Université de Montréal

Housing trajectories of individuals found not criminally responsible on account of mental disorder

par

Leila Salem

Département de psychologie

Faculté d'arts et sciences

Thèse présentée à la Faculté d'Études Supérieures

en vue de l'obtention du grade de Ph.D.

en psychologie – recherche et intervention

option psychologie clinique

avril, 2015

© Leila Salem, 2015

Résumé

Au Canada, les Commissions d'Examen des Troubles Mentaux de chaque province ont la responsabilité de déterminer les conditions de prise en charge des personnes déclarées Non Criminellement Responsables pour cause de Troubles Mentaux (NCRTM) et de rendre, sur une base annuelle une des trois décisions suivantes: a) détention dans un hôpital, b) libération conditionnelle, ou c) libération absolue. Pour favoriser la réinsertion sociale, la libération conditionnelle peut être ordonnée avec la condition de vivre dans une ressource d'hébergement dans la communauté. Parmi les personnes vivant avec une maladie mentale, l'accès aux ressources d'hébergement a été associé à une plus grande stabilité résidentielle, une réduction de nombre et de la durée de séjours d'hospitalisation ainsi qu'une réduction des contacts avec le système judiciaire. Toutefois, l'accès aux ressources d'hébergement pour les personnes trouvées NCRTM est limité, en partie lié à la stigmatisation qui entoure cette population. Il existe peu d'études qui traitent du placement en ressources d'hébergement en psychiatrie légale.

Pour répondre à cette question, cette thèse comporte trois volets qui seront présentés dans le cadre de deux manuscrits: 1) évaluer le rôle du placement en ressources d'hébergement sur la réhospitalisation et la récidive chez les personnes trouvées NCRTM; 2) décrire les trajectoires de disposition et de placement en ressources d'hébergement, et 3) mieux comprendre les facteurs associés à ces trajectoires. Les données de la province du Québec du Projet National de Trajectoires d'individus trouvés NCRTM ont été utilisées. Un total de 934 personnes trouvées NCRTM entre le 1er mai 2000 et le 30 avril 2005 compose cet échantillon.

Dans le premier manuscrit, l'analyse de survie démontre que les individus placés

dans un logement indépendant suite à une libération conditionnelle de la Commission d'Examen sont plus susceptibles de commettre une nouvelle infraction et d'être ré-hospitalisés que les personnes en ressources d'hébergement. Dans le deuxième article, l'analyse de données séquentielle a généré quatre modèles statistiquement stables de trajectoires de disposition et de placement résidentiel pour les 36 mois suivant un verdict de NCRTM: 1) libération conditionnelle dans une ressource d'hébergement (11%), 2) libération conditionnelle dans un logement autonome (32%), 3) détention (43%), et 4) libération absolue (14%). Une régression logistique multinomiale révèle que la probabilité d'un placement en ressource supervisée comparé au maintien en détention est significativement réduite pour les personnes traitées dans un hôpital spécialisé en psychiatrie légale, ainsi que pour ceux ayant commis un délit sévère. D'autre part, la probabilité d'être soumis à des dispositions moins restrictives (soit le logement indépendant et la libération absolue) est fortement associée à des facteurs cliniques tels qu'un nombre réduit d'hospitalisations psychiatriques antérieures, un diagnostic de trouble de l'humeur et une absence de diagnostic de trouble de la personnalité.

Les résultats de ce projet doctoral soulignent la valeur protectrice des ressources en hébergement pour les personnes trouvées NCRTM, en plus d'apporter des arguments solides pour une gestion de risque chez les personnes trouvées NCRTM qui incorpore des éléments contextuels de prévention du risque, tel que l'accès à des ressources d'hébergement.

Mots-clés : *Ressources d'hébergement, non criminellement responsable pour cause de troubles mentaux, ressources communautaires en santé mentale, récidive criminelle, réhospitalisation*

Abstract

In Canada, Provincial and Territorial Review Boards are mandated to evaluate the risk and custody decisions about individuals found Not Criminally Responsible on Account of Mental Disorder (NCRMD) and render one of three dispositions: (a) custody, (b) conditional discharge, or (c) absolute discharge. To promote community reintegration, conditional discharge can be ordered with the condition to live in supportive housing. Among individuals living with a mental illness, supportive housing in the community has been associated with increased housing stability, reduced number and length of hospitalization and reduced involvement with the criminal justice system. However, NCRMD accused face great barriers to housing access as a result of the stigma associated with the forensic label. To date, there is little information regarding the housing placement for the forensic mentally ill individuals, such as those found NCRMD.

In order to address the dearth of literature on supportive housing for the forensic population, the goal of the present thesis is threefold and addressed through two manuscripts: 1) to evaluate of the role of housing placement on rehospitalization and recidivism among individuals found NCRMD; 2) to describe the disposition and housing placement trajectories of individuals found NCRMD, and 3) to explore the factors that predict such trajectories. Data from the Québec sample of the National Trajectory Project of individuals found NCRMD were used. A total of 934 individuals found NCRMD between May 1st 2000 and April 30th 2005 comprise this sample.

In the first paper, survival analyses showed that individuals placed in independent housing following conditional discharge from the Review Board were more likely to be convicted of a new offense and to be readmitted for psychiatric treatment compared with

individuals residing in supportive housing. In the second paper, sequential data analysis resulted in four distinct trajectories: 1) conditional discharge in supportive housing (11%), 2) conditional discharge in independent housing (32%), 3) detention in hospital (43%) and 4) absolute discharge (14%). A multinomial logistic regression revealed that the likelihood of a placement in supportive housing compared to being detained significantly decreased for individuals treated in a forensic hospital, as well as those with an increased index offense severity. On the other hand, less restrictive disposition trajectories (i.e. independent housing and absolute discharge) were significantly influenced by clinical factors such as reduced number of prior psychiatric hospitalizations, a diagnosis of mood disorder and an absence of a comorbid personality disorder diagnosis.

The findings from this study point to the protective value that supportive housing can have on the community outcomes of forensic patients, and provides solid arguments for the development of a management strategy that incorporates contextual factors such as supportive housing.

Keywords : *supportive housing, not criminally responsible on account of mental disorder, forensic psychiatry, community mental health resources, recidivism, rehospitalization*

Table of contents

Résumé i

Abstract iii

Table of contents v

List of tables vii

List of figures viii

List of acronyms ix

List of abbreviations x

Acknowledgements xi

Introduction 12

Criminalization theory 13

The judicial management of the mentally ill 14

Description of the NCRMD population 18

NCRMD outcomes 21

Risk factors associated with violence among mentally ill individuals 24

Factors predicting dispositions 28

The importance of community-level factors 31

Outcomes related to housing models 33

Access to supportive housing for forensic patients 36

Significance and objectives of this thesis 39

Ethical consideration 40

Chapter 1. Supportive Housing and Forensic Patient Outcomes 41

Abstract 44

Literature overview 45

The Present Study 48

Method 49

Analytic Strategy 53

Results 54

Discussion 61
Conclusion 67
References 69
Chapter 2. Housing Trajectories of Forensic Patients 73
Abstract 75
Introduction 76
Method 78
Measures and sources of information 79
Results 82
Discussion 87
Conclusion 92
References: 93
Conclusion 98
Discussion 99
Future research 104
References 108
Appendix 1. Douglas Mental Health University Institute Research Ethics Certificate .... a-i
Appendix 2. Philippe-Pinel Research Ethics Board's approval .... a-ii
Appendix 3. "Access to Information Commission" approval .... a-iv

List of tables

Table I Characteristics of Québec NCRMD Sample 55
Table I.1 Cox regression: criminal recidivism, recidivism against a person and psychiatric rehospitalization 60
Table II. Descriptive and bivariate analysis of disposition-housing trajectories 84
Table II.1. Multinomial regression predicting disposition-housing trajectories 86

List of figures

Figure 1. Survival curve for recidivism. 58
Figure 1.1. Survival curve for recidivism against a person 58
Figure 1.2. Survival curve for psychiatric rehospitalization.. 59
Figure 2. Distribution of custody states for the 36 months following the index verdict 81
Figure 2.1. Distribution of custody states for the 36 months following the index verdict for each custody trajectories. 83

List of acronyms

NCRMD : Not Criminally Responsible on account of Mental Disorder

NGRI : Not Guilty by Reason of Insanity

CCC : Canadian Criminal Code

List of abbreviations

S. Section

i.e. *id est*

e.g. *exempli gratia*

et al. *et alii*

Acknowledgements

I would like to express my gratitude to Dr. Anne Crocker for her constant support throughout this journey. I am grateful for the generosity with which you have shared your knowledge and experience. This would have not been possible without your mentorship. Merci. I also wish to sincerely thank Dr. Christopher Earls for his precious guidance, and for always reminding me what this task was all about. I am grateful that you always kept me on track and helped move this project forward.

The work and support of Dr. Yanick Charette in this project deserves acknowledgement. Thank you for your patience, and thank you for being so committed and passionate about your work. To my co-authors, Dr. Tonia Nicholls, Dr. Michael Seto and Dr. Gilles Côté: this collaboration has been very stimulating, thank you for your availability and constructive feedback.

La survie à ce parcours doctoral (et la vie en général d'ailleurs) a été possible grâce à Soline et Christelle. Je suis si reconnaissante d'avoir pu partager ces moments avec vous. Je nous souhaite encore plusieurs années d'inadéquation et de fous rires.

Finalement, je dédie cette thèse à mes parents. Je tiens à exprimer ma reconnaissance pour votre soutien inconditionnel; et à mes frères, que je remercie profondément de m'avoir, chacun à leur manière, rappelé que finalement ce que je faisais n'était pas si important.

Introduction

Violent acts committed by individuals living with a mental illness often attract media attention (Angermeyer & Matschinger, 1996; Stark, Patersone, & Devlin, 2004; Stuart, 2006; Whitley & Berry, 2013) and are associated with further stigmatization of mentally ill persons (Arboleda-Florez, 2003; Crisp, Gelder, Goddard, & Meltzer, 2005). Stigma around mental illness has been associated with negative outcomes such as reducing help-seeking behaviors and social exclusion for individuals living with mental illness (Evans-Lacko, Brohan, Mojtabai, & Thornicroft, 2012; Rusch, Angermeyer, & Corrigan, 2005; Thornicroft, 2008). In addition to the physical and psychological effects it has on victims, criminal behavior among individuals with a mental illness leads to serious negative consequences in terms of recovery.

A number of studies found higher arrest rates for individuals with a mental illness compared to the general population (Brekke, Prindle, Bae, & Long, 2001; Fisher et al., 2011). Generally, these arrests are associated with minor offenses (summary offenses in Canada; misdemeanours in the United States) as opposed to serious offenses (indictable felony offenses; Charette, Crocker, & Billette, 2011; Hartford, Heslop, Stitt, & Hoch, 2005; Hwang & Segal, 1996). In a seminal study, Brekke et al. (2001) compared arrest rates of a sample of individuals diagnosed with schizophrenia recruited from community-based mental health services to those of non-mentally ill individuals in the general population. A 45% higher general arrest rate was found for mentally ill individuals; however, when arrest rates for violent offenses between the two groups were compared, a 40% lower arrest rate for mentally ill individuals is observed.

Criminalization theory

The phenomena by which mentally ill individuals come more readily in contact with the justice system for minor offenses is generally known as "criminalization of mental illness" (Abramson, 1972; Lamb & Weinberger, 1998; Teplin, 1984; Teplin & Pruett, 1992; Torrey et al., 1992). The criminalization theory suggests that for the same offense, mentally ill individuals are more likely to be arrested than non-mentally individuals (Teplin, 1984).

The increasing number of mentally ill individuals coming into contact with the criminal justice system has been associated with several changes occurring across the multiple waves of deinstitutionalization beginning in the 1960s (Lamb & Bachrach, 2001; Wallace, Mullen, & Burgess, 2004). The objective of psychiatric deinstitutionalization was to provide mentally ill individuals with mental health services in the community. Over a 30-year period, the number of psychiatric beds in Québec was reduced by 56% (Lecomte, 1997), leading to an increasing number of individuals with mental illness living in the community. Unfortunately, adequate and sufficient outpatient community-based services for persons with a mental illness did not follow these changes. In parallel, important modifications were brought to the civil legislation in Québec (mental health acts in other provinces), rendering involuntary commitment of individuals with a mental illness more difficult (Laberge & Morin, 1995; Lamb, Weinberger, & Gross, 1999). The reduced access to assessment and treatment for mentally ill individuals, and the increasingly complex psycho-social profiles in this population (e.g. substance use, homelessness), has led to an increasing number of individuals with mental illness interacting with the criminal justice system (Wallace et al., 2004). It has been argued that a person with a serious mental illness has a higher likelihood of spending a night in jail than being admitted to a psychiatric facility (Morrissey, Meyer, & Cuddeback, 2007). These

findings are unsettling as correctional facilities and police stations' cells are ill equipped to receive and manage individuals needing mental health treatment (Kirby & Keon, 2006; Peters, Sherman, & Osher, 2008; Sapers, 2013).

The judicial management of the mentally ill

Different designations exist internationally to refer to individuals whose mental illness is thought to have directly contributed to the commission of a criminal offense. In this section, we will review the literature pertaining to individuals who are referred to as forensic patients.

Not Criminally Responsible on account of Mental Disorder. Section 16 of the Canadian Criminal Code (CCC) stipulates that "no person is criminally responsible 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". In 1992, several changes were brought to the section of the Canadian criminal code pertaining to individuals who live with a mental illness and who commit a crime (Part XX.1). Prior to 1992, mentally ill individuals who committed a crime and who were found Not Guilty by Reason of Insanity (NGRI) were automatically held in custody and detained indefinitely at the pleasure of the Lieutenant Governor. These persons were often detained longer than if they had been managed under the regular justice system (Rice, Harris, Lang, & Bell, 1990). In 1992, the Supreme Court of Canada established that automatic and indefinite detention was unconstitutional under the Canadian Charter of rights and freedoms (*R. v. Swain* , 1991). The Canadian parliament passed Bill C-30, which ended the former Lieutenant Governor's warrant system, and implemented a provincial and territorial Review Board system that must evaluate each case annually. The verdict of Not Guilty by Reason of Insanity was modified to Not Criminally Responsible on account of Mental Disorder

(NCRMD; CCC s. 672.34) and Review Boards were mandated to render dispositions in the management of these persons.

The judicial process. Not all individuals with a mental disorder who commit an offense are exempt of criminal responsibility; instead, when a crime has been committed and the charges are laid, the accused is first heard in court. The crown or the defense may raise the issue of criminal responsibility (CCC S. 672.12). An assessment of criminal responsibility of 30 days (which can be extended up to 60 days) is ordered to evaluate the mental state of the accused at the time of the offense (CCC S. 672.14). A medical practitioner is required to advise the court as to the criminal responsibility of the accused, and determine the appropriate disposition to be made. When the court accepts a plea of NCRMD, a disposition regarding the custody of an NCRMD accused may be rendered or deferred to the Review Board (CCC s. 672.45). In the former case, the Review Board has 45 days to render a custody disposition. One of three dispositions must be decided upon: detention, conditional release or absolute discharge. If the court orders a disposition other than an absolute discharge, the Review Board will then review the disposition and the conditions attached to this disposition within 90 days (CCC, sec. 672.47). Review Boards must also render one of three dispositions at each annual hearing: 1) detention (with or without conditions); 2) conditional discharge; or 3) absolute discharge (CCC. S. 672.54).

Prior to the recent enacted legislation[1], and at the time this study was conducted, the principles behind custody dispositions were that: dispositions must be the least onerous and

---

[1] Section XX.1 of the Canadian Criminal Code has been modified (Criminal Responsibility Reform Act), and changes were enacted in July 2014.

least restrictive to the accused while taking into account "the need to protect the public from dangerous persons, the mental condition of the accused, the reintegration of the accused into society and the other needs of the accused" (CCC s. 672.54). Thus, when a disposition for the accused was considered, placement in the community, when possible, was favored. However, while giving the accused the opportunity for community reintegration, the Review Board must take into account the safety of the public. In 1999, the Supreme Court of Canada ruled that if the accused does not pose *significant threat* to the safety of the public, the Review Board must order an absolute discharge (*Winko v. British Columbia Forensic Psychiatric Institute,* 1999). In order to prevent the accused from being detained indefinitely, each accused who has not been discharged absolutely has the right to a minimum of one annual hearing where the members of the Review Board re-assess risk, and modify the disposition and/or the restrictions when appropriate (CCC s. 672.81).In the province of Ontario, Balachandra, Swaminath, and Litman (2004) revealed a significant increase in the number of absolute discharges post-*Winko* changes. On the other hand, Desmarais, Hucker, Brink, and De Freitas (2008) who conducted research on a much larger sample, across three provinces in Canada, found no significant changes post-winko. Recently enacted changes to the Canadian Criminal Code pertaining to individuals found NCRMD might contribute to reducing the number of absolute discharges, particularly for High Risk Accused (see footnote 1).

Several researchers examined the profiles and the management practices of the Canadian mentally ill forensic population following the important changes brought to the management of NCRMD accused in 1992 (Grant, 1997; Ohayon, Crocker, St-Onge, & Caulet, 1998; Roesh et al., 1997; Stuart, Arboleda-Florez, & Crisanti, 2001). In general, these studies show a large increase in the number of admissions to the Review Board following the

legislative changes (Grant, 1997; Livingston, Wilson, Tien, & Bond, 2003; Roesh et al., 1997; Schneider, Forestell, & MacGarvie, 2002). Between 1992 and 2004, Latimer and Lawrence (2006) observed a 102% increase of admissions to Review Boards across Canada. There are more annual Review Board admissions than releases; the population is thus growing (Grant, 1997; Latimer & Lawrence, 2006). This increase is not due to a general increase in the number of individuals brought before criminal courts (Latimer & Lawrence, 2006). Several reasons may contribute to the rise in number of NCRMD findings by the courts. Firstly, some scholars suggested that the NCRMD defence became more appealing to defendants following the *Swain* and *Winko* decisions described in the previous paragraphs, considering that detention was no longer automatic, indefinite and to the pleasure of the Lieutenant Governor (Livingston et al., 2003; Verdun-Jones, 2000). Secondly, it was argued that the increased difficulty in accessing general mental health services for mentally ill individuals leaves police officers resorting to making arrests and diverting individuals who would otherwise be diverted to general mental health services for minor offenses, to forensic mental health services (Crocker, Braithwaite, Côté, Nicholls, & Seto, 2011). Lastly, diversion from the criminal justice system (Jansman-Hart, Seto, Crocker, Nicholls, & Côté, 2011), the increasingly complex clinical profiles among mentally ill individuals (e.g., substance use disorders) (Priebe et al., 2005) as well as the important modifications brought to the civil legislation (mental health acts in other provinces) (Laberge & Morin, 1995; Lamb et al., 1999), have also been stated as probable causes for increased demands in forensic psychiatric services.

The increase in the number of forensic beds has been observed internationally (see Jansman-Hart et al., 2011), and has elicited concern with regards to increased delays in access to forensic services (individuals may spend longer periods in jail awaiting a forensic bed), as

well as reduced access to civil psychiatric beds (when accused no longer require forensic services) or community resources (CAMH, 2013; Jansman-Hart et al., 2011; Simpson et al., 2014). The increase in resources allocated to forensic services has an impact on access to non-forensic services, making the criminal justice system a major gateway to access and receive mental health services (Seto et al., 2001). This is in part supported by studies showing an inverse relation between general psychiatric beds and forensic mental health service use (O'neill, Sinclair, Kelly, & Kennedy, 2002; Priebe et al., 2005). These findings point to the importance of closely examining and understanding the needs of forensic patients in order to adjust and tailor services for this this complex and growing population.

Description of the NCRMD population

Socio-demographic profile

In Canada, individuals found NCRMD are for the most part single men of Canadian origin, who are in their late 30s (Crocker & Côté, 2009; Crocker, Nicholls, Seto, Charette, et al., in press; Grant, Ogloff, & Douglas, 2000; Latimer & Lawrence, 2006; Livingston et al., 2003; Roesh et al., 1997). Female NCRMD accused have been shown to be older than their male counterparts, and to have higher psychosocial functioning (Nicholls et al., in press). Simpson et al. (2014) have shown an important increase in the 18 to 25 age range in the Review Board cases across a 25 year span in Ontario (1987-2012). A small proportion (2.9%) of individuals are of aboriginal decent (Crocker, Nicholls, Seto, Charette, et al., in press; Latimer & Lawrence, 2006).

Historical profile

Prior involvement with the criminal justice and mental health systems is frequent in this population (Crocker & Côté, 2009; Crocker, Nicholls, Seto, Charette, et al., in press;

Grant et al., 2000; Latimer & Lawrence, 2006; Livingston et al., 2003; Roesh et al., 1997). The National Trajectory Project: a large in-depth investigation examining trajectories of 1800 individuals found NCRMD in the three most populous provinces of Canada (Ontario, British Columbia, Québec) revealed that nearly half of the NCRMD sample had prior contact with the criminal justice system (47%), with rates for women being slightly lower than those of males (30%) (Crocker, Nicholls, Seto, Charette, et al., in press). However, prior involvement with the Review Board appears to be rare among the Canadian NCRMD population: less than 10% of NCRMD accused have a previous NCRMD finding (Crocker, Nicholls, Seto, Charette, et al., in press; Latimer & Lawrence, 2006). These results suggest reduced rates of reoffenses for which the person is found NCRMD again.

The majority of NCRMD accused have received psychiatric services prior to their verdict (Balachandra et al., 2004; Crocker & Côté, 2009; Livingston et al., 2003; Simpson et al., 2014). Crocker, Nicholls, Seto, Charette, et al. (in press) found that at least 72% had a prior psychiatric hospitalization, a conservative estimate as the study was solely based on information in Review Board files. These findings provide insight into the possible prevention opportunities through the implementation of best practices in risk assessment and management in the general mental health services.

Criminal profile

Offenses of NCRMD accused range from minor offenses (e.g., mischief), to very serious offenses (e.g. homicide; Grant, 1997). Most NCRMD findings are for offenses such as assault or threat (Balachandra et al., 2004; Crocker & Côté, 2009; Crocker, Nicholls, Seto, Charette, et al., in press; Livingston et al., 2003). Findings from the National Trajectory Project show that most NCRMD verdicts are linked to offenses against the person (65%), 40%

of which are for simple assaults (CCC. S. 266; as opposed to aggravated assault, or assault with a weapon). Sexual offenses accounted for 2.3% of offenses in this study (Crocker, Nicholls, Seto, Charette, et al., in press); 7 % of NCRMD accused committed a homicide or an attempted homicide, with NCRMD women (9.6%) being more likely to have been found NCRMD for such offenses compared to men (6.3%) (Nicholls et al., in press).

Like other samples of mentally ill individuals, studies have reported that when offenses were against the person, victims of NCRMD accused were most often family members (Crocker, Nicholls, Seto, Charette, et al., in press; Monahan, Steadman, Silver, Appelbaum, & Robbins, 2001; Russo, Salomone, & Della Villa, 2003; Taylor & Gunn, 1999). Crocker, Nicholls, Seto, Charette, et al. (in press) found that in 33.7% of cases of violence against the person (including threats) the victim was a family member, in 22.9% of cases the victim was a mental health professional, a police officer or another authority figure, compared to 22.7% of cases where the victim was a stranger. In cases of violence against a family member, parents were more likely to be the target, followed by the partner or the spouse. Children were the victims of a violent index offense in 2.6% of NCRMD cases. Women were more likely than men to offend against their offspring (8.5% vs 1.5%) and partners (18.0% vs 10.8%). When the offender caused or attempted to cause death, the victims were family members in the majority of cases (Crocker, Nicholls, Seto, Charette, et al., in press; Russo et al., 2003)

Clinical profile

Schizophrenia is the most common primary diagnosis amongst the NCRMD population followed by mood disorders such as bipolar disorder and depression (Crocker & Côté, 2009; Crocker, Nicholls, Seto, Charette, et al., in press; Desmarais et al., 2008; Latimer & Lawrence, 2006; Roesh et al., 1997). Research shows that comorbid substance use disorder is present

among at least a third of individuals managed by the Review Board (Crocker, Nicholls, Seto, Charette, et al., in press; Latimer & Lawrence, 2006; Simpson et al., 2014). Latimer and Lawrence (2006) showed that 29% of their sample had two diagnoses and 18.4% had three or more diagnoses. Substance abuse disorder was present among 28.8% of the sample, and 17.7% of the sample had an Axis II diagnosis. Exploring changes over time in the Ontario Review Board's population, Simpson et al. (2014) have shown that the rates of "pure" psychotic or mood disorders have significantly decreased since 1987 and stabilized in the mid-2000, while comorbid substance use disorder has significantly increased since 1987, and started stabilizing around the late 2000. It is important to note that the increase in comorbid substance use disorder among mentally ill individuals has been shown in the civil psychiatric population as well (Mueser & Drake, 2007; Wallace et al., 2004).

NCRMD outcomes

In order to promote the social reintegration of individuals found NCRMD, the Review Board is required to prioritize community placement, when individuals no longer pose significant threat to society (CCC s.672.54; see footnote 1). As such, an important proportion of NCRMD accused are managed in the community (Crocker et al., 2011; Latimer & Lawrence, 2006). In fact, analyzing hearings from 2000 to 2008 (n = 6739) of individuals found NCRMD between 2000 and 2005, results from the National Trajectory Project have shown that detention with conditions and conditional discharge were the most frequent dispositions ordered at hearings (40% and 37%) followed by absolute discharge in 19% of hearings. Strict detention was the least frequent disposition ordered in this study (4% of hearings) (Crocker, Charette, et al., in press). In this section we review the research on community outcomes of individuals found NCRMD.

Recidivism

Recidivism in the forensic population is relatively low (Charette et al., 2015; Rice et al., 1990). During a 24 month follow up period, Livingston et al. (2003) found that 18% of discharged NCRMD patients were charged with a new criminal offense. However, only 7.5% of those who were discharged in the community were ultimately convicted of a new offense. Criminal charges subsequent to discharge were mostly for theft-related crimes (36.2%) and less frequently for violent crimes (15.2%). Similar findings were shown among a sample of individuals found NGRI in the state of New York (Miraglia & Hall, 2011). Analyses of re-arrest following discharge has shown that 11% of the sample are re-arrested for any offense and 3% are re-arrested for a violent offense within three years of release (Miraglia & Hall, 2011). Comparable results were found in the Canadian forensic population examining re-convictions and new NCRMD verdicts (Charette et al., 2015). Charette et al. (2015) reveal a relatively low recidivism rate in a three-year follow up period (17%); however, these results are limited by the fact that we used official criminal records (i.e. convictions), which limits information regarding offenses (especially minor offenses) for which charges are dropped because the offender is diverted to mental health services. Number of prior violent offenses, being male and younger have all been associated with recidivism in the forensic population (Charette et al., 2015; Lee, 2003; Miraglia & Hall, 2011; Yoshikawa et al., 2007).

Rehospitalization

Research has shown that rehospitalization is frequent among the NCRMD population. A study conducted on a sample of NCRMD accused in British Columbia has shown that at least 50% of the sample returned to the hospital at least once after conditional discharge over the course of 5 years (Melnychuk, Verdun-Jones, & Brink, 2009). Livingston and colleagues

(2003) have shown similar rehospitalization rates (47%) in an average period of 7.7 months. These results are not surprising as most NCRMD individuals suffer from chronic mental disorders such as schizophrenia, which has been linked with high rates of rehospitalization (Masand, Daniel, & Harvey, 2003). Among the forensic population, rehospitalization is used as a risk management strategy: substance abuse, violence, deteriorating mental health, breach of conditions and medical non-compliance have been associated with the rehospitalization of individuals found NCRMD (Livingston et al., 2003; Melnychuk et al., 2009; Viljoen, Nicholls, Greaves, de Ruiter, & Brink, 2011). It has been argued that length of community stay is negatively correlated with the number of readmissions; i.e., the longer the person lives in the community without being hospitalized, the less likely they are to be readmitted (Melnychuk et al., 2009). These findings point to the importance of adequately preparing the release of individuals found NCRMD and support their reintegration in the community in order to promote longer community stays, and to stop the *revolving door phenomenon*: where patients find themselves circling between prisons, hospitals and the streets.

Living conditions

Latimer and Lawrence (2006) found that 94.4% of conditionally discharged accused are directed towards specific types of housing. In a 3-year follow up study of NCRMD accused in British Columbia, 47.7% of the sample was living independently (apartment or hotel), 19.6% was living in a supervised arrangement, 19.6% was living with family members and 13.1% was in an unknown location during their first community discharge (Livingston et al., 2003). Moreover, housing stability was infrequently achieved by this sample as 51.4% of participants had one to three address changes during the follow-up period. To our knowledge, no other published studies focused specifically on residential outcomes of forensic patients.

Risk factors associated with violence among mentally ill individuals

Violence on the part of individuals with mental illness is the result of multiple factors, including socio-demographic, criminal, clinical, personality and environmental factors. Many of these factors are associated with violence in the general population as well. The literature on risk factors of violence and criminality among mentally ill individuals as well as in the general population is reviewed in this section.

Historical/static factors

Static risk factors, which are often present in the history of an individual, are limited in terms of interventions strategies (e.g., criminal history or gender). These factors include, but are not limited to socio-demographic factors, criminological factors and clinical factors.

1. Demographic factors. It has been consistently shown that youth is a risk factor for violent behavior; not only among the mentally ill but also among the general population (Bonta, Law, & Hanson, 1998; Gendreau, Little, & Goggin, 1996). However, despite findings showing increased risk of violence among younger mentally ill individuals, criminal careers start across all age groups in this population (Hodgins, 1992).

The role of biological sex in the association between mental illness and violence has yet to be determined. Some studies have found males to be at a significantly higher risk of violence than females (Bonta et al., 1998; Link, Stueve, & Phelan, 1998; Solomon & Draine, 1999), while other studies have shown that males and females presented an equal risk of violent behavior (Robbins, Monahan, & Silver, 2003; Stueve & Link, 1998). However, the impact of mental illness on risk for violence is higher on females compared to males (Hodgins, 1992; Lindqvist & Allebeck, 1990; Wessely, Castle, Douglas, & Taylor, 1994).

2. Criminal factors. Similar to what has been shown in the general population (Albonetti & Hepburn, 1997; Gendreau et al., 1996), the presence of a history of criminal behavior is highly predictive of criminal recidivism among individuals with mental illness (Bonta, Blais, & Wilson, 2014; Bonta et al., 1998; Brekke et al., 2001; Harris, Rice, & Quinsey, 1993; Porporino & Motiuk, 1995; Swanson, 1993). In fact, a temporal association between prior violence and future violence has been evoked (Skeem et al., 2006). Early onset of delinquency has also been associated with increased risk of violence and criminality among mentally disordered samples (Bonta et al., 1998; Farrington, 2000; Gendreau et al., 1996; Solomon & Draine, 1999).

3. Clinical factors. Psychiatric history and contact with mental health services, which are static clinical factors, have been associated with future violence (Link, Andrews, & Cullen, 1992; Modestin & Ammann, 1995). More specifically, violence among mentally ill individuals is more likely to occur following release from hospital (Swanson et al., 2002). Number of psychiatric hospitalizations was also linked to violence perpetrated by individuals suffering from mental illness (Bonta et al., 1998).

Dynamic factors

Research has shown that dynamic factors; which are modifiable and can be targeted in treatment plans, also have predictive potential for criminal and violent behavior among mentally ill individuals (Andrews & Bonta, 2010; Gendreau et al., 1996). The major predictors of criminality among the general population, as well as among criminally involved mentally ill individuals are referred to as the Central Eight risk/needs factors: 1) Criminal History (static factor), 2) Procriminal Companions, 3) Procriminal Attitudes and Cognitions, 4) Antisocial Personality Pattern (e.g., poor self-control, early onset and diverse criminal behavior, 5)

Education/Employment, 6) Family/Marital, 7) Substance Abuse, and 8) Leisure/Recreation (Andrews & Bonta, 2010). These factors have been empirically validated in a number of studies (Bonta et al., 2014; Skeem, Winter, Kennealy, Louden, & Tatar, 2014) and are included in a widely use, and empirically validated risk assessment tool (The Level of Service/ Case Management Inventory; Andrews, Bonta, & Wormith, 2004).

It is important to underline that factors related to mental health, such as diagnosis or presence of psychiatric symptoms, which are dynamic clinical factors as they are not stable across time, are not present in this model. The predictive validity of dynamic clinical factors on criminal behavior is the subject of great debate. Mojtabai (2006) found an increased a risk of violent behavior in the presence of psychotic symptoms. Based on data from a national United States study, Swanson, Van Dorn, Monahan, and Swartz (2006) also identified specific clinical factors associated with violent behavior among individuals diagnosed with schizophrenia. Four specific symptoms (i.e., suspicion, persecution, the presence of hallucinations and grandiosity) were significantly correlated to a high risk of aggravated violence (Swanson et al., 2006). However, other studies reveal a moderate, or absent association between clinical factors (e.g., diagnosis or presence of psychotic symptoms) and criminal behavior among mentally ill individuals (Bonta et al., 1998; K. S. Douglas, Guy, & Hart, 2009; K.S. Douglas & Skeem, 2005; Fazel & Yu, 2011; Monahan et al., 2001; Wessely et al., 1994).

Environmental factors. Violence by individuals with mental illness is the result of multiple factors with compounded effects (Swanson et al., 2002), but research to date has taken an individual level approach to risk assessment and management, thus overseeing community level factors as correlates of violence and criminality (Sirotich, 2008). Silver

(2000) refers to this type of individual-like risk assessment as the *individualistic fallacy*.

It has been suggested that living environments may contribute to antisocial and aggressive behavior (Hodgins, 2001). In fact, factors associated with violence (e.g. mental illness or substance abuse) have been shown to be more prevalent in socially disadvantaged neighborhoods (Silver, Mulvey, & Swanson, 2002). Moreover, some of the associations between individual factors (e.g. prior arrest) and violence among mentally ill individuals are reduced when neighborhood variables (e.g. poverty, victimization, community violence) are controlled (Silver, Mulvey, & Monahan, 1999; Swanson et al.).

Lack of housing, homelessness and residential instability are environmental factors that have been consistently associated with poorer community outcomes of mentally ill individuals (see Roy, Crocker, Nicholls, Latimer, & Reyes, 2014, for a review). In fact, among the mentally ill, homelessness has been shown to be a high risk factor predicting violence (Swanson et al., 2002), and incarceration (McNeil, Binder, & Robinson, 2005). A study focusing on consumers of community mental health programs compared those with legal involvement to those without legal involvement (Sheldon, Aubry, Arboleda-Florez, Wasylenki, & Goering, 2006): fully 57.6% of individuals with mental illness involved with the criminal justice system were unstably housed compared to 30% of those who were not legally involved. In addition, a three-year longitudinal study focusing on arrest rates of individuals with a diagnosis of schizophrenia or schizoaffective disorder showed that address change was a significant predictor of police arrests (Brekke et al., 2001). Among a forensic sample in Japan, participants with no fixed address post-discharge were 2.6 times more likely to reoffend violently compared to those with fixed addresses (Yoshikawa et al., 2007). These findings point to the importance of stable housing for mentally ill individuals post-discharge from

hospital, forensic settings or criminal justice system.

Factors predicting dispositions

As previously mentioned, Review Boards must decide on dispositions for the management of NCRMD accused while taking into account the mental condition of the accused, as well as the risk posed to the public safety. Hence, the level of risk and needs of the accused should be associated with Review Boards' decisions. Several studies have examined the factors predicting dispositions in the management of the forensic population. In this section, the factors predicting dispositions will be reviewed in light of the previously presented literature on risk factors in the general and mentally ill population.

Socio-demographic factors. Age at the index offense has not been shown to have an effect on the disposition decisions among NCRMD accused (Crocker, Nicholls, Charette, & Seto, 2014), although it has been associated with risk of violence among mentally ill individuals (Hodgins, 1992; Swanson et al., 1998). However, sex has been shown to influence dispositions among the forensic population with women being subjected to less restrictive dispositions and having increased access to community based dispositions than men (Callahan, 1998; McDermott & Thompson, 2006; Seig, Ball, & Menninger, 1995). On average, McDermott and Thompson (2006) found that NGRI women are released two years prior to their male counterparts. In an NCRMD sample, women were more likely to receive an absolute discharge decision than a conditional discharge decision, in comparison to men, but were no more or less likely to be detained (Crocker et al., 2014). It is important to note that studies have found that female forensic patients display higher psychosocial functioning, are older, and are more likely to be diagnosed with a mood disorder (Nicholls et al., in press; Seig et al., 1995). These factors are all associated with reduced risk of recidivism, and possibly

contribute to the increased rates of community dispositions rather than stricter custody dispositions for women.

Criminological factors. Although severity of index offense has not been shown to be a reliable predictor of recidivism (Bonta et al., 2014; Bonta et al., 1998; Charette et al., 2015), the nature of the index offense has been associated with type of disposition among the forensic population (Callahan, 1998; Crocker et al., 2014; McDermott & Thompson, 2006; Silver, 1995). In Canada, Latimer and Lawrence (2006) found that individuals accused of a non-violent crime were more likely to be absolutely discharged compared to those who committed a violent or sexual offense. Inversely, individuals accused of violent offenses are more likely to be detained than those who committed a non-violent offense (Crocker et al., 2011; Latimer & Lawrence, 2006). However, number of prior offenses was not found to influence disposition in forensic samples (Callahan, 1998; Crocker et al., 2011; Crocker et al., 2014; McDermott & Thompson, 2006), despite the fact that it has consistently been demonstrated to be a good predictor of future offending among mentally ill individuals (Bonta et al., 1998; Brekke et al., 2001; Harris et al., 1993; Porporino & Motiuk, 1995; Swanson, 1993).

Clinical factors. Results from the National Trajectory Project show that psychiatric history, which has been associated with future violence (Link et al., 1992; Modestin & Ammann, 1995), reduced the likelihood of being released from detention (Crocker et al., 2014). Latimer and Lawrence (2006) found that primary diagnosis of schizophrenia most likely resulted in detention (59%) compared to a mood disorder diagnosis (34.9%). Moreover, when individuals diagnosed with schizophrenia were granted conditional discharge, they had significantly more restrictions than those with a mood disorder (Latimer & Lawrence, 2006). Although substance use is a reliable predictor of revocation of conditional discharge (Monson,

2001; Riordan, Haque, & Humphreys, 2006), research to date has not consistently found its diagnosis, or use, to predict dispositions for the forensic population (Crocker et al., 2014; McDermott & Thompson, 2006).

Dynamic factors. A reliable predictor of disposition is whether the accused was detained at the time of initial hearing (Grant, 1997). Crocker et al. (2011; 2015) have shown that, controlling for severity of index offense, persons in custody were more likely to be detained at subsequent hearing; just like persons living in the community were most likely to be given a subsequent release disposition. These results suggest stability in dispositions given to NCRMD accused over the duration of their legal mandate.

Having behaved aggressively in the period between hearings, and non-compliance with the conditions ordered by the Review Board significantly reduce the likelihood of being released (Crocker et al., 2014; McDermott et al., 2008). Findings from the National Trajectory Project have further shown that non-compliance with medication reduced the likelihood of being conditionally discharged but not the likelihood of being absolutely discharged compared to being detained (Crocker et al., 2014).

Taken together these findings reveal that Review Boards base decisions in the management of the NCRMD population on a variety of important static and dynamic socio-demographic, clinical and criminological factors. However, our review also points to the existence of a knowledge-practice gap in the decision-making process for the management of forensic mental health patients, as some of the factors that are taken into account have little empirical validity, while other factors that have been shown to be good predictors of future violence or rehospitalisation seem to be overlooked.

The importance of community-level factors

Considering the increasing number of individuals treated in the community through outpatient mental health services, it has become crucial to consider the interplay of individual and environmental influences on human behavior (Melnychuk et al., 2009). Research shows that the transfer of mentally ill individuals who have been hospitalized or incarcerated during a long period of time to an environment with little structure often resulted in relapse and increases the risk of violence considering the incapacity to adapt to the stress of a new environment (Lamb et al., 1999). However, access to housing may not be sufficient for individuals presenting with complex clinical profiles. Lindqvist and Skipworth (2000) hypothesized that being too quickly and abruptly faced with the demands of a new environment with limited support will lead to inevitable failure.

Housing models

Following the successive deinstitutionalisation movements, various housing philosophies emerged in order to ensure continuity of care and provide a solid basis for the return of mentally ill individuals to the community. Three main housing models emerged, and are defined in this section: the custodial model, the supportive housing model (following a Residential Continuum approach), and the supported housing model (following a Housing First approach) (Corrigan & McCracken, 2005; Parkinson, Nelson, & Horgan, 1999; Ridgway & Zipple, 1990).

1. Custodial model. The first housing model that emerged following the increased number of mentally ill individuals treated in the community is the custodial model (Parkinson et al., 1999). The custodial model is a medical model in the community, providing care in semi-institutional facilities. This housing model provides similar services as those found in

inpatient settings, and is meant to address needs of individuals who have important functional difficulties related to their mental illness (Parkinson et al., 1999). It has been significantly criticized for its lack of active rehabilitative interventions (see Nelson, Aubry, & Hutchison, 2010, for a review).

2. Supportive housing model. In response to the concerns regarding the custodial model, a more rehabilitation-oriented model emerged following a *residential continuum* approach, where individuals gradually gain access to more independent housing structures as they acquire the skills necessary to "manage their symptoms and the dysfunctions of their mental illness" (Corrigan & McCracken, 2005, p.31). Supportive housing is defined as housing with on-site professional support; it is neither independent living nor institutional care. Different settings are included in this model such as group homes, supervised apartments and foster homes (Nelson et al., 2010). Supportive housing creates a supportive community for its participants (Sylvestre, Ollenberg, & Trainor, 2007) and promotes normalcy by separating housing arrangements from mental health services. These types of structures are relevant in addressing daily living issues, implementing routines, increasing awareness of mental illness, and promoting vocational and educational engagement (Soliman, Santos, & Lohr, 2008). This model has been criticized for three main reasons: 1) lack of consumer choice and freedom in treatment or housing, 2) stress created by change of housing setting (when residents move to more independent type of housing settings), and 3) the fact that skills acquired in one type of residence (i.e. supervised environment) is not transferable to another (i.e. independent living) (Tsemberis & Eisenberg, 2000).

3. Supported housing model. Following a *Housing First* philosophy, a supported housing model followed. The supported housing model provides independent living with

community support as needed (Carling, 1993). Individuals live in their own home, which they choose, and receive individualized and flexible support as needed (in their own homes or in the community). The underlying value of this approach is empowerment; providing service users with considerable choice, as they can become tenants in regular apartments, and receive mental health services outside of their housing (Parkinson et al., 1999).

Although studies have repeatedly shown that mental health service users prefer to live alone, in their own apartment (Piat et al., 2008; Tanzman, 1993), for individuals with severe psychiatric symptoms and other coexisting clinical and psycho-social problems (e.g., substance use) such as is frequently found in the NCRMD population, a transfer to the community with little or no structure could lead to deteriorating mental health and may put the accused at risk of acting violently or getting in trouble with the law (Lamb et al., 1999). In fact, a recently study looking at Housing First model across Canada revealed that the supported housing model had no impact on criminal justice involvement among homeless individuals with mental illness, presumably because of the lack of a risk management component in the services offered (Goering et al., 2014). Furthermore, one study revealed that most mental health service users admit that integrating a supportive housing environment following discharge can be beneficial (Tsai, Bond, Salyers, Godfrey, & Davis, 2010).

The main focus of this thesis will center on the supportive housing model, which is a more structured housing model, providing on-site professional support and most often used by forensic mentally ill patients.

Outcomes related to housing models

The literature review on housing resources is impeded by the lack of consistency in the definition and categorization of models throughout studies (Leff et al., 2009). The review of

the literature on housing models reveals great variability and overlap in the actual administration of housing resources, making it difficult to generate conclusions that are model-specific. The differences between supportive and supported housing, in practice, has become blurred over time (Nelson et al., 2010). Nonetheless, review of housing models for mentally ill individuals has shown that housing stability and reduced number of hospitalizations are consistently associated with placement in housing resources in general (Goldfinger et al., 1999; Leff et al., 2009; Nelson, Aubry, & Lafrance, 2007; Parkinson et al., 1999). For example, a qualitative study conducted on supportive housing for mentally ill individuals in Montreal (Dorvil, Morin, Beaulieu, & Robert, 2005) reported that the presence of other individuals in the supportive housing environment prevented the participants from experiencing loneliness, which was considered to precipitate relapse. These results are consistent with those found in a study focusing on predictors of rehospitalization among conditionally discharged patients (Riordan et al., 2006); individuals were almost five times more likely to be rehospitalized if they did not have the support of a live-in other.

Supportive housing has been associated with reduced rates recidivism and rehospitalization in the forensic population (Casper, 2004; Cherner, Aubry, Ecker, Kerman, & Nandlal, 2014; Cimino & Jennings, 2002). A study looking at outcomes of forensic patients placed in supportive housing in Arkansas, revealed no recidivism for the 18 patients examined during an average of a 508 day follow up (Cimino & Jennings, 2002). In New York, Casper (2004) examined outcomes of forensic patients (defined as individuals with mental illness and criminal justice involvement) placed in supportive housing (n = 39). During a four-year follow-up period, results show that 54% (n = 21) of the sample was discharged from the housing program. Of those 21 residents, five went on to live in a supported type of housing,

four went to a more supervised (i.e., supportive) type of housing, five individuals reoffended, and two were rehospitalized. In Canada, a study conducted on NCRMD accused placed in supportive housing in the province of Ontario reported that 55% of their sample (n = 11) had been rehospitalized, and 15% (n = 3) had committed a new offense during the 18-month follow-up (Cherner et al., 2014). The proportion of readmissions for individuals placed in the community in this study was high; however, using hospital admission as an outcome measure for a forensic population can be misleading in that readmission is often used when patients experience worsening of symptoms, adjustment in medication or are suspected of having used drugs or alcohol (Luettgen, Chrapko, & Reddon, 1998; Viljoen et al., 2011). For instance, in Cherner et al.'s (2014) study, reasons for readmission included medication non-compliance, change in medication leading to functioning difficulties, and mental health deterioration. A review of effectiveness of short-term planned hospitalizations has suggested that this type of care does not promote the revolving door pattern, and shows better community outcomes of patients than long term hospital stays (Johnstone & Zolese, 1999). Factors suggesting deterioration of mental health and risk of relapse and/or recidivism can be more easily monitored when patients have access to on-site support.

The findings described above reveal that providing supportive housing options aids in the transition from institution to the community of individuals living with mental illness as well as those who have gone through the criminal justice or forensic mental health systems. It has been argued that because the presence of prior contact with the criminal justice system is highly predictive of future violent behavior among mentally ill individuals (Monahan et al., 2001), once individuals come in contact with the criminal justice system, interventions should be put in place to reduce the risk of violence (Swanson et al., 2006). In the case of the

NCRMD population managed under a Review Board system for example, efforts should be made to provide adequate support to integrate the individual in the society, to prevent recidivism/rehospitalization, and eventually stop the revolving door phenomenon. To date, the literature specifically focused on outcomes of supportive housing placement for the forensic population remains scarce, and usually involves small sample sizes and short follow-up periods.

Access to supportive housing for forensic patients

Considering the risk associated with premature discharge in the community without adequate support, the Review Board can order discharge disposition with the condition that the accused live in a specific type of housing. However, access to supportive housing has been shown to be limited, especially for individuals who live with a mental illness and who are involved in the criminal justice system.

Mentally ill individuals with a history of criminality face stigma leading them to be often refused from both systems. On the one hand, the services from the judicial system are often reluctant to accept persons with mental illness considering the lack of resources they have to manage the mental health aspect (Lamb & Weinberger, 1998). On the other hand, mental health services are reluctant to accept individuals with a history of violence or criminality due to their inability to provide treatment with adequate risk management structure for this population (Lamb et al., 1999). Mentally ill persons who have been incarcerated may be considered “undesirable clients” by agencies due to characteristics that are often thought to be linked with this population: e.g., dangerousness, substance use, impulsivity (Lamb & Weinberger, 1998). A history of violence can limit access to different community programs such as housing, employment programs and other social activities (Fakhoury, Murray,

Shepherd, & Priebe, 2002; Lamb et al., 1999). For example, lifetime “assaultiveness” has been shown to lead individuals to be rated as “high risk’’ which in turn exclude them from housing (Goldfinger, Schutt, Turner, Tolomiczenko, & Abelman, 1996). Other studies have reported history of violence as an exclusion criterion from housing resources for individuals with psychiatric disability (Chipperfield & Aubry, 1990; Heilbrun, Lawson, Spier, & Libby, 1994). In Montreal, a ministerial report (Herman et al., 2008) describing the housing situation for the forensic population between 2005 and 2007, indicated that 1446 beds were available in housing resources for mental health services users; and that 165 of those beds were designated for forensic service users. Since 2005, the rate of admission to supportive housing specialized for the forensic population in the city of Montreal has been consistently decreasing going from 70% in 2005, to 54.4% in 2006 falling to 17.7% in 2007 (Herman et al., 2008). The wait time for forensic service users was estimated to be more than 1197 days (3 years) in 2006 (Herman et al., 2008). It was reported that forensic patients were frequently refused by regular housing resources, and referred back to forensic housing resources, even when this type of environment was not necessary (Herman et al., 2008).

The difficulty in finding supportive housing for the accused can lead to longer stays in hospital (detention) if there is concern about poor quality of housing or if the accused is waiting for community placement. Such a situation promotes institutionalization and works against rehabilitation (Skipworth & Humberstone, 2002). Nijdam-Jones, Livingston, Verdun-Jones, and Brink (2014) conducted a qualitative study with NCRMD accused in British Columbia showing that indeterminate hospital stays were associated with hopelessness and despair among this population. It is suggested that the unnecessary increased length of stays in inpatient settings compromise treatment efficacy by decreasing motivation (Herman et al.,

2008). Furthermore, from a legal perspective, when individuals under the purview of the Review Board no longer require the restrictions imposed by hospitalization, they must be released to the community. This pressure on the system, the reduced access to housing resources, and perhaps the lack of familiarity of Review Boards with housing resources, might lead the Review Boards to impose no living restrictions to an accused. In that case, NCRMD accused find themselves living in different environments such as with family and friends or independently which puts the individuals at risk of social isolation, unstable housing or homelessness (Griffiths, Dandurand, & Murdoch, 2007).

Certain living arrangements have been shown to be associated with higher risk of violence especially if the individual is financially dependent on the person with whom they live (Estroff, Swanson, Lachicotte, Swartz, & Bolduc, 1998). A study revealed that participants with a diagnosis of schizophrenia and living with their families were at higher risk of self-reported violent acts (Swanson et al., 2006). In conjunction, and as previously stated, individuals with a mental illness were shown to be more likely to target family members than strangers (Crocker, Nicholls, Seto, Charette, et al., in press; Russo et al., 2003). Living alone was also associated with negative outcomes such as increased rates of substance abuse (Newman, Reschovsky, Kaneda, & Hendrick, 1994), less social support (Ridgeway, Simpson, Wittman, & Wheeler, 1994) and sense of social isolation (Dorvil et al., 2005; "<family and client perspective of alternative residential prgrams.pdf>," ; Pulice, McCormick, & Dewees, 1995). Finally, some vulnerable individuals may also face residential instability and homelessness, which have been associated with involvement in the criminal justice system and/or relapse of psychiatric symptoms (Roy et al., 2014).

Significance and objectives of this thesis

The literature presented above reveals that Review Boards rely heavily on clinical testimonies (Crocker et al., 2015) when making decisions on dispositions for NCRMD accused, which itself is based on individual risk factors. Furthermore, findings reveal poor consistency between empirically validated risk factors and the factors predicting dispositions for this population. The study of environmental and contextual factors reveal interesting outcomes associated with placement in supportive housing for the civil population, for mentally ill offenders as well as for forensic patients. However, to date, findings concerning predictors of housing placements of forensic patients and the influence of such placement on the community outcomes of the NCRMD population are either absent from the literature or impeded by limited sample sizes and follow-up periods. Considering that unlike fixed timed limited sentencing for individuals who are found guilty and sent to jail, the Review Board must release an accused when they no longer pose significant threat for society, it is crucial to shed light on the housing placement of NCRMD accused during a Review Board mandate, the factors that predict Review Boards decision to order such placement, and the influence of housing on the criminal and mental health trajectories of NCRMD accused.

Objectives

The objectives of this dissertation are threefold and presented through two papers based on data from the Quebec sample of the National Trajectory Project (Crocker, Nicholls, Seto, Cote, et al., in press). In the first paper (Salem et al., 2015), the objective was to understand the role of housing placement in the criminal recidivism and rehospitalization outcomes of NCRMD accused. In the second paper (Salem et al., submitted), the objectives were to 1) categorize the Quebec's forensic population's custody and housing trajectories and

2) to examine the factors predicting each trajectory. Based on the literature review, we predicted that forensic patients would have better criminal and clinical outcomes if they were conditionally discharged to supportive housing compared with individuals conditionally discharged to independent housing. We also predicted that forensic patients would follow stable disposition trajectories, and that the factors predicting trajectories would align with empirically based risk factors.

Ethical consideration

The full research protocol for the National Trajectory Project was approved by Douglas Mental Health University Institute (see Appendix 1) and the Philippe-Pinel Research Ethics Board (see Appendix 2). Approval for data retrieval from the Régie d'Assurance Maladie du Québec was obtained through the "Commission d'Accès à l'Information" (see Appendix 3). Criminal records were obtained through the Royal Canadian Mounted Police.

Chapter 1. Supportive Housing and Forensic Patient Outcomes

CITATION

Salem, L., Crocker, A. G., Charette, Y., Seto, M. C., Nicholls, T. L., & Côté, G. (2015). Supportive Housing and Forensic Patient Outcomes. *Law and Human Behavior, 39*(3), 311-320.

Leila Salem [1-2], Anne Crocker [2-3], Yanick Charette [1-2], Michael C. Seto PhD [4], Tonia L. Nicholls [5] & Gilles Côté [6]

[1] Université de Montréal

[2] Douglas Mental Health University Institute

[3] McGill University

[4] University of Ottawa Institute for Mental Health Research and Royal Ottawa Health Care Group

[5] University of British Columbia & BC Mental Health and Substance Use Services

[6] Université du Québec à Trois-Rivières & Philippe Pinel Institute

Author notes

Leila Salem, Department of Psychology, *Université de Montréal* and Douglas Mental Health University Institute. Anne G. Crocker, Department of Psychiatry, McGill University and Douglas Mental Health University Institute. Yanick Charette, Department of Criminology, *Université de Montréal*. Michael C. Seto, Forensic Mental Health Research Unit, University of Ottawa Institute of Mental Health Research and Royal Ottawa Health Care Group, Ottawa,

Ontario, Canada; Tonia L. Nicholls, Department of Psychiatry, University of British Columbia and BC Forensic Services Commission, BC Mental Health and Substance Use Services, Coquitlam, British Columbia, Canada; Gilles Côté, Department of Psychology, *Université du Québec à Trois-Rivières* and Research Center, Philippe-Pinel Institute, Montréal, Québec. Yanick Charette is now at the department of sociology, Yale University.
This study could not have been possible without the full collaboration of the Quebec, British Columbia, and Ontario Review Boards, and their respective registrars and chairs. We are especially grateful to Mathieu Proulx, Bernd Walter, and Justices Douglas H. Carruthers and Richard Schneider, the Québec, British Columbia, and consecutive Ontario Review Board chairs, respectively. We sincerely thank Dr. Malijai Caulet, National Coordinator, Ms Erika Jansman-Hart, Dr. Cathy Wilson, Ontario and British-Colombia coordinators respectively. As well, we thank our dedicated research assistants: Erika Braithwaite, Yanick Charette, Dominique Laferrière, Catherine Patenaude, Jean-François Morin, Florence Bonneau, Marlène David, Amanda Stevens, Stephanie Thai, Christian Richter, Duncan Greig, Nancy Monteiro, and Fiona Dyshniku. We would also like to extend our appreciation to the members of the Mental Health and the Law Advisory Committee of the Mental Health Commission of Canada, in particular Justice Edward Ormston and Dr. Patrick Baillie, consecutive chairs of the committee as well as the NTP advisory committee for their continued support, advice, and guidance throughout this study and the interpretation of results. This research was supported by Grant 6356-2004 from Fonds de recherche Québec – Santé (FRQ-S) and a grant from the Mental Health Commission of Canada to Anne G. Crocker. Leila Salem currently holds an FRQ-Health and Society (FRQ-SC) doctoral fellowship. Anne G. Crocker received consecutive salary awards from the Canadian Institutes of Health Research (CIHR) and FRQ-

S, as well as a William Dawson Scholar award from McGill University while conducting this research. Yanick Charette acknowledges the support of the Social Sciences and Humanities Research Council of Canada (SSHRC) in the form of a doctoral fellowship. Tonia L. Nicholls acknowledges the support of the Michael Smith Foundation for Health Research and the CIHR for consecutive salary awards.

Correspondence concerning this article should be addressed to Leila Salem, Douglas Mental Health University Institute, 6875 LaSalle Boulevard, Montreal, Québec H4H 1R3, Canada.

Abstract

In Canada, Review Boards are mandated to evaluate individuals found Not Criminally Responsible on Account of Mental Disorder (NCRMD) on an annual basis and render 1 of 3 dispositions: (a) custody, (b) conditional discharge, or (c) absolute discharge. To promote social reintegration, conditional discharge can be ordered with the condition to live in supportive housing. However, NCRMD accused face great barriers to housing access as a result of the stigma associated with the forensic label. The goal of this study was to evaluate the role of housing in the clinical and criminal trajectories of forensic patients as they reintegrate into the community. Data for this study were extracted from a national study of individuals found NCRMD in Canada (Crocker, Nicholls, Seto, Côté, et al., 2015). The present study focuses on a random sample of NCRMD accused in the province of Québec, who were under a conditional discharge disposition during the study period (n = 837). Controlling for sociodemographic, clinical, and criminal variables, survival analysis showed that individuals placed in independent housing following a conditional discharge from the Review Board were 2.5 times more likely to commit a new offense, nearly 3 times more likely to commit an offense against a person, and 1.4 times more likely to be readmitted for psychiatric treatment compared with individuals residing in supportive housing. These results point to the influence housing can have on the trajectories of forensic patients, above and beyond a range of clinical, criminological, and sociodemographic factors.

Keywords: forensic mental health, housing, not criminally responsible on account of mental disorder, psychiatric services, readmission, recidivism

Supportive housing and forensic patient outcomes

Literature overview

For more than 60 years, access to housing has been recognized as a basic human right and a necessity for living in society (United Nations, 1974, sect. 25). Homelessness has been associated with a higher risk of violence (Swanson et al., 2002) and criminal justice involvement of mentally ill individuals (McNeil, Binder, & Robinson, 2005; see Roy et al., 2014, for a systematic review). However, for justice-involved individuals with a severe mental illness, standard housing conditions may not be sufficient. A review of the literature on community treatment of offenders living with a mental illness indicates that the transfer from a long-term hospitalization or incarceration to an environment with little structure often results in relapse and increases the risk of violence (Lamb, Weinberger, & Gross, 1999; Lindqvist & Skipworth, 2000). Furthermore, the premature release of individuals into community settings offering little supervision can be costly in terms of hospital readmissions or psychiatric treatment in correctional facilities (Lamb & Weinberger, 2005).

Supportive Housing

Various housing models emerged following successive deinstitutionalization movements since the 1960s to provide continuity of care and a solid basis for the return of mentally ill individuals to the community. Following a residential continuum model, different variants of supportive housing (e.g., group homes, supervised apartments, foster homes) were developed (Nelson, Aubry, & Hutchison, 2010). The focus of the current study is on supportive housing, an intermediate step between independent living and institutional care. Supportive housing is defined as housing with on-site professional support intended to address

daily living skills, implement better routines, increase awareness of mental illness, and promote vocational and educational engagement (Soliman, Santos, & Lohr, 2008).

Results of outcome studies of supportive housing are limited by the fact that different models (e.g., group homes, foster homes) are incorporated under this broad label (Nelson et al., 2010). Nonetheless, placement in supportive housing has been associated with reduced number of hospitalizations, increased housing stability, and reduced number and length of incarcerations of mentally ill individuals living in the community (Culhane, Metraux, & Hadley, 2002; Leff et al., 2009; Nelson, Aubry, & Lafrance, 2007). Supportive housing can thus facilitate the transition of individuals living with mental illness, as well as those who have gone through the criminal justice system, in safely returning to the community.

Access to Resources

Access to supportive housing resources in mental health and social services is limited, especially for individuals who have a history of violent behavior, criminality, or a forensic label. Housing services in the criminal justice system are often reluctant to accept persons with serious mental illness because they lack resources to manage mental health needs (Lamb & Weinberger, 1998). Conversely, mental health services are reluctant to accept individuals with a history of violence or criminality (Lamb & Weinberger, 1998; Lamb et al., 1999). This difficulty in finding supportive housing for individuals with a history of forensic hospitalization can lead to longer hospital stays (detention) if there is concern about poor quality of housing or if the treating team is having difficulty securing a suitable community placement. Such a situation encourages institutionalization and works against rehabilitation (Skipworth & Humberstone, 2002). Given limited access to supportive housing, mentally ill persons also live with their families (Hodgins, 2001), who can be a source of support.

However, such living arrangements are not always ideal because family members do not necessarily have the knowledge or skills to offer effective support, or can have negative influences (e.g., drug use in the home). Moreover, conflict with family members may sometimes increase the likelihood of violence, particularly when the mentally ill individual is financially dependent on the person with whom they live (Estroff, Swanson, Lachicotte, Swartz, & Bolduc, 1998). Results from the Canadian national study focusing on individuals found Not Criminally Responsible on account of Mental Disorder (NCRMD) has shown that family members were the most likely victims of index NCRMD offenses against a person (34%) (Crocker, Nicholls, Seto, Charette, et al., in press).

Mentally Ill Individuals in the Forensic System

Little research has been conducted on housing of discharged forensic patients. One study in British Columbia, Canada, found that 47.7% of their NCRMD sample lived independently (i.e., alone in an apartment or hotel), 19.6% were living with a family member, and 19.6% were living in a supervised arrangement during their first community discharge (Livingston, Wilson, Tien, & Bond, 2003). Moreover, housing was not always stable; half of the participants had one to three address changes during the three-year follow-up period. These findings are concerning given that stable housing is an important factor for recovery among individuals living with mental illness (Piat & Sabetti, 2010; Ridgway & Zipple, 1990).

Forensic System in Canada

In Canada, each province and territory has a Review Board responsible for disposition determinations in the management of individuals found NCRMD (Canadian Criminal Code s. 672.34). At the time the study was conducted, Review Boards were required to evaluate each

NCRMD accused on at least an annual basis and render one of three decisions (CCC s. 672.81): (a) detention (custody) with or without conditions, (b) conditional discharge (release into the community with conditions; the person remains under the purview of Review Board), or (c) absolute discharge (complete release from the Review Board). The decision is intended to be the least onerous and least restrictive to the accused, to promote social reintegration (CCC s. 672.54). Thus, the Review Board must prioritize absolute or conditional discharge when individuals no longer pose a significant threat to society and are clinically stable (CCC s. 672.54). Unlike determinate sentencing for individuals who are found guilty, the Review Board must take into consideration the public safety threat posed by NCRMD accused, their clinical condition, as well as other considerations before a conditional or absolute discharge is ordered; housing stability and support are important components of those decisions.

Research shows that an important proportion of NCRMD accused are managed in the community (Crocker, Braithwaite, Côté, Nicholls, & Seto, 2011; Latimer & Lawrence, 2006). Considering the increasing number of individuals treated in the community through outpatient mental health services, it has become crucial to consider the interrelationship of individual and environmental influences on violence (Melnychuk, Verdun-Jones, & Brink, 2009).

The Present Study

The main goal of the present study was to assess the influence of housing placements of forensic psychiatric patients conditionally discharged to the community on two main outcomes (i.e., recidivism and psychiatric readmissions). We predicted that forensic patients would have better criminal and clinical outcomes if they were conditionally discharged to supportive housing compared with individuals conditionally discharged to independent housing, after controlling for clinical, criminal history, and other relevant factors.

Method

Research Design and Study Period

Data for this study were extracted from a multisite national study examining forensic psychiatric patients in Canada (see Crocker, Nicholls, Seto, Côté, et al., in press, for a detailed methodology). The national study used a retrospective longitudinal design in the three largest provinces of Canada (Ontario, Québec and British Columbia) of individuals found NCRMD between May 2000 and April 2005. Because access to provincial administrative health records, including psychiatric hospitalizations, was only available in Québec, it was the only province retained for this study (Crocker, Nicholls, Seto, Côté, et al., in press, for a full description of the population). The average length of follow-up for the sample was 743.86 days (*SD* = 677.20). Because some patients had more than one NCRMD verdict during this time period, the first verdict during the study period was considered as the index verdict, all subsequent verdicts were considered recidivism.

Extensive coding of Review Board files as well as government health records five years before the index offense and up until December 31, 2008 (end of study), or absolute discharge (i.e., no longer under the purview of the provincial Review Board), was conducted. Criminal records were obtained from a national police database, and recidivism was coded up to December 31, 2008 or absolute discharge.

Sample Selection

Given the large number of forensic psychiatric patients hospitalized annually in Québec, the sample was stratified by geographic region; all 17 judicial administrative regions in the province of Québec were included. The Montreal metropolitan area was under sampled because of a high number of NCRMD verdicts, whereas other regions with small numbers of

NCRMD accused were oversampled. The sample consisted of 837 men and women after excluding 85 cases (9.21%) with missing information on housing placement from the initial sample of 922 individuals conditionally discharged after their index NCRMD verdict.

Procedures

Trained research assistants in Québec collected data from the Review Board files and entered information into a computerized data collection program on a secure server to ensure standardization of data collection from various study sites.

Measures and Sources of Information

Four main types of information were collated as independent variables: (a) Contextual (e.g., Review Board dispositions, housing, type of mental health facility), (b) sociodemographic (e.g., age at index verdict and sex), (c) clinical (e.g., diagnosis, psychiatric history), and (d) criminological variables (e.g., criminal history, offense leading to NCRMD verdict).

Contextual information. Forensic psychiatric patients undergo a Review Board hearing at least on an annual basis until their absolute discharge. We coded information regarding processing and outcomes of each hearing. For the purposes of this study, information regarding the evolution of dispositions (detention, conditional discharge or absolute discharge) for each individual was analyzed. Dates of hearings were used to map the trajectory of each participant. Total time detained before conditional discharge and total time spent on conditional discharge until the end of the observation period were then calculated.

Housing. Type of housing was rarely specified in Review Board files. To categorize housing, the patient’s residential address at each hearing was compared with a list of

supportive housing locations in Québec. The participant's address was categorized into supportive housing with on-site staff, other than a hospital (e.g., group homes, supervised apartments, foster homes) or independent housing (i.e., residence with no on-site support staff, whether alone or with family members or housemates or a romantic partner). Because of sample size, it was not possible to compare outcomes per subtype of supportive housing. Moreover, because addresses were only available at the time of the hearing, a decision algorithm was developed to ensure a systematic and reliable computation of placement between hearings based on Review Boards' decisions as well as the addresses provided at the time of hearings. Research assistants' notes also allowed further categorization of transitional placement for the sample.

To compute the housing variable, time spent in each type of housing was calculated (days between each hearing), and the housing placement where the accused spent the most time (independent housing or supportive housing) was used: individuals categorized in the supportive group spent on average 94.88% (*SD* = 13.43) of their conditional discharge time in supportive housing, whereas individuals categorized in the independent housing group spent 97.40% (*SD* = 10.62) of their conditional discharge mandate in independent housing. Another variable was computed with placement at the time of reoffense and most frequent placement for nonrecidivists, as it may be the type of housing at the time of a new offense that is more relevant. However, housing placement was stable across individual mandates and the use of both housing variables yielded similar results. For consistency, we thus report most frequent placement for the whole sample.

Type of mental health services. In Québec, NCRMD cases under the purview of the Review Board are treated in one of several civil psychiatric hospitals (with or without a

dedicated forensic or risk management unit), general hospitals with psychiatric wards, or in the sole forensic psychiatric hospital in the province. The level of expertise in forensic mental health services (i.e., risk assessment and management) may vary considerably from one facility to the next. We therefore factored in the type of facility providing mental health services to conditionally discharged individuals in the analysis of trajectories (civil, whether psychiatric or general hospital, vs. provincial forensic).

Clinical information. Previous psychiatric hospitalizations were coded through the provincial health records. Number of psychiatric hospitalizations in the five years before the index verdict was computed. Primary Axis I diagnosis at the time of index offense (*Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision* [*DSM–IV–TR*]; American Psychiatric Association, 2000), substance use and personality disorders were identified through Review Board files.

Criminological information. All information regarding index offenses was obtained through the Review Board files. Given some individuals had multiple charges within the index NCRMD finding, the most serious charge was selected as the index offense. Index offense was then categorized as severe if the accusations were of murder, attempted murder, or any sexual offense. Criminal history and recidivism were collected using the Royal Canadian Mounted Police centralized criminal records (Crocker, Nicholls, Seto, Côté, et al., in press, for more details). Using both criminal records and Review Board files, we coded information regarding both reoffenses leading to convictions or to a new NCRMD verdict. Moreover, all available information on offenses (i.e., *Canadian Criminal Code* sections and description of the offenses) was recorded and coded using the Uniform Crime Reporting Survey concordance tables (Canadian Centre for Justice Statistics Policing Services Program, 2008). A severity

score was assigned to each index offense using the Crime Severity Index (CSI) (Crocker, Nicholls, Seto, Côté et al., in press, for more details on CSI; Wallace, Turner, Matarazzo, & Babyak, 2009). Two large categories of crime were used, those against a person (e.g., assaults, threats, robbery) and all other offenses (e.g., theft, mischief, etc.). Given that criminal records only provide information regarding sentencing or court verdict dates, an estimation of offense dates was computed using criminal court processing duration (Crocker, Nicholls, Seto, Côté, et al., in press).

Outcomes

Criminal recidivism. All offenses occurring after the first conditional discharge following the index verdict, up to the date of the individual's absolute discharge or the end of the data collection period (December 31st 2008), were coded as recidivism. Given that the goal of the study was to broaden knowledge regarding the influence of housing on recidivism, and to provide possible recommendations that could be implemented in the management of NCRMD individuals while the Review Board still had some leverage, conditional discharge was selected as the start date, and offenses committed post absolute discharge were not considered.

Psychiatric readmission. Dates of psychiatric admissions were examined to establish hospitalization subsequent to conditional discharge. This information was collected through the provincial health records.

Analytic Strategy

The nonparametric Kaplan–Meier method was used to estimate the time-to-event curves of our groups. Studies of time to relapse provide a more powerful comparison of

participants than the proportion of reconviction within a fixed follow-up period (Dolan & Coid, 1992). Group comparisons on the time to event curves were conducted with the Mantel-Cox Log Rank test (M-C log rank). Finally, the Cox regression model was used to analyze the predictive value of multiple explanatory factors on the probability of an event to occur (i.e., rehospitalization or recidivism).

Because some hazard ratios in the Cox regression were not interpretable due to scaling (i.e., hazard ratios close to 1.0), age at index offense, number of past hospitalizations, and number of past offenses were entered into the model after dividing by 10 (e.g., age 34 was entered as 3.4). For example, before this transformation, the odds ratio for age in predicting recidivism against the person was .97 ($p < .05$), which is difficult to interpret. After transformation, the odds ratio was .78 ($p < .05$). Time spent detained was entered in the regression model in years for the same reasons (presented in days in the descriptive section).

Results

Descriptive Results

Housing. As shown in Table I, approximately a quarter (26.6%) of our sample were placed in supportive housing at the time of conditional discharge ($n = 223$), and the other three quarters (73.3%) were placed in independent housing ($n = 614$), forming our two main groups.

Sociodemographic characteristics. Men constituted 82.4% of our sample. The median age at index offense was 35.0 years old ($SD = 12.4$) and ranged from 18 to 82 years of age.

Table I Characteristics of Québec NCRMD Sample

Variables	**Total N (Valid %) or Median (SD)**
Housing	
Supportive Housing	223 (26.6%)
Independent Housing	614 (73.3%)
Sex	
Female	147 (17.6%)
Male	690 (82.4%)
Age	35.00 (12.42)
Forensic hospital	93 (11.5%)
Time detained	11.00 (249.26)
Diagnosis	
Psychotic disorder	537 (64.5%)
Mood disorder	239 (28.7%)
Substance use disorder	258 (31.0%)
Axis II disorder	93 (11.17%)
Psychiatric history	597 (71.3%)
Number of prior hospitalizations	1.0 (3.4)
Lifetime criminal history	399 (47.7%)
Criminal history against a person	226 (27.0%)
Number of past offenses	0.0 (3.79)
Severe index offense	53 (6.3%)
Outcomes	
Criminal recidivism	113 (13.5%)
New offense against a person	67 (8.0%)
Psychiatric rehospitalization	292 (34.9%)
Absolute discharge from Review Board	703 (84.0%)

Hearings and dispositions. Among the conditionally discharged NCRMD individuals, length of detention between NCRMD verdict and conditional discharge within our study period ranged from 0 to 1,778 days (4.9 years), with a median of 11 days (*SD* = 249.3). The majority of the sample was granted a conditional discharge at the time of the index verdict (*n* = 413, 49.3%) or at the first hearing after the index verdict (*n* = 256, 30.6%). These results, as well as the level of severity of index offenses of our sample (Crocker, Nicholls, Seto, Charette,

et al., in press), explain the short median number of days spent in detention before conditional discharge. Finally, 84% of our sample has been absolutely discharged during our study period (n = 703).

Type of facility. Information about type of mental health facility was available for 97.0% of the sample (n = 812). Results show that 88.5% (n = 719) of all conditionally discharged forensic patients in our sample were treated in a civil hospital over the 5-year study period, whereas just 11.5% (n = 93) of conditionally discharged patients received treatment at the province's only secure forensic psychiatric hospital.

Psychiatric history. Government health records show that 71.3% (n = 597) of our sample had a psychiatric hospitalization in the five years before their index verdict. The maximum number of prior hospitalizations was 36 within the five years, with a median of 1 (SD = 3.4).

Diagnosis. Information regarding diagnosis at NCRMD verdict was available for 832 (99.4%) accused. More than half of the sample (64.5%, n = 537) had a psychotic spectrum disorder (e.g., schizophrenia, schizoaffective disorders, unspecified psychosis), and 28.7% presented with a mood disorder (n = 239). Substance use disorder was identified in 31% (n = 258) of patients, whereas presence of an Axis II disorder was recorded for 11.2% of the sample (n = 93). Nearly half of the sample (48.6%, n = 407) presented with more than one psychiatric diagnosis at verdict.

Criminal history. Nearly half the sample had prior convictions (44.9%, n = 376) or NCRMD (8.4%, n = 70) findings. In total, 47.7% (n = 399) of our sample had either a prior conviction, an NCRMD finding, or both before their index forensic admission. Moreover, 27.0% (n = 226) of the sample had a history of offenses against a person, including threats.

Index offense. With regard to the index offense, 6.3% ($n = 53$) of the sample had a severe index offense (i.e., murder, attempted murder, sex offense).

Outcomes

Recidivism. As shown in Table I, during the study period, 13.5% of conditionally discharged individuals ($n = 113$) were convicted or found NCRMD for a new offense. Of the 113 recidivists, 59.3% ($n = 67$) committed a new offense against a person (including threats).

Psychiatric readmission. More than a third of our sample (34.9%, $n = 292$) was readmitted to a psychiatric facility during our study period.

Influence of housing type on criminal, clinical, and review board trajectories

Figures 1 to 1.3 show the survival curves of both groups on general recidivism, recidivism against a person and psychiatric readmission. The *y* axis shows the number of accused who have survived the event (i.e., general recidivism, recidivism against a person and psychiatric readmission), and the *x* axis denotes time in days after conditional discharge. Figure 1 shows that individuals living in supportive housing have a significantly better survival rate to general recidivism than individuals living independently (M-C log rank = 13.46, $p < .001$, exp (b) = 2.42, 95% CI [1.49, 3.93]). Figure 1.1 shows that individuals living in supportive housing also have a significantly better survival rate to recidivism against a person than individuals living independently (M-C log rank = 9.21, $p = .002$, exp (b) = 2.64, 95% CI [1.38, 5.07]). Survival curves for psychiatric readmission following conditional discharge (Figure 1.2) did not reach a statistically significant difference between groups (M-C log rank = 3.61, $p = .057$, exp (b) = 1.28, 95% CI [.99, 1.66]).

Figure 1. Survival curve for recidivism.

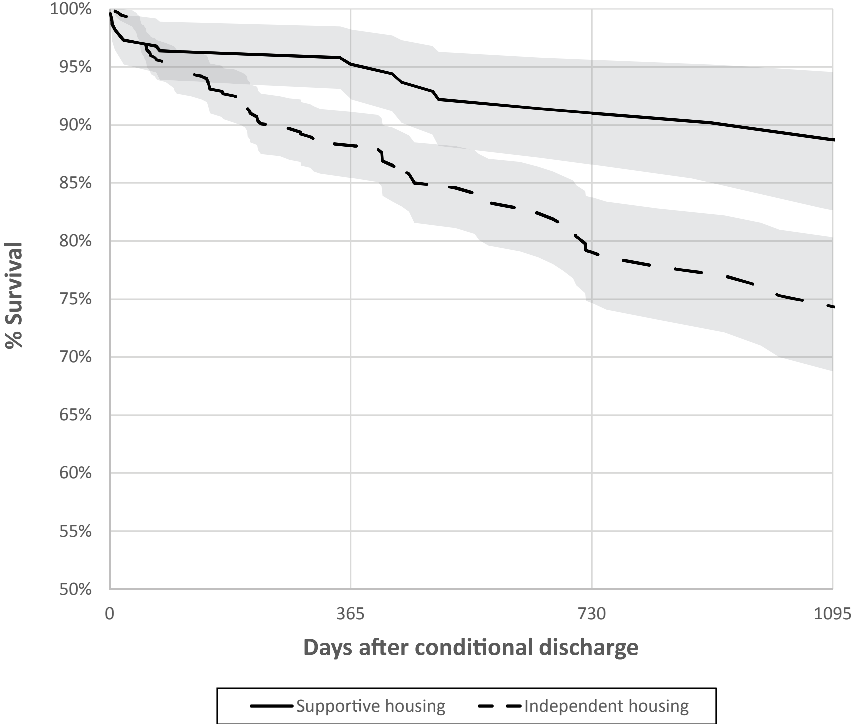


Figure 1.1. Survival curve for recidivism against a person

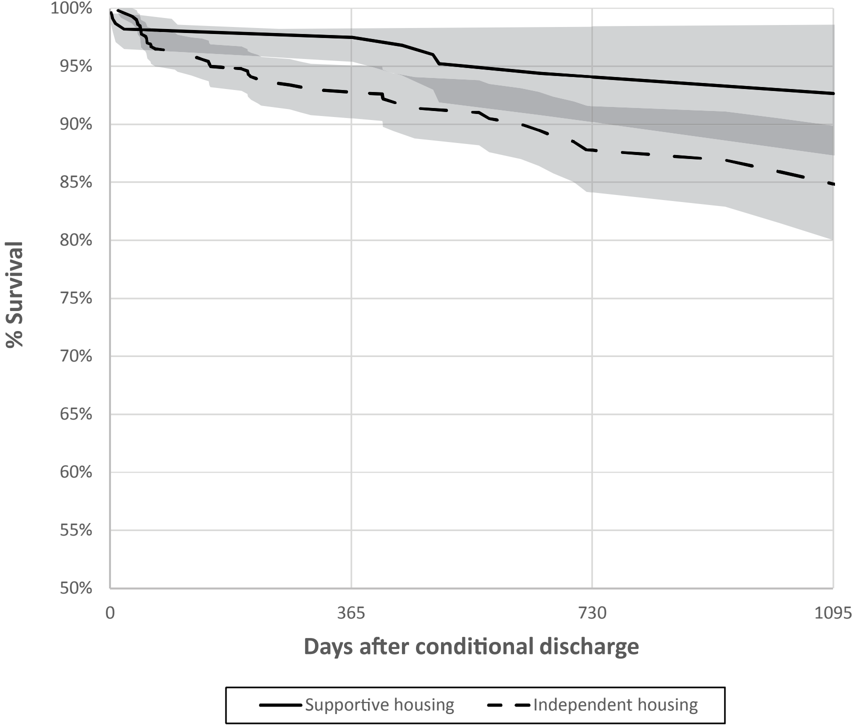
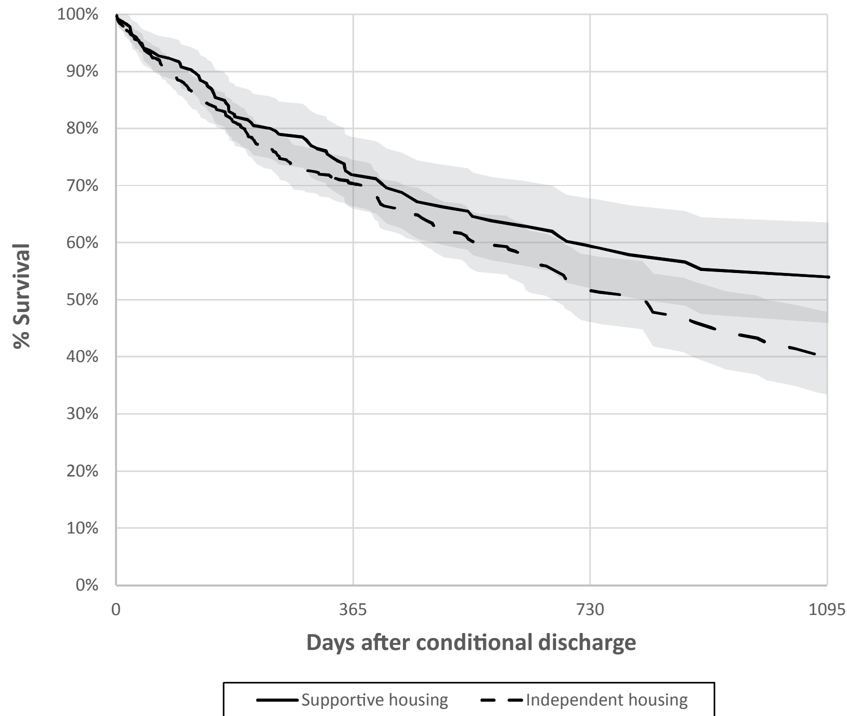


Figure 1.2. Survival curve for psychiatric rehospitalization



Cox Regression

To control for covariates in the influence of housing on our outcome measures, we carried out a Cox regression analysis.

Recidivism. As observed in Table I.1, after controlling for sociodemographic, clinical, and criminal variables, type of housing following a conditional release still had a significant influence on the risk of recidivism in our sample. Independent housing was associated with a 2.43 times greater risk of reoffending after conditional discharge compared with supportive housing (p = .001, 95% CI [1.421, 4.14]). As shown in Table I.1, number of past offenses (exp (b) = 2.06 p < .001, 95% CI [1.39, 3.06]) also significantly increased risk of recidivism in the presence of other variables including housing. Finally, older age at index verdict reduced the risk of committing a new offense during conditional discharge (exp (b) = .79, p = .014, 95%

CI [0.66, 0.95]).

Recidivism against a person. Table I.1 also shows that individuals in independent housing were 2.76 times more likely to commit a new offense against a person (*p* = .006, 95% CI [1.34, 5.65]) than individuals in supportive housing. Number of criminal offenses prior to index offense (exp (b) = 1.93, *p* = .023, 95% CI [1.10, 3.40]) increased the risk for recidivism against a person in the presence of other variables including housing. Late age at index verdict (exp(b) = .78, *p* = .047, 95% CI [0.61, 1.00]) reduced the risk of recidivism against a person in this sample.

Table I.1 Cox regression: criminal recidivism, recidivism against a person and psychiatric rehospitalization

	Criminal Recidivism		**Criminal recidivism against a person**		**Psychiatric rehospitalization**	
	Exp (b)	CI (95%)	Exp (b)	CI (95%)	Exp (b)	CI (95%)
Age at index (/10)	0.79**	0.66-0.95	0.78*	0.61-1.00	0.83**	0.75-0.93
Sex	0.58	0.27-1.2	0.50	0.18-1.43	0.57**	0.38-0.86
Forensic Hospital	1.44	0.83-2.5	1.79	0.90-3.55	0.80	0.54-1.18
Years detained before conditional discharge	0.89	0.66-1.22	0.76	0.48-1.18	0.979	0.81-1.16
Number prior hospitalizations (/10)	0.68	0.33-1.4	0.92	0.38-2.19	2.23***	1.71-2.91
Diagnosis						
Psychotic disorder	0.82	0.36-1.91	0.79	0.28-2.24	1.37	0.74-2.54
Mood disorder	0.93	0.38-2.26	0.69	0.23-2.10	1.64	0.86-3.12
Substance use disorder	1.21	0.80-1.82	1.29	0.76-2.20	0.85	0.66-1.11
Axis II Disorder	1.37	0.76-2.44	1.41	0.66-2.99	1.20	0.82-1.75
Presence of criminal history against a person	1.05	0.66-1.67	1.15	0.63-2.11	1.18	0.87-1.61
Number of past criminal offenses (/10)	2.06***	1.39-3.06	1.93*	1.10-3.40	1.19	0.83-1.70
Presence of a severe index offense	0.69	0.27-1.75	0.78	0.23-2.61	1.12	0.68-1.84
Housing	2.42***	1.421-4.14	2.76**	1.34-5.65	1.36*	1.02-1.81

***p<0.001, **p<0.01, *p<0.05

Psychiatric readmission. As shown in Table I.1, controlling for sociodemographic, clinical, and criminological variables, housing type was significantly related to risk of psychiatric readmission following conditional discharge. In fact, results show that independent housing put individuals at 1.36 times risk of readmission compared with supportive housing ($p = .034$, 95% CI [1.02, 1.81]). Moreover, older age at index verdict (exp (b) = .84, $p = .002$, 95% CI [0.75, 0.93]), and being female (exp (b) = .57, $p = .007$, 95% CI [0.38, 0.86]) reduced the risk of being readmitted for psychiatric treatment on conditional discharge. Number of psychiatric hospitalizations before index verdict (exp (b) = 2.23, $p < .001$, 95% CI [1.71, 2.91]) also significantly increased the risk of readmission.

Discussion

The objective of the present study was to explore the effect of supportive housing during conditional discharge on the criminal and clinical outcomes of individuals found NCRMD. The large majority of conditionally discharged individuals eventually lived in independent housing over our study period, seemingly a direct consequence of the lack of community mental health resources in Québec (Felx et al., 2012) and difficulty in accessing intermediary housing for justice involved individuals with a mental illness (Lamb & Weinberger, 1998; Lamb et al., 1999). Immediately after their NCRMD verdict, more than 30% of our conditionally discharged sample returned to independent housing in the community, even before the Review Board called an initial hearing. Slightly more than one-tenth of the conditionally discharged sample in this study were convicted or found NCRMD for a new offense during the follow-up period; more than half were for offenses against a person but it is important to be mindful that this included threats. When controlling for sociodemographic, contextual, criminal, and clinical variables, supportive housing was

associated with a lower risk of recidivism in general and recidivism involving offenses against a person in particular, compared with independent housing. Young age at index verdict and number of past offenses also significantly increased the risk of recidivism of our sample. Age and offense history have been repeatedly demonstrated to predict recidivism among both general offenders and mentally ill offenders (Albonetti & Hepburn, 1997; Bonta, Law, & Hanson, 1998; Gendreau, Little, & Goggin, 1996; Hodgins, 1992; Swanson et al., 1998). Time spent in detention prior to conditional discharge did not seem to have an influence on criminal recidivism in the presence of control variables, nor did the presence of a severe index offense.

These results are of particular interest as severity of index offense has been strongly associated with tribunal decisions for NCRMD individuals across three provinces in Canada (Crocker, Nicholls, Charette, & Seto, 2014). Moreover, recent changes were introduced into the Canadian legislation for NCRMD individuals. In fact, the Canadian Government brought amendments to Part XX.1 of the *Canadian Criminal Code* dealing with individuals found NCRMD. In what appears to be an effort to improve the Review Boards' ability to manage risk of reoffending, it is indicated in Bill C-14 (2013) that accused be identified by the court as "high risk" if there is a "substantial likelihood" that they will reoffend or if the acts for which they are found NCRMD were of "brutal nature as to indicate a risk of grave harm to the public" (CCC s. 672.64). Moreover, and although prolonged detention has been shown to work against rehabilitation (Skipworth & Humberstone, 2002), Bill C-14 proposes to set a hearing after three years of detention for individuals deemed "high risk" rather than the usual annual hearings granted to NCRMD accused (CCC s. 672.81). The results of the present study reveal that neither length of detention nor severe index offense significantly predict recidivism, when contextual variables such as housing are taken into account. Attributing risk

of reoffending exclusively to past violence is an individual level approach to risk assessment and management that is not supported by empirical evidence, and overlooks dynamic risk factors and community level factors as correlates of violence and criminality (Sirotich, 2008).

The present study suggests that supportive housing is effective in attending to dynamic criminogenic risk factors above and beyond static factors such as criminal history.
Our results also indicate that supportive housing was associated with a lower risk of psychiatric readmission during conditional discharge when controlling for other variables. Young age at index offense, being male, and number of past psychiatric admissions increased the risk of psychiatric readmission, which has been shown in the literature (Øiesvold et al., 2000; Swett, 1995). Although the mechanisms through which rehospitalization is reduced are speculative at the moment (e.g., better management of symptoms and medication), we can conclude that supportive housing plays a role in the success of community reintegration of NCRMD accused by maintaining individuals in the community with decreased rates of psychiatric readmissions compared with individuals living in independent settings. It has been suggested that the longer a person stays in the community the less likely they are to be readmitted (Melnychuk et al., 2009). Findings of the present study similarly suggest that supportive housing reduces the revolving door phenomenon and thereby facilitates social reintegration by attending to the clinical risk factors of this population.

Strengths

The present study is innovative, as no published work has been conducted on the effect of housing environments on the criminal and clinical trajectories of individuals found NCRMD in Canada. Moreover, this study analyzed a fairly large sample, with an important female proportion, thereby allowing us to control for gender. Lastly, to map out clinical and

criminal outcomes influenced by housing while controlling for other risk factors, survival analysis with Cox regression provided us with a more precise indication of the time to 'fail' related to each placement condition (Fisher & Lin, 1999).

Limitations

An important limitation of this study relates to the fact that only officially recorded offenses were available for our analysis of recidivism and criminal history. According to Statistics Canada, about two-thirds of criminal incidents are not reported to the police (Perreault & Brennan, 2009). Evidence of this phenomenon has also been found in studies of psychiatric patients. For instance, using official records alone, Steadman et al. (1998) found that 4.5% of their sample of discharged civil psychiatric patients had committed an act of violence; this proportion went up to 23.7% when adding patient-reported acts that were not available from official records. Moreover, violence in psychiatric institutions is rarely criminalized; in a study conducted among professionals working in psychiatric services, only 33% of victims reported the offenses (Larose & Bigaouette, 1999). It is possible that staff in supportive housing settings have a higher threshold of tolerance for assaultive and criminal behavior and may be less likely to criminalize residents' actions. Alternatively, however, individuals in supportive housing are expected to be more closely monitored and thus might be expected to have higher rates of adverse outcomes recorded. Further research is needed to examine these issues.

It was not possible to distinguish between preventive and reactive psychiatric readmission in the information that was available to us. Future studies should analyze hospital readmissions prompted by deteriorating mental health, or concerns about safety separately from readmissions following a suspected offense. Case managers and administrators noted that

it could be hypothesized that individuals in supportive housing are more likely to be directed toward mental health services when agitated or when demonstrating violent or intimidating attitudes, whereas individuals in independent housing might be more likely to be managed by the judicial system. Through constant contact with care teams, supportive housing might play a role in reducing the likelihood of such events occurring by providing mental health services instead of criminalizing the mentally ill individual. This could be explored further in future research.

Future Directions

Several types of supportive housing are available in the community, including group homes with 24/7 professional presence or supervised apartments with staff present during business hours only. Moreover, even within the same type of supportive housing, level of supervision may differ according to individual needs (e.g., medication can be managed by the staff or autonomously, depending on the capability of the resident). Because of sample size limitations, results from this study do not allow us to distinguish between types of supportive housing, and to determine the level of supervision required in order for supportive housing to be effective in reducing criminal recidivism and ensuring appropriate clinical management. We also did not have information on the quality of supervision or quality of supportive housing, which we would expect would have an impact on outcomes. Quality of supportive housing can vary greatly, from high-quality supervision that uses evidence-based practices tailored to the criminogenic needs of the individual, to lower quality supervision that is inconsistent or indifferent. Quality of supportive housing can also vary from high-quality housing that is clean, comfortable, and safe to lower-quality housing that lacks these qualities. Further research is needed to understand the parameters of supervision required.

The present study did not control for neighborhood characteristics in the prediction of recidivism among our sample. Studies have shown that neighborhood characteristics should be attended to when looking at risk of violence for mentally ill individuals living in the community. Factors associated with violence (e.g., mental illness or substance abuse) have been shown to be more prevalent in socially disadvantaged neighborhoods (Silver, Mulvey, & Swanson, 2002). Some of the associations between individual factors and violence among the mentally ill have been found to be reduced when neighborhood variables were controlled for in prior studies. For instance, in a study conducted by Silver, Mulvey, and Monahan (1999), patients discharged to neighborhoods with concentrated poverty were found to be 2.7 times more likely to engage in violence compared to patients discharged to neighborhoods with less poverty. Moreover, in Silver and colleagues' study (1999), the association between presence of prior arrest and subsequent violent behavior was reduced when concentrated poverty was statistically controlled.

There is also a need to focus on the factors that come into play regarding social reintegration (e.g., monitoring of mental health status; vocational and educational engagement) to provide more specific conclusions as to the processes by which recidivism is reduced. The literature on supportive housing allows us to suggest different mechanisms through which supportive housing reduced the risk of recidivism and rehospitalization in our sample. A study conducted in Montreal, Québec reported that supportive housing offered mentally ill participants a place to integrate new skills such as socializing or solving daily problems (Dorvil, Morin, Beaulieu, & Robert, 2005). That study also revealed that the presence of others in the supportive housing environment prevented the participants from experiencing loneliness, which was considered to be a precipitant of relapse. These results are

consistent with those found in a study focusing on predictors of rehospitalization among conditionally discharged patients (Riordan, Haque, & Humphreys, 2006). In that study, individuals were almost five times more likely to be rehospitalized if they did not have the support of a live-in other. Similarly, in a sample of mentally ill offenders in Italy, those who had committed a homicide were usually suffering from active symptoms of schizophrenia in the period leading to the offense, which resulted in further isolation (Russo, Salomone, & Della Villa, 2003). According to the authors, such an "at risk situation" is difficult to identify in the absence of treatment. They concluded that there is a strong need to build prevention facilities to ensure that individuals who are at risk of committing violence be brought to the attention of mental health professionals. In that sense, it may also be the case that independent housing with informal supervision by family members, partners, or housemates (checking medication compliance, intervening when there appears to be deterioration in mental health stability) may influence psychiatric readmission and recidivism, compared with living alone. Future studies should investigate the influence of informal supervision for forensic patients released to independent housing. Research would also benefit from looking at criminal and clinical outcomes of forensic patients post absolute discharge from Review Boards to evaluate the long-term effect of housing placement on trajectories of NCRMD accused.

Conclusion

Because of the scarcity of forensic community resources, housing in particular, individuals who might be ready for that type of community reintegration may be kept in custody for longer than is necessary. This caveat in the administration of services delays the reintegration of the accused, and increases backlog and wait times in system. This study provides information justifying the relevance of pursuing research on housing placement of a

forensic population and developing strategies to increase accessibility to transitional housing. When evaluating the threat that forensic patients pose to society, Review Boards have been shown to focus on individual risk factors associated with violence among mentally ill individuals (Grant, 1997). In fact, violence by individuals with mental illness is the result of multiple factors with compounded effects. It has also been argued that there is a need to shift away from prediction and move toward prevention and management of violence among individuals with mental illness (Hart, 1998; Heilbrun, 1997). Seeing that individual characteristics are often static, and hence have limited intervention potential (e.g., past criminal history, age, or gender), the study of factors related to the post-release environment of the accused and their impact on community reintegration seems to be a logical avenue to pursue to enhance the success of community reintegration of former forensic inpatients. The results of the present study reveal the protective value of supportive housing for a forensic population, and concur with Silver's view (Silver, 2000) that we have to account for the social context in which mental illness and violence actually occur to understand the association between mental illness and violence.

References

Albonetti, C.A., & Hepburn, J.R. (1997). Probation revocation: a proportional hazards model of the conditionning effect of social disadvantage. *Social Problems, 44*(1), 124-138.

American Psychiatric Association, APA. (2000). *Diagnostic and statistical manual of mental disorders (4th ed., text rev.)*. Washington, DC: Author.

Bill-C14, Not responsible reform act. (2013). 1st reading November 25th 2013, 41st parliament, 2nd Session. Retrieved from the parliament of Canada website: http://www.parl.gc.ca/HousePublications/Publication.aspx?Language=E&Mode=1&DocId=6540830

Bonta, J., Law, M., & Hanson, K. (1998). The prediction of criminal and violent recidivism among mentally disordered offenders: a meta-analysis. *Psychological bulletin, 123*(2), 123-142.

Canadian Centre for Justice Statistics Policing services Program. Uniform Crime Reporting Incident-Based Survey, Reporting Manual. (2008). Ottawa: Statistics Canada.

Criminal Code of Canada, R.S.C., C-46 (1985).

Crocker, A.G., Braithwaite, E., Côté, G., Nicholls, T.L., & Seto, M.C. (2011). To detain or to release? Correlates of dispositions for individuals declared not criminally responsible on account of mental disorder. *The Canadian Journal of Psychiatry, 56*(5), 293-302.

Crocker, A.G., Nicholls, T.N., Charette, Y., & Seto, M. C. (2014). Dynamic and static factors associated with discharge dispositions: The National Trajectory Project of Individuals found Not Criminally Responsible on Account of Mental Disorder in Canada. *Special issue of Behavioral Sciences and the Law on Conditional Release* (minor revisions).

Crocker, A.G., Nicholls, T.N., Seto, M. C., Charette, Y., Cote, G., & Caulet, M. (2014). The National Trajectory Project of Individuals found Not Criminally Responsible on Account of Mental Disorder in Canada. Part 2–The people behind the label. *Canadian Journal of Psychiatry* (accepted).

Crocker, A.G., Nicholls, T.N., Seto, M. C., Cote, G., Charette, Y., Latimer, E., & Caulet, M. (2014). The National Trajectory Project of Individuals found Not Criminally Responsible on account of Mental Disorder in Canada. Part 1: Context and Methods. *Canadian Journal of Psychiatry* (accepted).

Culhane, Dennis P., Metraux, Stephen, & Hadley, Trevor. (2002). Public service reductions associated with placement of homeless persons with severe mental illness in supportive housing. *Housing Policy Debate, 13*(1), 107-163. doi: 10.1080/10511482.2002.9521437

Dolan, B., & Coid, J. (1992). The outcome of treatment of psychotic disorder. London: Gaskell.

Dorvil, Henri., Morin, Paul., Beaulieu, Alain., & Robert, Dominique. (2005). Housing as a Social Integration Factor for People Classified as Mentally Ill. *Housing Studies, 20*(3), 497-519.

Éiesvold, T., Saarento, O., Sytema, S., Vinding, H., GoÈ stas, G., LoÈnnerberg, O., . . . Hansson, L. (2000). Predictors for readmission risk of new patients: the Nordic Comparative Study on Sectorized Psychiatry. *Acta Psychiatrica Scandinavia, 101*, 367-373.

Estroff, S.E., Swanson, J.W., Lachicotte, W.S., Swartz, M., & Bolduc, M. (1998). Risk reconsidered: targets of violence in the social networks of people with serious psychiatric disorders. *Soc Psychiatry Psychiatr Epidemiol, 33*, S95-S101.

Felx, A., Piat, M., Lesage, A., Côté, S., Cadorette, S., & Corbière, M. (2012). De l'institution à l'appartement; l'éventail du logement pour les personnes avec un trouble mental. *Manuel de réadaptation psychiatrique* (2 ed., pp. 244-273): Presse de l'Université du Québec.

Fisher, L.D., & Lin, D.Y. (1999). Time-dependent covariates in the cox proportional-hazards regression model. *Annu. Rev. Public Health, 20*, 145-157.

Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: what works! *Criminology, 34*(4), 575-607.

Grant, I. (1997). Canada's new mental disorder disposition provisions: a case study of British Columbia criminal code review board. *Int J Law Psychiatry, 20*(4), 419-443.

Hart, S. D. (1998). The role of psychopathy in assessing risk for violence: conceptual and methodological issues. *Legal and Criminological Psychology, 3*, 121-137.

Heilbrun, K. (1997). Prediction versus management models relevant to risk assessment: the importance of legal decision-making context. *Law Hum Behav, 21*(4), 347-359.

Hodgins, S. (1992). Mental disorder, intellectual deficiency, and crime. *Archives of General Psychiatry, 49*, 476-483.

Hodgins, S. (2001). The major mental disorders and crime: stop debating and start treating and preventing. *Int J Law Psychiatry, 20*, 427-446.

Lamb, R.H., & Weinberger, L.E. (1998). Persons with severe mental illness in jails and prisons: a review. *Psychiatric Services, 49*(4), 483-493.

Lamb, R.H., & Weinberger, L.E. (2005). The shift of psychiatric inpatient care from hospitals to jails and prisons. *J Am Acad Psychiatry Law, 33*, 529-534.

Lamb, R.H., Weinberger, L.E., & Gross, B.H. (1999). Community treatment of severely mentally ill offenders under the jurisdiction of the criminal justice system: a review. *Psychiatric Services, 50*, 907-913.

Larose, D., & Bigaouette, M. (1999). Les agressions dans les urgences générales et psychiatriques. *Objectif Prévention, 22*(1), 18-21.

Latimer, J., & Lawrence, A. (2006). The review board systems in Canada: an overview of the results from the mentally disordered accused data collection study (R. a. S. Division, Trans.). Canada: Department of Justice Canada.

Leff, S.H., Chow, C.M., Pepin, R., Conley, J., Allen, E.I., & Seaman, C.A. (2009). Does one size fit all? What we can and can't learn from a meta-analysis of housing models for persons with mental illness. *Psychiatric Services, 60*(4), 10.

Lindqvist, P., & Skipworth, J. (2000). Evidence-based rehabilitation in forensic psychiatry. *The British Journal of Psychiatry, 176*(4), 320-323.

Livingston, J.D., Wilson, D., Tien, G., & Bond, L. (2003). A follow-up study of persons found not criminally responsible on account of mental disorder in British Columbia. *Canadian Journal of Psychiatry, 48*(6), 408-415.

McNeil, D.E., Binder, R.L., & Robinson, J.C. (2005). Incarceration associated with homelessness, mental disorder and co-occuring substance abuse. *Psychiatric Services, 56*(7), 7.

Melnychuk, Rachel M., Verdun-Jones, Simon N., & Brink, Johann. (2009). Geographic Risk Management: A Spatial Study of Mentally Disordered Offenders Discharged from

Forensic Psychiatric Care. *International Journal of Forensic Mental Health, 8*(3), 148-168.

Nelson, G., Aubry, T., & Hutchison, J. (2010). Housing and mental health *International Encyclopedia of Rehabilitation*. University of Buffalo: Center for International Rehabilitation Research Information and Exchange.

Nelson, G., Aubry, T., & Lafrance, A. (2007). A review of the literature on the effectiveness of housing and support, assertive community treatment, and intensive case management interventions for persons with mental illness who have been homeless. *American Journal of Orthopsychiatry, 77*(3), 12.

Perreault, S., & Brennan, S. (2009). Criminal victimization in Canada, 2009. In C. C. f. J. S. Statistics Canada (Ed.), *Juristat*. Canada.

Piat, M., & Sabetti, J. (2010). Residential housing for persons with serious mental illness: the fifty year experience with foster homes in canada *International Encyclopedia of Rehabilitation* (pp. 1-14): Center for International Rehabilitation Research Information and Exchange.

Ridgway, P., & Zipple, A. M. (1990). The paradigm shift in residential services: From the linear continuum to supported housing approaches. *Psychosocial Rehabilitation Journal, 13*(4), 11-31.

Riordan, S., Haque, S., & Humphreys, M. (2006). Possible predictors of outcome for conditionnally discharged patients: a preliminary study. *Medicine, Science and the Law, 46*(1), 6.

Roy, L., Crocker, A.G., Nicholls, T.N., Latimer, E.A., Reyes Ayllon, A. (2014). Criminal behavior and victimization among homeless individuals with severe mental illness: a systematic review. *Psychiatric Services, 6*(65), 739-750.

Russo, G., Salomone, L. , & Della Villa, L. (2003). The characteristics of criminal and noncriminal mentally disordered patients. *Int J Law Psychiatry, 26*(4), 417-435.

Silver, E. (2000). Race, neighborhood disadvantage, and violence among persons with mental disorders: the importance of contextual measurement. *Law and Human Behavior, 24*(4), 8.

Silver, E., Mulvey, E.P., & Monahan, J. (1999). Assessing violence risk among discharged psychiatric patients: toward an ecological approach. *Law and Human Behavior, 23*(2), 19.

Silver, E., Mulvey, E.P., & Swanson, J.W. (2002). Neighborhood structural characteristics and mental disorder: Faris and Dunham revisited. *Social Science and Medicine, 55*, 14.

Sirotich, Frank. (2008). Correlates of Crime and Violence among Persons with Mental Disorder: An Evidence-Based Review. *Brief Treatment and Crisis Intervention, 8*(2), 171-194.

Skipworth, J., & Humberstone, V. (2002). Community forensic psychiatry: restoring some sanity to forensic psychiatric rehabilitation. *Acta Psychiatrica Scandinavia, 106*(412), 57-53.

Soliman, M., Santos, A.M., & Lohr, J.B. (2008). Emergency, inpatient, and residential treatment. In K. T. Mueser, & Jeste, D.V (Ed.), *Clinical Handbook of Schizophrenia*. United States The Guilford Press.

Steadman, H. J., Mulvey, E.P., Monahan, J., Robbins, P.C., Appelbaum, P.S., Grisso, T., . . . Silver, E. (1998). Violence by people discharged from acute psychiatric impatient

facilities and by others in the same neighborhoods. *Archives of General Psychiatry, 55*, 393-401.

Swanson, J.W., Swartz, M.S., Essock, S.M., Osher, F.C., Wagner, R., Goodman, L.A., . . . Meador, K.G. (2002). The social-environmental context of violent behavior in persons treated for severe mental illness. *American Journal of Public Health, 92*, 10.

Swanson, J.W., Swartz, M.S., Estroff, S., Borum, R., Wagner, R., & Hiday, V. (1998). Psychiatric impairment, social contact, and violent behavior: evidence from a study of outpatient-committed persons with severe mental disorder. *Soc Psychiatry Psychiatr Epidemiol, 33*, S86-S94.

Swett, C. (1995). Symptom severity and number of previous psychiatric admissions as predictors of readmission. *Psychiatric Services, 46*(5), 482-485.

United Nations. (1974). *The universal declaration of human rights. (1974). Washington, DC: U.S. Catholic Conference, Division of Latin America*.

Wallace, C., Turner, W., Matarazzo, A., & Babyak, C. (2009). *Measuring crime in canada: introducing the Crime Severity Index and improvements to the Uniform Crime Reporting Survey*. Canada: Ministry of Industry.

Chapter 2. Housing Trajectories of Forensic Patients

Submitted to Behavioral Sciences and Law

Housing trajectories of forensic psychiatric patients

Leila Salem [1-2], Anne G. Crocker [2,3], Yanick Charette [2,4], Christopher, M. Earls [1], Tonia L. Nicholls [5], Michael C. Seto [6].

[1] Université de Montréal

[2] Douglas Mental Health University Institute

[3] McGill University

[4] Yale University

[5] University of British Columbia & British Columbia Mental Health and Substance Use Services

[6] Royal Ottawa Health Care Group

Author notes

Leila Salem currently holds an *FRQ-SC* doctoral fellowship. Anne G. Crocker received consecutive salary awards from the Canadian Institutes of Health Research (CIHR) and an *FRQ-S*, as well as a William Dawson Scholar award from McGill University while conducting this research. Tonia L. Nicholls would like to acknowledge the support of the Michael Smith Foundation for Health Research and the CIHR for consecutive salary awards.

This research was supported by grant #6356-2004 from the *FRQ-S* and a grant from the Mental Health Commission of Canada to Anne G. Crocker.

Address for correspondence: Leila Salem, Douglas Mental Health University Institute, 6875 LaSalle Boulevard, Montreal, Québec, H4H 1R3, CANADA.

Abstract

Objectives: Describe the disposition and housing trajectories of individuals found Not Criminally Responsible on account of Mental Disorder (NCRMD) and inform our understanding of the factors that predict different trajectories. Methods: Disposition and housing status were coded from files for 934 NCRMD accused over the 36 month period following their index verdict. Results: Sequential data analysis resulted in four distinct trajectories: detention in hospital (43%), conditional discharge in supportive housing (11%), conditional discharge in independent housing (32%), and discharge to unknown housing (14%). The likelihood of a placement in supportive housing compared to being detained in hospital significantly decreased for individuals treated in a forensic hospital, as well as those with an increased index offense severity. On the other hand, less restrictive trajectories (i.e. independent housing and absolute discharge in unknown housing placement) were significantly influenced by clinical factors such as reduced number of prior psychiatric hospitalizations, a diagnosis of mood disorder and an absence of a comorbid personality disorder diagnosis. Conclusion: The results revealed little variation in the disposition and housing trajectories of NCRMD accused in the 3 years following their verdict. Furthermore, decisions on disposition and housing trajectories of NCRMD individuals seem to be highly influenced by the mental condition of the accused, and point to a knowledge-practice gap between known risk factors and predictors of use of community resources for the forensic population.

Keywords: *Housing, not criminally responsible on account of mental disorder, disposition, review board, forensic.*

Introduction

Over the past 25 years, continuity of care has been ensured by providing hospitalized individuals with serious mental illness access to supportive housing upon their return to the community (Parkinson, Nelson, & Horgan, 1999). Supportive housing is defined as housing with on-site professional mental health support, intended to address daily living skills, implement better routines, and promote vocational and educational engagement (Rog, 2004; Sylvestre, Ollenberg, & Trainor, 2007). Housing stability and fewer hospitalizations and incarcerations have all been associated with supportive housing placements for individuals with a serious mental illness, as well as those involved in the criminal justice system (Caton, Wyatt, Felix, Grunberg, & Dominguez, 1993; Cherner, Aubry, Ecker, Kerman, & Nandlal, 2014; Culhane, Metraux, & Hadley, 2002; Leff et al., 2009; Murray, Baier, North, Lato, & Eskew, 1997; Proscio, 2000; Salem et al., 2014; Tsemberis & Eisenberg, 2000). However, research on supportive housing for forensic populations is scarce, and usually involves small sample sizes (Cherner et al., 2014) and/or short follow-up periods (Salem et al., 2014). Research on supportive housing for the forensic population is needed as such resources are often limited for mentally ill individuals involved in the criminal justice system (Heilbrun, Lawson, Spier, & Libby, 1994; Lamb & Weinberger, 1998; Lamb, Weinberger, & Gross, 1999).

Forensic mental health

In Canada, provincial Review Boards render dispositions regarding the custody and management of individuals found Not Criminally Responsible on account of Mental Disorder (NCRMD) (*Canadian Criminal Code* s. 672.34). Hearings are held wherein the Review Board has the option of ordering one of three dispositions: detention in hospital; conditional

discharge to the community; or absolute discharge from Review Board jurisdiction. These hearings are held on at least an annual basis, and/or when circumstances substantially change (e.g., following elopement). When making their decisions, Review Boards are to promote the community reintegration of the accused while taking into account the safety of the public as well as the mental condition of the accused (CCC s. 672.54). Considering that housing influences community outcomes of mentally ill individuals (Estroff, Swanson, Lachicotte, Swartz, & Bolduc, 1998; Friedrich, Hollingsworth, Hradek, Friedrich, & Kennith, 1999; Hodgins, 2001; Newman, Reschovsky, Kaneda, & Hendrick, 1994; Ridgeway, Simpson, Wittman, & Wheeler, 1994; Salem et al., 2014; Swanson, Van Dorn, Monahan, & Swartz, 2006), Review Boards have the option, when ordering a conditional discharge, to order that the accused live in supportive housing. Review Boards may also decide not to impose any living restrictions, and some NCRMD accused live on their own, with friends or with family. According to the Risk, Needs, Responsitivity (RNR) model (Andrews, Bonta, & Hodge, 1990), the level of service provided to an offender should match the offender's risk to reoffend (Risk Principle) and the needs of the accused should be assessed and targeted in treatment (Needs Principle).

Several studies have identified predictors of dispositions in the forensic population that do not reflect risk for recidivism (Crocker, Braithwaite, Côté, Nicholls, & Seto, 2011; Crocker, Nicholls, Charette, & Seto, 2014; Desmarais, Hucker, Brink, & De Freitas, 2008; Grant, Ogloff, & Douglas, 2000; Latimer & Lawrence, 2006; Livingston, Wilson, Tien, & Bond, 2003; Melnychuk, Verdun-Jones, & Brink, 2009; Roesch et al., 1997). For instance, age, substance use and prior criminal history do not predict dispositions (Callahan & Silver, 1998; Crocker et al., 2011; Crocker et al., 2014; McDermott & Thompson, 2006), although

they have been strongly associated with risk of reoffending or revocation of conditional discharge (Bonta, Law, & Hanson, 1998; Brekke, Prindle, Bae, & Long, 2001; Harris, Rice, & Quinsey, 1993; Monson, Gunnin, Fogel, & Kyle, 2001; Porporino & Motiuk, 1995; Riordan, Haque, & Humphreys, 2006). Conversely, some factors that do predict dispositions, such as nature and severity of index offense (Callahan & Silver, 1998; Crocker et al., 2014; McDermott & Thompson, 2006) or physical attractiveness (Hilton & Simmons, 2001), have little empirical support as risk factors for recidivism (Bonta, Blais, & Wilson, 2014; Bonta et al., 1998). Furthermore, as described in Wilson et al. (2015) and in Côté et al. (2012), few empirically supported risk factors are being included in the written reports and reasons for decision by the Review Board.

The objective of the present study is to describe patterns of dispositions, particularly with regards to housing placement upon conditional discharge from the Review Boards, and to analyze contextual, criminal and clinical factors that distinguish housing trajectories. If the Review Boards are making decisions based on the level of risk and needs of the accused, we would expect individuals who are detained in hospital to be higher in risk and clinical needs than those who are conditionally discharged in supportive housing, then independent housing, and then those receiving an absolute discharge in unknown housing placement.

Method

Sample

Data were extracted from a multi-site national study examining forensic psychiatric patients in Canada (Crocker et al., 2015). The present study focuses on individuals found NCRMD between May 2000 and April 2005 (i.e., the index verdict) in the Canadian province

of Québec. Housing status was available for 934 individuals (85%) of the Québec sample (N=1094); those without housing status information did not differ on the study variables.

Measures and sources of information

Characteristics of the accused

Primary diagnosis at the time of the index offense, as well as presence of a co-occurring diagnosis of substance use or personality disorder, were identified through clinical reports in Review Boards files. Using provincial health records registry, the number of psychiatric hospitalizations in the five years preceding the index verdict was considered.

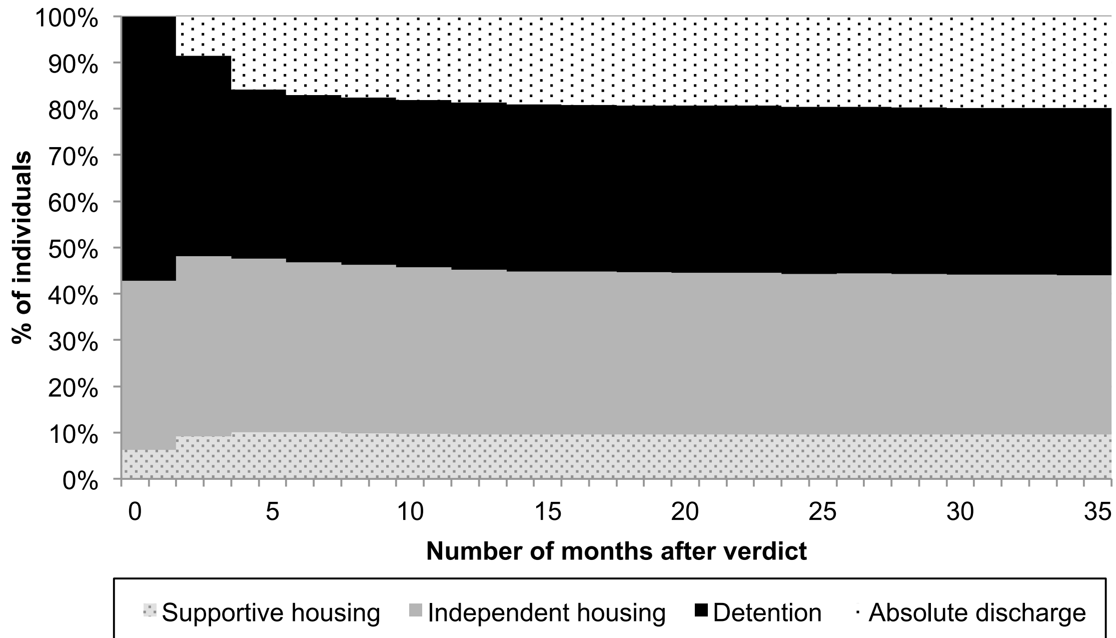
In Québec, civil psychiatric facilities in addition to the sole provincial forensic psychiatric hospital are designated to treat and manage NCRMD accused. The risk assessment and management approach of the forensic hospital (Crocker & Côté, 2009), as well as the stigma associated with forensic hospital service users might have an impact on accessibility to housing resources. The type of facility responsible for the management of accused was therefore taken into account.

The severity of the index offense was classified using the Canadian Crime Severity Index (CSI) (Wallace, Turner, Matarazzo, & Babyak, 2009). Given some individuals had multiple charges leading to a NCRMD finding, the most serious charge was selected as the index offense. Criminal history was considered using the sum of lifetime convictions or NCRMD verdicts based on criminal records and Review Boards' files.

Housing placement

Over a 3 year period following the index verdict, a month by month sequence of four housing statuses were analyzed, as hearings are not exactly a year apart, and when changes in dispositions need to be made, individuals may have more than one hearing during the year. Housing status depends on the disposition chosen by the Review Board. An NCRMD accused may be placed in one of four housing options based on the Review Board's decision: detention in hospital, conditional discharge in supportive housing, conditional discharge in independent housing, or absolute discharge to an unknown housing placement. This decision, as stated in the Canadian Criminal Code must take into account "the need to protect the public from dangerous persons, the mental condition of the accused, the reintegration of the accused into society and the other needs of the accused" (CCC s. 672.54). Information regarding housing following absolute discharge was not available as individuals were no longer under a Review Board mandate. Figure 2 presents the average distribution of statuses during this period.

Figure 2. Distribution of custody states for the 36 months following the index verdict



Analyses

Sequential data analysis. For the 934 individuals in the sample, 44 distinct custody sequences were observed; however, given the complexity of these longitudinal sequences of categorical data, a sequential clustering method was used to simplify the information (Abbott, 1995; Abbott & Forrest, 1986; Abbott & Hrycak, 1990). As suggested by Lesnard (Lesnard, 2010), to respect the ordering of time and avoid “time warping”, only substitution of statuses was used and costs were defined as inversely proportional to transition rates. Individuals cannot adhere perfectly to one cluster; as such, a “fuzzy” clustering method was favored (Kaufman & Rousseeuw, 1990), where each individual has a probability of belonging to each cluster. Average silhouette distance (Rousseeuw, 1987) and average Pearson gamma (Halkidi, Batistakis, & Vazirgiannis, 2001) adequacy measures suggest an optimal solution of four clusters. The R package TraMineR was used to compute optimal matching algorithm

(Gabadinho, Ritschard, Müller, & Studer, 2011), cluster was used to compute fuzzy clustering (Maechler, Rousseeuw, Struyf, Hubert, & Hornik, 2013) and fpc was used to obtain the cluster statistics (Hennig, 2010).

Multinomial logistic regression. In order to identify characteristics of the accused that influenced their disposition-housing trajectories, a multinomial logistic regression was used to compare each of our trajectories, for a total of six pairwise comparisons. The distribution of the number of past hospitalizations, severity of index offense and number of past criminal offenses were log-transformed.

Results

As observed in Figure 2.1, 43% (n = 401) of the total sample was classified in the first cluster, spending an average of 31.5 months detained in hospital during the 36 month follow up period. Individuals grouped in the second cluster, (n = 102; 11%) spent an average of 22.0 months in supervised housing. For those belonging to the third cluster (n = 300; 32%), 31.9 months of their follow-up period was spent in independent housing. Individuals in the fourth trajectory (n = 131; 14%) were under the authority of the Review Board for an average of 7.7 months before being granted absolute discharge. Pairwise bivariate comparisons reveal that the four groups differed significantly on all of the independent variables except for the number of previous hospitalizations and the presence of comorbid substance use and personality disorders (see Table II).

Figure 2.1. Distribution of custody states for the 36 months following the index verdict for each custody trajectories.

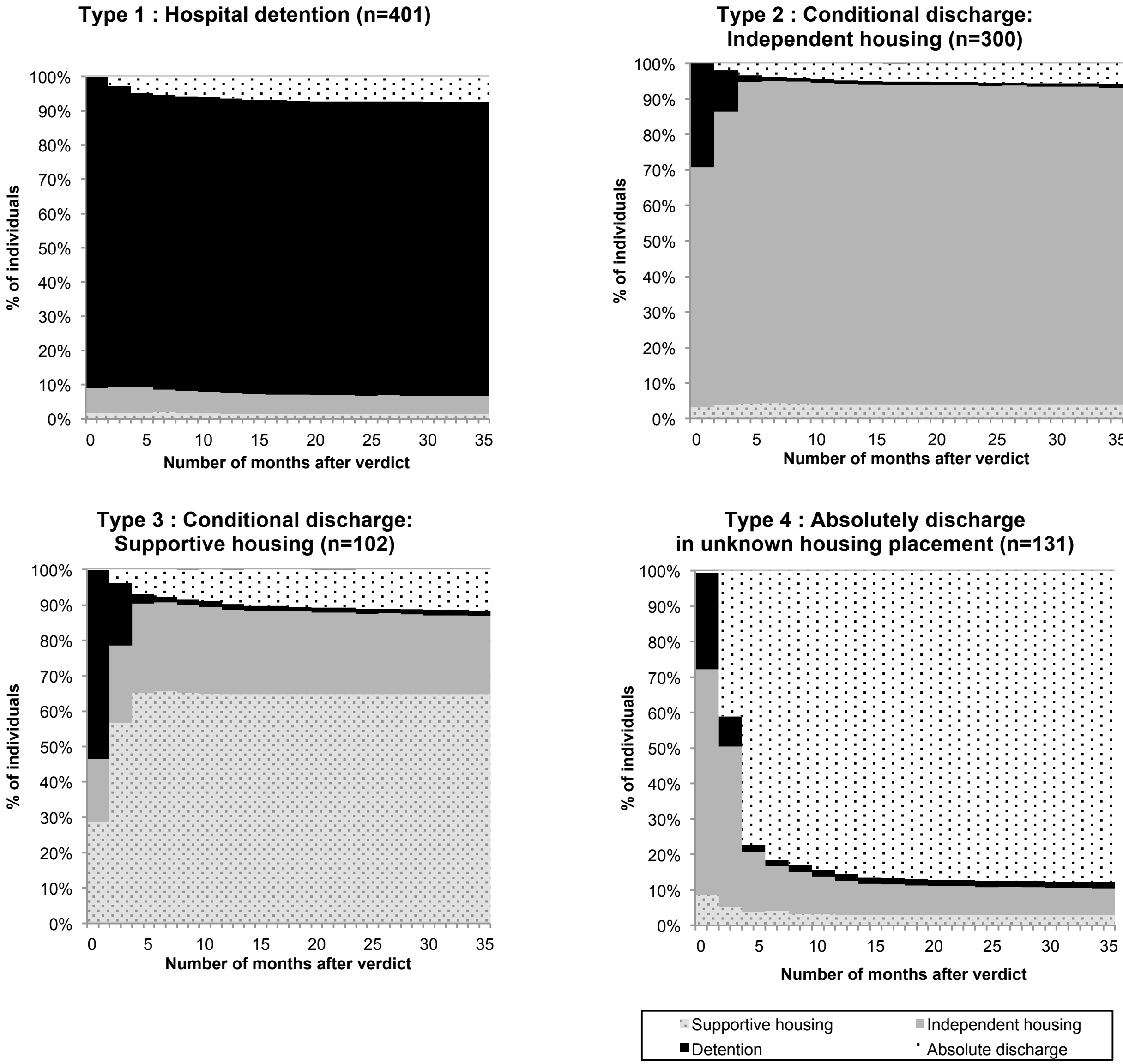


Table II. Descriptive and bivariate analysis of disposition-housing trajectories

	Custody trajectories												
	Hospital detention (n = 401)		Independent housing (n = 300)		Supportive housing (n = 102)		Absolute discharge (n = 131)		Total (n = 934)		Statistics		
	n	%	n	%	n	%	n	%	n	%	χ^2	df	p
Male	359	89%	246	82%	85	83%	103	78%	782	84%	12.88	3	0.005
Forensic institute	49	12%	56	19%	7	7%	8	6%	93	10%	17.88	3	<0.001
Psychotic spectrum disorder	304	76%	197	66%	73	71%	65	50%	624	67%	33.09	3	<0.001
Mood spectrum disorder	92	23%	108	36%	25	25%	61	46%	290	31%	32.68	3	<0.001
Comorbid substance use disorder	121	30%	84	28%	26	26%	41	31%	299	32%	1.35	3	0.710
Comorbid personality disorder	50	12%	26	9%	8	8%	16	12%	114	12%	3.79	3	0.280
	M± SD		M± SD		M± SD		M± SD		M± SD		F	df	p
Age at the index verdict	35.35±12.75		36.23±12.34		37.20±12.60		38.66±12.76		36.40±12.82		2.47	3, 930	0.006
Number of past offenses (ln)	0.61±0.89		0.43±0.77		0.48±0.81		0.42±0.74		0.50±0.82		3.48	3, 930	0.020
Number of past offenses (geometric mean)	1.84±2.44		1.54±2.16		1.62±2.25		1.52±2.10		1.65±2.27				
Severity of index offense (ln)	4.67±1.35		4.44±0.10		4.32±0.90		4.40±0.89		4.52±1.16		5.72	3, 930	0.001
Severity of index offense (geometric mean)	106.70±3.86		84.77±1.11		75.19±2.46		81.45±2.44		91.84±3.19				
Number hospitalizations (ln)	0.90±0.77		0.79±0.74		0.95±0.75		0.78±0.71		0.91±0.75		2.21	3, 930	0.080
Number hospitalizations (geometric mean)	2.46±2.16		2.20±2.10		2.59±2.12		2.18±2.03		2.48±2.12				
Time spent detained in hospital (months)	31.49±11.52		1.26±3.45		2.22±4.18		1.57±4.80		13.57±16.78		1038.01	3, 930	<0.001
Time spent independent housing (months)	2.09±7.47		31.92±9.74		8.78±14.07		5.55±9.17		12.80±16.17		623.69	3, 930	<0.001
Time spent supportive housing (months)	0.54±4.07		1.39±6.59		21.99±16.48		1.35±6.08		3.42±10.16		240.82	3, 930	<0.001
Time spent in discharge (months)	1.89±7.42		1.42±6.43		3.01±9.14		27.53±11.72		6.21±12.66		380.24	3, 930	<0.001

Predictors of trajectory

Socio-demographic variables. Results of the multinomial regression analyses predicting disposition-housing trajectories are presented in Table II.1. Being a woman decreased the likelihood of belonging to the detention in hospital trajectory compared to belonging to the independent housing or the absolutely discharged trajectories, but had no impact on the probability of belonging to the supportive housing trajectory. Age did not significantly predict trajectory.

Clinical variables. A higher number of hospitalizations prior to index offense significantly decreased the likelihood of belonging to the absolutely discharged trajectory compared to all other trajectories. A higher number of hospitalizations prior to index offense also increased the likelihood of being in the supportive housing trajectory compared to the independent housing trajectory.

A primary diagnosis of psychotic disorder significantly increased the likelihood of belonging to the detention in hospital and the independent housing trajectory compared to the absolutely discharged trajectory. In contrast, having a primary diagnosis of a mood disorder was associated with less restrictive dispositions. In fact, a mood disorder reduced the likelihood of belonging to the detention in hospital trajectory and the supportive housing trajectory compared to the independent housing trajectory and the absolutely discharged trajectory.

A comorbid personality disorder was associated with increased restrictive dispositions and significantly differentiated all trajectories except for the detention in hospital trajectory compared to the supportive housing trajectory. A comorbid substance use disorder had no significant influence on the placement trajectories of our sample.

Table II.1. Multinomial regression predicting disposition-housing trajectories

	Independent > hospital detention		Supportive > hospital detention		Absolute discharge > hospital detention	
	β	(95% CI)	β	(95% CI)	β	(95% CI)
Age at the index verdict	0.01	(-.12 to .13)	0.06	(-.98 to .21)	0.05	(-.08 to .18)
Male	.17**	(.06 to .29)	0.03	(-.11 to .17)	.20**	(.08 to .33)
Forensic institute	.16**	(.06 to .26)	-.19*	(-.35 to -.03)	-.20**	(-.34 to -.05)
Past hospitalizations	-0.09	(-.21 to .03)	0.07	(-.06 to .21)	-.20**	(-.35 to -.05)
Psychotic disorder	-0.02	(-.19 to .15)	-0.04	(-.25 to .17)	-.31***	(-.49 to -.13)
Mood disorder	.27**	(.10 to .43)	-0.11	(-.33 to .10)	.25 **	(.07 to .43)
Substance use disorder	-0.02	(-.15 to .11)	-0.09	(-.24 to .06)	-0.06	(-.19 to .08)
Personality disorder	-.21***	(-.33 to -.09)	-0.01	(-.15 to .13)	-.33***	(-.47 to -.20)
Severity of index offense	-.18**	(-.29 to -.07)	-.21**	(-.36 to -.06)	-.19**	(-.32 to -.05)
Past offenses	-.14*	(-.26 to -.01)	-0.04	(-.18 to .10)	-0.11	(-.25 to .02)

	Independent > supportive		Absolute discharge > independent		Absolute discharge > supportive	
	β	(95% CI)	β	(95% CI)	β	(95% CI)
Age at the index verdict	-0.09	(-.19 to .01)	0.11	(-.20 to .23)	-0.05	(-.14 to .04)
Male	0.08	(-.01 to .16)	0.05	(-.06 to .17)	0.08	(-.00 to .17)
Forensic institute	.22***	(.13 to .31)	-.37***	(-.51 to -.24)	-0.08	(-.18 to .02)
Past hospitalizations	-.13**	(-.22 to -.04)	-.14*	(-.28 to -.01)	-.26***	(-.36 to -.16)
Psychotic disorder	0	(-.13 to .14)	-.30***	(-.47 to -.14)	-0.11	(-.24 to .01)
Mood disorder	.19**	(.05 to .32)	0.03	(-.14 to .19)	.28***	(.15 to .41)
Substance use disorder	0.06	(-.03 to .16)	-0.02	(-.15 to .11)	0.05	(-.04 to .14)
Personality disorder	-.11*	(-.21 to -.02)	-.16*	(-.29 to -.03)	-.22***	(-.31 to -.13)
Severity of index offense	0.09	(-.02 to .19)	-0.1	(-.24 to .04)	-0.01	(-.12 to .09)
Past offenses	-0.02	(-.11 to .08)	0	(-.13 to .13)	-0.05	(-.14 to .05)

*$p<.05$, **$p<.01$, *** $p<.001$

Contextual variables. Being treated in a forensic institution significantly increased the likelihood of being in the independent housing trajectory compared to the three other trajectories. However, being treated in a forensic institute was associated with an increased likelihood of being in the hospital detention trajectory compared to the supportive housing trajectory or the absolutely discharged trajectory.

Criminological variables. The severity of the index offense significantly increased the likelihood of being detained compared to the other trajectories; while a higher number of offenses prior to index offense only increased the likelihood of being detained when compared to the independent housing trajectory.

Discussion

The results of this study reveal little variation in the trajectories of the sample during the first three years following an NCRMD verdict: Patients spent most of the first three years of their Review Board mandate in one of four trajectories: detained, conditionally discharged to independent housing, conditionally discharged to supportive housing, or were absolutely discharged (Crocker et al., 2014; Grant, 1997)

As previously mentioned, to make a decision on the custody and release disposition of NCRMD accused, Review Boards must review all available information on the case (e.g. police reports, expert reports) and take into account "the need to protect the public from dangerous persons, the mental condition of the accused, the reintegration of the accused into society and the other needs of the accused" (CCC s. 672.54). The results of this study show that the mental condition of the accused criteria seems to predict custody-housing dispositions for NCRMD accused in the way that would be expected based on empirical knowledge. For instance, an increased number of prior hospitalizations, likely to suggest chronicity of illness

and/or poor treatment compliance, significantly predicted more restrictive dispositions. Furthermore, mood disorders, usually associated with non-violent offending (Grant et al., 2000), were associated with the least restrictive measures (Crocker et al., 2014); specifically, independent housing. Latimer and Lawrence (2006) also found that individuals with a primary mood disorder are given fewer conditions upon conditional discharge compared to individuals with a primary diagnosis of schizophrenia; they were also more likely to be absolutely discharged to an unknown housing placement.

Presence of a comorbid personality disorder seems to be an obstacle for the community reintegration of our sample. It is hypothesized that among the forensic population, antisocial personality disorder is the most common comorbid personality disorder to be diagnosed. The presence of marked impulsivity, aggressiveness and irritability of an accused (American Psychiatric Association, 2013) might be associated with prior surveillance failure, and poor treatment compliance, which might divert Review Boards from releasing the accused to the community. However, presence of a personality disorder did not differentiate individuals who were detained in hospital to those who were conditionally discharged to supportive housing. The low rate of diagnosed personality disorders in our study might explain these results. However, we also found that a primary diagnosis of psychotic disorder was associated with increased restrictions in dispositions, but did not influence the likelihood of placement in supportive housing. These findings are important because our previous study (Salem et al., 2015) revealed that when housing setting is controlled for, the presence of a psychotic disorder or a personality disorder did not predict recidivism or rehospitalisation among conditionally discharged NCRDM accused; this suggests that supportive housing is an effective

management tool, despite the presence of a severe mental disorder or a complex clinical profile.

On the other hand, when looking at the safety of the public criterion, the results of this study point to a knowledge-practice gap because custody-housing dispositions did not consistently match the patient's level of risk. For instance, age and substance use had no association with dispositions in our sample. Furthermore, number of prior criminal offenses only differentiated individuals who were detained compared to those who were in independent housing. These results do not align with evidence showing that substance use, younger age at index offense and number of prior criminal offenses are important risk factors for violence (Bonta et al., 1998; Salem et al., 2014). However, it is possible that based on the clinical team recommendations, Review Board relies more heavily on dynamic factors (Crocker et al., 2014; Wilson, Nicholls, Crocker, Charette, & Seto, 2015), specifically on the mental condition of the accused when ordering absolute discharge, instead of basing decisions on static/historical factors such as age.

As would be expected from previous studies examining factors associated with dispositions (Callahan & Silver, 1998; Crocker et al., 2014; Hilton & Simmons, 2001; McDermott & Thompson, 2006), controlling for other socio-demographic, clinical and criminological factors, increased severity of index offense was found to reduce access to community reintegration, particularly, access to supportive housing. These results are particularly disconcerting, as research has shown that severity of the index offense is not a reliable risk factor for recidivism among the NCRMD population (Charette et al., 2015; Salem et al., 2015), or with other mentally ill offender populations (Bonta et al., 2014).

Furthermore, although individuals treated in a forensic hospital are likely to require more support in the community for efficient risk management, the present study shows that, controlling for other risk factors, being treated in a forensic hospital actually reduces the likelihood of placement in supportive housing compared to independent housing. The present study also shows that controlling for the severity of index offense, being treated in a forensic hospital increased the likelihood of being detained throughout the three year study period. We hypothesise that these results are possibly due to the stigma attached with the forensic label, which constitutes a barrier to supportive housing accessibility and lead to further institutionalization or premature release of the NCRMD population to housing environments with reduced support. Previous research has demonstrated that individuals treated in a forensic hospital are no more likely to reoffend, or be rehospitalized, compared to individuals treated in general or civil psychiatric hospitals (Hodgins et al., 2007; Salem et al., 2015). This suggests supportive housing should be an equally accessible risk management tool for this population.

Taken together, these results reveal that supportive housing placement does not seem to be used as a risk management strategy based on the static/stable level of risk of the accused; instead, it seems to depend greatly on the clinical condition of NCRMD accused. The Risk principle of the RNR model, as defined using static/stable risk factors does not seem to be supported. Premature release of forensic patients to independent housing or unnecessary prolonged detention is incongruent with the RNR model, which has been associated with more efficient and effective intervention (Hollin, 1999). Custody and housing placement decisions should take into account factors that are empirically associated with risk in this population in order to reduce length of stays and efficiently make use of scarce resources.

Strengths and Limitations

This study is innovative, as supportive housing, despite having been studied in the general mental health literature, has remained relatively unexplored in forensic populations. Having highlighted the risk management function served by supportive housing in our previous study (Salem et al., 2015), we are able to draw further conclusions about the factors associated with supportive housing placements.

The literature has shown that Review Board purview over NCRMD individuals lasts more than 5 years for the majority of cases across the country (Latimer & Lawrence, 2006). Thus, the three-year duration of the observation period of this study might have had an impact on the lack of variability in the trajectories of this sample. Longer follow-up periods, would allow us to see more variation over time in placement patterns; particularly for individuals who committed a severe index offense, for whom duration under Review Board is longer (Crocker, Charette, et al., 2015) and for whom housing resources may be particularly difficult to access.

Having access to supportive housing is not always possible, particularly for forensic patients. Community mental health resources are lacking (Felx et al., 2012; Herman et al., 2008; Tourigny, 2014) and/or individuals with a mental illness involved in the justice system may face barriers in accessing supportive housing (Heilbrun et al., 1994; Lamb et al., 1999). The stability of trajectories revealed in this study might be the product of institutional factors (i.e., the scarcity of housing resources leading to long waiting lists and backlogs) rather than risk management decisions. Future data collection methods should take into account the recommendations of clinical teams, not only the actual outcomes.

Conclusion

Consistent with what we know about violence generally, violence by individuals with mental illness is the result of multiple factors (Swanson et al., 2002). However, research to date has taken an individual level approach (Sirotich, 2008), overlooking community level factors (Silver, 2000). Results of the present study show that there might be a knowledge-practice gap in the management of the forensic population as the factors taken into account in the housing placement decisions for NCRMD accused in our sample are not consistent with the factors that predict recidivism and rehospitalization in this population. The discrepancy between decision-making practices and evidence-based knowledge in forensic services has been highlighted in previous research particularly with regards to standardized risk assessment (Côté, Crocker, Nicholls, & Seto, 2012; Wilson et al., 2015). Conditional discharge has been shown to be an effective alternative to hospitalization (Segal & Burgess, 2006); by effectively targeting custody and placement based on risk factors, length of stays, risk of recidivism and rehospitalization could be reduced.

References:

Abbott, A. (1995). Sequence analysis: new methods for old ideas. *Annual Review of Sociology, 21*, 93-113.

Abbott, A., & Forrest, J. (1986). Optimal matching methods for historical sequences. *Journal of Interdisciplinary History, 16*, 471-494.

Abbott, A., & Hrycak, A. (1990). Measuring resemblance in sequence analysis: an optimal mathing analysis of musicians' careers. *American Journal of Sociology, 96*, 144-185.

American Psychiatric Association, APA. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. Arlington, VA: American Psychiatric Publishing.

Andrews, D.A., Bonta, J., & Hodge, R.D. (1990). Classification for effective rehabilitation - rediscovering psychology. *Criminal Justice and Behavior, 17*(1), 19-52.

Bonta, J., Blais, J., & Wilson, H.A. (2014). A theoretically informed meta-analysis of the risk for general and violent recidivism for mentally disordered offenders. *Aggression and Violent Behavior, 19*(3), 278-287. doi: 10.1016/j.avb.2014.04.014

Bonta, J., Law, M., & Hanson, K. (1998). The prediction of criminal and violent recidivism among mentally disordered offenders: a meta-analysis. *Psychological bulletin, 123*(2), 123-142.

Brekke, J.S., Prindle, C., Bae, S.S., & Long, J.D. (2001). Risks for individuals wwith schizophrenia who are living in the community *Psychiatric Services, 52*, 1358-1366.

Callahan, L.A., & Silver, E. (1998). Factors associated with the conditional release of persons aquitted by reason of insanity: a decision tree approach. *Law and Human Behavior, 22*(2), 16.

Caton, C.L., Wyatt, R.J., Felix, A., Grunberg, J., & Dominguez, B. (1993). Follow-up of chronically homeless mentally ill men. *American Journal of Psychiatry, 150*, 1639-1642.

Charette, Y., Crocker, A. G., Seto, M. C., Salem, L., Nicholls, T. N., & Caulet, M. (2015). The national trajectory project of individuals found not criminally responsible on account of mental disorder in Canada: Part 4 - criminal recidivism. *Canadian Journal of Psychiatry, 60*(3), 127-134.

Cherner, R., Aubry, T., Ecker, J., Kerman, N., & Nandlal, J. (2014). Transitioning into the Community: Outcomes of a Pilot Housing Program for Forensic Patients. *International Journal of Forensic Mental Health, 13*(1), 62-74. doi: 10.1080/14999013.2014.885472

Côté, G., Crocker, A.G., Nicholls, T.N., & Seto, M. C. (2012). Risk assessment intruments in clinical practice. *Canadian Journal of Psychiatry, 57*(4), 238-244.

Criminal Code of Canada, R.S.C (1985), C.46, part XX.I.

Crocker, A.G., Braithwaite, E., Côté, G., Nicholls, T.L., & Seto, M.C. (2011). To detain or to release? Correlates of dispositions for individuals declared not criminally responsible on account of mental disorder. *The Canadian Journal of Psychiatry, 56*(5), 293-302.

Crocker, A.G., Charette, Y., Seto, M. C., Nicholls, T.N., Cote, G., & Caulet, M. (2015). The National Trajectory Project of Individuals found Not Criminally Responsible on Accoung of Mental Disorder in Canada: Part 3 - Trajectories and Outcomes Through the Forensic System. *Canadian Journal of Psychiatry, 60*(3), 117-126.

Crocker, A.G., & Côté, G. (2009). Evolving systems of care: Individuals found not criminally responsible on account of mental disorder in custody of civil and forensic psychiatric services. *European Psychiatry, 24*(6), 356-364.

Crocker, A.G., Nicholls, T.L., Charette, Y., & Seto, M.C. (2014). Dynamic and static factors associated with discharge dispositions: the National Trajectory Project of individuals found not criminally responsible on account of mental disorder (NCRMD) in Canada. *Behavioral Sciences and Law, 32*(5), 577-595. doi: 10.1002/bsl.2133

Crocker, A.G., Nicholls, T.N., Seto, M.C., Cote, G., Charette, Y., & Caulet, M. (2015). The National Trajectory Project of Individuals found Not Criminally Responsible on account of Mental Disorder in Canada. Part 1: Context and Methods. *Canadian Journal of Psychiatry, 60*(3), 98-105.

Culhane, Dennis P., Metraux, Stephen, & Hadley, Trevor. (2002). Public service reductions associated with placement of homeless persons with severe mental illness in supportive housing. *Housing Policy Debate, 13*(1), 107-163. doi: 10.1080/10511482.2002.9521437

Desmarais, Sarah L., Hucker, Stephen, Brink, Johann, & De Freitas, Karen. (2008). A Canadian Example of Insanity Defence Reform: Accused Found Not Criminally Responsible Before and After theWinkoDecision. *International Journal of Forensic Mental Health, 7*(1), 1-14.

Estroff, S.E., Swanson, J.W., Lachicotte, W.S., Swartz, M., & Bolduc, M. (1998). Risk reconsidered: targets of violence in the social networks of people with serious psychiatric disorders. *Social Psychiatry and Psychiatric Epidemiology, 33*, S95-S101.

Felx, A., Piat, M., Lesage, A., Côté, S., Cadorette, S., & Corbière, M. (2012). De l'institution à l'appartement; l'éventail du logement pour les personnes avec un trouble mental. *Manuel de réadaptation psychiatrique* (2 ed., pp. 244-273): Presse de l'Université du Québec.

Friedrich, R.M., Hollingsworth, B., Hradek, E., Friedrich, H.B., & Kennith, R.C. (1999). Family and client perspectives on alternative residential settings for persons with severe mental illness. *Psychiatric Services, 50*(4), 509-514.

Gabadinho, A., Ritschard, G., Müller, N.S., & Studer, M. (2011). Analyzing and visualizing state sequences in R with TraMineR. *Journal of Statistical Software, 40*(4), 1-37.

Grant, I. (1997). Canada's new mental disorder disposition provisions: a case study of British Columbia criminal code review board. *International Journal of Law and Psychiatry, 20*(4), 419-443.

Grant, I., Ogloff, J.R.P., & Douglas, K.S. (2000). The British Columbia Review Panel: factors influencing decision-making. *International Journal of Law and Psychiatry, 23*(2), 173-194.

Halkidi, M., Batistakis, Y., & Vazirgiannis, M. (2001). On Clustering Validation Techniques. *Journal of Intelligent Information Systems, 17*, 107-145.

Harris, G. T., Rice, M. E., & Quinsey, V. L. (1993). Violent Recidivism of Mentally Disordered Offenders: The Development of a Statistical Prediction Instrument. *Criminal Justice and Behavior, 20*(4), 315-335.

Heilbrun, K., Lawson, K., Spier, S., & Libby, J. (1994). Community placement for insanity acquittees: A preliminary study of residential programs and person-situation fit. *Bulletin of the american academy of psychiatry and law, 22*(4), 551-560.

Hennig, C. (2010). fpc: Flexible procedures for clustering. Rpackage version 2.0-3. http://CRAN.R-project.org/package=fpc.

Herman, A., Cadorette, S., Champagne, S., Cousineau, L., Gagnon, D., Gendron, P., . . . Sirois, C. (2008). L'urgence d'agir: pour un hébergement et une réinsertion sociale de

qualité en psychiatrie légale. Montréal QC: Hôpital Louis-H.Lafontaine; Institut Philippe-Pinel de Montréal.
Hilton, N.Z., & Simmons, J.L. (2001). The influence of actuarial risk assessment in clinical judgements and tribunal decisions about mentally ill disordered offenders in maximum security. *Law and Human Behavior, 25*(4), 393-408.
Hodgins, S. (2001). The major mental disorders and crime: stop debating and start treating and preventing. *International Journal of Law and Psychiatry, 20*, 427-446.
Hodgins, S., Müller-Isberner, R., Freese, R., Tiihonen, J., Repo-Tiihonen, E., Eronen, M., . . . Kronstrand, R. (2007). A Comparison of General Adult and Forensic Patients with Schizophrenia Living in the Community. *International Journal of Forensic Mental Health, 6*(1), 63-75. doi: 10.1080/14999013.2007.10471250
Hollin, C. (1999). Treatment programs for offenders. *International Journal of Law and Psychiatry, 22*(3), 361-372.
Kaufman, L., & Rousseeuw, P.J. (1990). *Finding Groups in Data*. New York.
Lamb, R.H., & Weinberger, L.E. (1998). Persons with severe mental illness in jails and prisons: a review. *Psychiatric Services, 49*(4), 483-493.
Lamb, R.H., Weinberger, L.E., & Gross, B.H. (1999). Community treatment of severely mentally ill offenders under the jurisdiction of the criminal justice system: a review. *Psychiatric Services, 50*, 907-913.
Latimer, J., & Lawrence, A. (2006). The review board systems in Canada: an overview of the results from the mentally disordered accused data collection study (R. a. S. Division, Trans.). Canada: Department of Justice Canada.
Leff, S.H., Chow, C.M., Pepin, R., Conley, J., Allen, E.I., & Seaman, C.A. (2009). Does one size fit all? What we can and can't learn from a meta-analysis of housing models for persons with mental illness. *Psychiatric Services, 60*(4), 10.
Lesnard, L. (2010). Setting Cost in Optimal Matching to Uncover Contemporaneous Socio-Temporal Patterns. *Sociological Methods & Research, 38*(3), 389-419. doi: 10.1177/0049124110362526
Livingston, J.D., Wilson, D., Tien, G., & Bond, L. (2003). A follow-up study of persons found not criminally responsible on account of mental disorder in British Columbia. *Canadian Journal of Psychiatry, 48*(6), 408-415.
Maechler, M., Rousseeuw, P., Struyf, A., Hubert, M., & Hornik, K. . (2013). cluster: Cluster Analysis Basics and Extensions.
McDermott, B. E., & Thompson, J. W., Jr. (2006). The review panel process: an algorithm for the conditional release of insanity acquittees. *International Journal Law and Psychiatry, 29*(2), 101-111. doi: 10.1016/j.ijlp.2003.12.008
Melnychuk, Rachel M., Verdun-Jones, Simon N., & Brink, Johann. (2009). Geographic Risk Management: A Spatial Study of Mentally Disordered Offenders Discharged from Forensic Psychiatric Care. *International Journal of Forensic Mental Health, 8*(3), 148-168.
Monson, C.M., Gunnin, D.D., Fogel, M.H., & Kyle, L.L. (2001). Stopping (or slowing) the revolving door: factors related to NGRI acquittees' maintenance of a conditional release. *Law and Human Behavior, 25*(3), 11.
Murray, R., Baier, M., North, C., Lato, M., & Eskew, C. (1997). One-year status of homeless mentally ill clients who completed a transitional residential program. *Community Mental Health Journal, 33*(1), 43-50.

Newman, S.J., Reschovsky, J.D., Kaneda, K., & Hendrick, A.M. (1994). The effects of independent living on persons with chronic mental illness: An assessment of the Section 8 certificate program. *Milbank Quarterly, 72*(1), 171-198.
Parkinson, S., Nelson, G., & Horgan, S. (1999). From housing to homes: a review of the litterature on housing approaches for psychiatric consumer/survivor. *Canadian Journal of Community Mental Health, 18*(1), 145-164.
Porporino, F.J., & Motiuk, L.L. (1995). The prison careers of mentally disordered offenders. *International Journal of Law and Psychiatry, 18*(1), 29-44.
Proscio, T. (2000). Supportive housing and its impact on the public health crisis of homelessness. New York: Corporation for Supportive Housing.
Ridgeway, P., Simpson, A., Wittman, F. D., & Wheeler, G. . (1994). Home making and community building: Notes on empowerment and place. *Journal of Mental Health Administration, 21*(4), 407-418.
Riordan, S., Haque, S., & Humphreys, M. (2006). Possible predictors of outcome for conditionnally discharged patients: a preliminary study. *Medicine, Science and the Law, 46*(1), 6.
Roesch, R., Ogloff, J.R.P., Hart, S.D., Dempster, R.J., Zapf, P.A., & Whittermore, K.E. (1997). The impact of canadian criminal code changes on remands and assessments of fitness to stand trial and criminal responsibility in British Columbia. *Canadian Journal of Psychiatry, 42*, 6.
Rog, D.J. (2004). The evidence on supported housing. *Psychiatric Rehabilitation Journal, 27*, 334-344.
Rousseeuw, P.J. (1987). Silhouettes: a graphical aid to the interpretation and validation of cluster analysis. *Journal of Computational and Applied Mathematics, 20*, 53-65.
Salem, L., Crocker, A.G., Charette, Y., Seto, M.C., Nicholls, T.L., & Cote, G. (2015). Supportive Housing and Forensic Patient Outcomes. *Law and Human Behavior, 39*(3), 311-320. doi: 10.1037/lhb0000112
Segal, S.P., & Burgess, P. (2006). Conditional release: a less restrictive alternative to hospitalization. *Psychiatric Services, 57*, 1600-1606.
Silver, E. (2000). Race, neighborhood disadvantage, and violence among persons with mental disorders: the importance of contextual measurement. *Law and Human Behavior, 24*(4), 8.
Sirotich, Frank. (2008). Correlates of Crime and Violence among Persons with Mental Disorder: An Evidence-Based Review. *Brief Treatment and Crisis Intervention, 8*(2), 171-194.
Swanson, J.W., Swartz, M.S., Essock, S.M., Osher, F.C., Wagner, R., Goodman, L.A., . . . Meador, K.G. (2002). The social-environmental context of violent behavior in persons treated for severe mental illness. *American Journal of Public Health, 92*, 10.
Swanson, J.W., Van Dorn, R.A., Monahan, J., & Swartz, M.S. (2006). Violence and leverage community treatment for persons with mental disorders. *American Journal of Psychiatry, 163*(8), 1404-1411.
Sylvestre, J., Ollenberg, M.D., & Trainor, J. (2007). A participatory benchmarking strategy for describing and improving supportive housing. *Psychiatric Rehabilitation Journal, 31*(2), 10.
Tourigny, M. (2014). Proposition d'organisation de services hiérarchisés en psychiatrie légale à Montréal. *L'Agence de la Santé et des Services Sociaux*. Montreal, Qc.

Tsemberis, S., & Eisenberg, R.F. (2000). Pathways to housing: supported housing for street-dwelling homeless individuals with psychiatric disabilities. *Psychiatric Services, 51*(4), 487-493.
Wallace, C., Turner, W., Matarazzo, A., & Babyak, C. . (2009). *Measuring crime in canada: introducing the Crime Severity Index and improvements to the Uniform Crime Reporting Survey*. Canada: Ministry of Industry.
Wilson, C.M., Nicholls, T.N., Crocker, A.G., Charette, Y., & Seto, M.C. (2015). *What factors are mentioned by forensic review boards in their reasons for disposition decisions?* Paper presented at the American Psychology and Law Society annual meeting, San Diego, CA.
Wilson, C.M., Crocker, A.G., Nicholls, T.L., Charette, Y., & Seto, M.C. (2015). The use of risk and need factors in forensic mental health decision-making and the role of gender and index offense severity. *Behavioral Sciences and Law, 33*(1), 19-38. doi: 10.1002/bsl.2162

Conclusion

Synthesis of results

Results of the papers that compose this dissertation reveal several interesting findings. The first study shows that compared to NCRMD accused conditionally discharged to independent settings (with or without live-in support), NCRMD accused who are conditionally discharged to supportive housing are at reduced risk of general recidivism, recidivism against the person as well as psychiatric rehospitalization. More importantly, the findings further show that controlling for post-release housing setting reduces some of the associations between socio-demographic, clinical and criminological variables and recidivism/rehospitalization. Factors that have been extensively associated with increased recidivism (e.g. being male, presence of history of violence against the person) and rehospitalization (e.g. substance use disorder) (Bonta et al., 1998; Brekke et al., 2001; Harris et al., 1993; Mueser, Bellack, & Blanchard, 1992; Porporino & Motiuk, 1995; Solomon & Draine, 1999; Steadman et al., 1998) did not significantly predict the outcomes of our sample. In other words, despite the presence of empirically validated risk factors, providing supportive housing aids in the safe transition of NCRMD accused in the community, and promotes longer community stays with reduced rates of rehospitalization and recidivism.

These results are important as they suggest the need to develop management strategies that go-beyond traditional individual-attributed risk factors, and take into account the value of protective and environmental factors in the community re-entry of individuals found NCRMD. However, when examining the factors involved in the decision to use the rehabilitative resource (i.e. supportive housing) the results of the second article of this dissertation reveal

that Review Board decisions seem to overlook the fact that supportive housing can be efficient despite the presence of certain risk factors. In fact, results of the second article show that some risk factors, such as being treated in a forensic hospital, having committed a severe index offense or the presence of a psychotic disorder limit the access to supportive housing for NCRMD accused. These results are somewhat disconcerting given that these factors do not reliably predict recidivism in the mentally ill population (Bonta et al., 2014; Bonta et al., 1998; Charette et al., 2015; Hodgins et al., 2007; Seto, Harris, & Rice, 2004); and our findings further show that supportive housing has a positive effect on community tenure despite the presence of these factors.

Discussion

Implications of recent legislative changes

To date there remains public unease with the release of mentally ill who have committed an offense based on a perceived link between mental illness and serious crime, partly influenced by media portrayals of individuals with mental illness. Treating NCRMD individuals in the community can raise concerns, especially because of the presence of a history of violent behavior among these individuals (Vitacco et al., 2008). The concerns elicited by recent highly publicized cases of individuals with mental illness who committed very severe offenses and were found NCRMD is in part what prompted the Government of Canada to table amendments to Part XX.1 of the Canadian Criminal Code pertaining to the custody of NCRMD individuals. In what appears to be an effort to improve the Review Boards' ability to manage risk of reoffending, the Criminal Responsibility Reform Act (2014) modifies several sections of the legislation pertaining to individuals found NCRMD. The

section “taking into consideration the need to protect the public from dangerous persons” was replaced with “taking into account the safety of the public, which is the paramount consideration” (CCC. s. 672.54). In addition, dispositions are no longer required to be “the least onerous and least restrictive to the accused”, and must now be “necessary and appropriate in the circumstances” (CCC. s. 672.54). The act also created a new category of NCRMD individuals: “high risk accused” if there is a “substantial likelihood” that they will reoffend or if the acts for which they are found NCRMD were of “brutal nature as to indicate a risk of grave harm to the public” (CCC. s. 672.64). Although prolonged detention has been shown to work against rehabilitation (Skipworth & Humberstone, 2002), the Criminal Responsibility Reform Act proposes to set a hearing after three years of detention for individuals deemed “high risk” rather than the usual annual hearings under the previous legislation (CCC s. 672.81).

The aforementioned changes to Part XX.1 of the Canadian Criminal Code generated a lot of debate and criticism from researchers, decision-makers and practitioners as there is no evidence-base to support these changes (Brink & Simpson, 2013; Seto, Crocker, Nicholls, & Côté, 2013). Firstly, individuals found NCRMD for severe violent offenses such as homicide, attempted murder and sex offenses represent a small proportion of all NCRMD accused in Canada (8.1%) (Crocker, Nicholls, Seto, Charette, et al., in press). Secondly, severity of index offense has not been shown to be associated with risk of recidivism (Bonta et al., 2014; Grant, 1997). In fact, findings show that individuals found NCRMD for severe violent offenses displayed low rates of recidivism (10%) during a 3 year follow-up period (Charette et al., 2015); and that recidivism involved non-violent offenses in 93% of cases. Interestingly, Charette et al. (2015) showed that individuals who were found NCRMD for a severe offense

were less likely to reoffend than individuals who had committed less severe index offenses. Although hampered by a short follow-up period, these findings do not support the need for the recent changes brought to part XX.1 of the Canadian Criminal Code.

In addition to criticism regarding the limited empirical support for Criminal Responsibility Reform Act, mental health advocacy groups, researchers as well as clinicians have raised other concerns regarding these changes (CAMH, 2013; CBA, 2013; Seto et al., 2013). Firstly, the recent changes to part XX.1 of the Canadian Criminal Code are shifting a rehabilitative legislation to a punitive one. There is great concern with regards to prolonged length of stays associated with the new legislation that will likely result in blocking forensic beds and therefore reduce access to forensic services, as well as reduce accessibility to community reintegration for the forensic population. Furthermore, there is apprehension among researchers and practitioners that this one of many "tough on crime" policy would draw mentally ill offenders away from forensic services and more into the correctional system, in order to avoid detention periods that would exceed those intended for offenders found guilty and responsible of the same offense. Such consequences are alarming given that mentally ill individuals released from the correctional services have limited community reintegration plan (Peters et al., 2008); and have been shown to display higher rates of reoffense than those managed through the forensic system (Brown, St-Amand, & Zamble, 2009; Villeneuve & Quinsey, 1995). Finally, the Criminal Responsibility Reform Act's "high risk" designation will add a label to these individuals which will likely result in further stigmatization and alienation of an already vulnerable population.

The recent changes brought to the Canadian legislation point to the debate as to how to best manage the forensic population. Hence, the broader objective of this thesis was to inform

the public, decision-makers, clinicians as well as service users as to the importance of use of housing resources as a risk prevention and management strategy for the safe and positive return of criminally involved severely mentally ill individuals to the community.

Risk management

Clinicians and Review Boards have to make a judgement pertaining to the proper management of forensic patients that will balance the individual's rights as well as ensure safety of the public. According to the Risk, Needs and Responsivity principle (Andrews, Bonta, & Hodge, 1990), the level of service granted to an offender must match the offender's risk to reoffend. As such, decisions on the custody and placement of NCRMD accused must be congruent with the level of risk presented by the accused. Furthermore, in line with the Needs principle of the Risk Needs Responsivity model, the criminogenic needs (i.e. dynamic factors that are associated with criminal conduct) of the accused must be assessed and targeted in treatment. In their evaluation, clinical teams must assess whether independent living contributes to the criminal conduct of an accused, and offer access to supportive housing as part of the treatment plan to address this need and promote efficient community reintegration.

The need to include the assessment of protective factors, and to examine risk management strategies has been stressed by several authors (K.S. Douglas & Skeem, 2005; Farrington & Lober, 2000; Jones & Brown, 2008; Rogers, 2000). In fact, the development of tools such as the *Structured Assessment of Protective Factors for Violence Risk* (SAPROF: De Vogel, De Ruiter, Bouman, & De Vries Robbé, 2009) and the *Short-Term Assessment of Risk and Treatability* (START: Webster, Martin, Brink, Nicholls, & Desmarais, 2009) objectify the priority that has been given to the evaluation of strength-based protective factors in risk management. The level of risk posed by an accused should be counterbalanced with the

opportunity to access proper risk prevention services/interventions.

Resource use and allocation

In light of the scarcity of housing resources in the community, not granting access to supportive housing to individuals who would benefit from such settings has a significant impact on the organization of forensic mental health services, as well as on the general mental health and the criminal justice services. Individuals who require forensic mental health inpatient treatment might await such treatment in detention facilities, which are ill-equipped to respond to the needs of this population (Kirby & Keon, 2006; Peters et al., 2008; Sapers, 2013), while some individuals who no longer require forensic inpatient treatment are hospitalized longer than necessary, or prematurely released to environments with reduced support. These outcomes not only have important implications for victims, but also for the NCRMD individual's community reintegration (e.g. repeat incarceration, recidivism and psychiatric rehospitalization).

Important economic costs are also associated with inappropriate management of forensic patients. In the province of Alberta, where the NCRMD defense is used for higher severity cases compared to the province of Québec, a report revealed that treating NCRMD accused on an inpatient basis costs 274 723$ per case annually, whereas the costs of outpatient services for these individuals amounts to 881$ per case annually (Jacobs et al., 2014). The costs of supportive housing in Québec per case, per year is estimated to cost between 20 000$ and 40 000$ (cited in Vincent & Morin, 2010). These numbers reveal that inpatient stays of NCRMD accused are associated with high costs compared to providing outpatient services or access to supportive housing, which further points to the importance of properly targeting individuals who need supportive housing resources. Similar conclusions were drawn in

general mental health services; providing treatment in the community is less costly than providing inpatient services (Rothbard, Kuno, Schinnar, Hadley, & Turk, 1999).

Future research

Service users' preferences. Although supportive housing has been shown to be a suitable method for the positive community re-entry of the forensic population, it has been widely shown to be counter to service users preferences (Forchuk, Nelson, & Hall, 2006; Minsky, Reisser, & Duffy, 1995; Owen et al., 1996; Piat et al., 2008; Tanzman, 1993). A Swedish study revealed that patients perceived supportive housing as oppressive and leaving them with a feeling of inequality (Bengtsson-Tops, Ericsson, & Ehliasson, 2014). Paying attention to individual choices is strongly encouraged as a better fit between patient's preferences and housing accommodation has been associated with increased likelihood of success of conditional discharge (i.e. community tenure; Heilbrun et al., 1994). Again, the importance of balancing individual rights and public safety is a key consideration: placement in supportive housing can be viewed as coercive, and should be ordered proportionally to the risk posed by the individual and correspond to the needs of that individual. Several characteristics of the housing accommodation are to be considered when examining individual preferences and needs, such as: staff/resident ratio, frequency of group/individual meetings, chores, number of peers living in the home, curfew, substance use tolerance (Heilbrun et al., 1994).

Neighborhood adjustment. Furthermore, neighborhood residents' attitudes regarding the presence of a supportive housing resource and the influence of such attitudes on supportive housing residents' community adjustment need to be considered. The Not In My Back Yard (NYMBY) phenomenon is prevalent and refers to the oppositional attitudes adopted by a

community with regards to undesired developments in the neighborhood (Dear, Takahashi, & Wilton, 1996; Freudenberg & Pastor, 1992). Group homes in a neighborhood can be perceived negatively by some individuals because of the stigma attached with mental illness; which can have an adverse effect on the community reintegration of supportive housing residents (Evans-Lacko et al., 2012; Rusch et al., 2005; Thornicroft, 2008). However, a study revealed that when neighbors are informed and educated with regards to the characteristics of the residents, they feel more safe in their neighborhood (Granerud & Severinsson, 2003), suggesting that educating communities can prove to be positive in reducing stigma and improving neighborhood relations. Studies have shown that the NYMBY phenomenon seems to have less of an effect in low-income neighborhoods (Oakley, 2002). However, poverty is an environmental factor that has been associated with increased risk of violence (Silver et al., 1999). Hence, there is a debate as to whether to develop housing resources in low income neighborhoods that are associated with higher rates of criminality, but where residents will face less stigma; or develop housing resources in high income neighborhoods where residents might fail to achieve proper community adjustment because of the negative attitudes towards them (Wong & Stanhope, 2009). The adequate adjustment of an accused in his/her housing environment should be attended to when examining placement of NCRMD accused. Future research should account for the impact of neighborhood stigma associated with the presence of supportive housing on the community outcomes of its residents.

Recovery. Québec's last mental health action plan made recovery of mentally ill individuals a priority (MSSS, 2005-2010). It is hoped that the next action plan (2015-2020) to be unveiled in May 2015, considers housing as a priority in this recovery approach. Recovery oriented treatment plans build upon strengths of the consumer and help them regain a sense of

membership in the community (Jacobson & Greenley, 2001; Pouncey & Lukens, 2010). Improving activities of daily living (e.g. hygiene, money management, medical appointments, medication compliance) is essential to the recovery of mentally ill individuals; and it was argued that teaching these skills in the home environment is more effective for the generalization of skills to occur (Miller & Velligan, 2008). Our findings do not allow for the understanding of the underlying mechanisms involved in the improved community tenure of NCRMD accused living in supportive housing, however they clearly point to the fact that more attention should be paid to housing in the community reintegration process of forensic mentally ill individuals. In order to make proper use of supportive housing as a risk prevention and rehabilitative tool, we need to examine the influence of placement in supportive housing on the involvement of its residents in occupational activities, as well as on the development of independent living, and mental health management skills. Such measures should be taken into account to gain a better insight into the mechanisms that influence improved community outcomes of NCRMD accused placed in supportive housing.

Finally, independent living abilities change over time and illness; hence, the level of structure needed by an individual should be reassessed regularly to match patients' abilities (Miller & Velligan, 2008). Our results show that there is great stability over a 36 month follow up period after verdict. Perhaps this is due to a limitation of our study design (short follow up period). However, other possibilities for this lack of variability should be examined. For example, it can be hypothesised that NCRMD individuals have more complex needs, and therefore might require longer stays in supportive housing before acquiring the skills necessary to live independently. Another alternative would be that supportive housing is not used in the way it was intended to, and could in that sense create a form of

reinstitutionalisation (Priebe et al., 2005). Future research should look into the long-term pathways of housing of individuals found NCRMD. In line with this question, the notion of long-term influence of placement in supportive housing on the community outcomes of individuals found NCRMD should also be attended to. Future research should examine whether the protective value of supportive housing translates when the individual moves to a more independent setting.

References

Abramson, M.F. (1972). The criminalization of mentally disordered behavior: possible side effects of a new mental health law. *Hospital and Community Psychiatry, 23*, 101-105.

Albonetti, C.A., & Hepburn, J.R. (1997). Probation revocation: a proportional hazards model of the conditionning effect of social disadvantage. *Social Problems, 44*(1), 124-138.

Andrews, D.A., & Bonta, J. (2010). *The psychology of criminal conduct* (5th ed.). New Providence, NJ.

Andrews, D.A., Bonta, J., & Hodge, R.D. (1990). Classification for effective rehabilitation - rediscovering psychology. *Criminal Justice and Behavior, 17*(1), 19-52.

Andrews, D.A., Bonta, J., & Wormith, S.J. (2004). Toronto, ON Patent No.: M.-H. Systems.

Angermeyer, M.C., & Matschinger, H. (1996). The effect of violent attacks by schizophrenic persons on the attitude of the public towards the mentally ill. *Social Science and Medicine, 43*(12), 1721-1728.

Arboleda-Florez, J. (2003). Considerations on the stigma of mental illness. *The Canadian Journal of Psychiatry, 48*(10), 645-650.

Balachandra, K., Swaminath, S., & Litman, L. (2004). Impact of Winko on absolute discharges. *J Am Acad Psychiatry Law, 32*, 173-177.

Bengtsson-Tops, A., Ericsson, U., & Ehliasson, K. (2014). Living in supportive housing for people with serious mental illness: a paradoxical everyday life. *Int J Ment Health Nurs, 23*(5), 409-418. doi: 10.1111/inm.12072

Bill C-54: an Act to amend the Criminal Code and the National Defence Act (mental disorder). 1st session ed. Ottawa (ON): House of Commons of Canada; 2013. Now known as the Not Criminally Responsible Reform Act.

Bonta, J., Blais, J., & Wilson, H.A. (2014). A theoretically informed meta-analysis of the risk for general and violent recidivism for mentally disordered offenders. *Aggression and Violent Behavior, 19*(3), 278-287. doi: 10.1016/j.avb.2014.04.014

Bonta, J., Law, M., & Hanson, K. (1998). The prediction of criminal and violent recidivism among mentally disordered offenders: a meta-analysis. *Psychological bulletin, 123*(2), 123-142.

Brekke, J.S., Prindle, C., Bae, S.S., & Long, J.D. (2001). Risks for individuals wwith schizophrenia who are living in the community *Psychiatric Services, 52*, 1358-1366.

Brink, J., & Simpson, S. (2013). Brief of the Canadian Forensic Mental Health Network to Select Committee hearing Submissions regarding Bill C-54: An Act to amend the Criminal Code and the national Defence Act (mental disorder). Port Coquitlam, B.C: Canadian Forensic Mental Health Network.

Brown, S.L., St-Amand, M.D., & Zamble, E. (2009). The dynamic prediction of criminal recidivism: A three-wave prospective study. *Law Hum Behav, 33*(1), 25-45.

Callahan, L.A., Silver, E. (1998). Factors associated with the conditional release of persons aquitted by reason of insanity: a decision tree approach. *Law and Human Behavior, 22*(2), 16.

CAMH. (2013). Mental health and criminal justice policy framework: Center for Addiction and Mental Health.

Carling, P.J. (1993). Housing and supports for persons with mental illness: Emerging approaches to research and practice. *Hospital and Community Psychiatry, 44*(439-450).
Casper, E.S., Clark, D. (2004). Service utilization, incidents and hospitalizations among people with mental illness and incarceration histories in a supportive housing program. *Psychiatric Rehabilitation Journal, 28*(2), 4.
CBA. (2013). Bill C-54 - Not Criminally Responsible National Criminal Justice Section, Canadian Bar Association.
Charette, Y., Crocker, A. G., Seto, M. C., Salem, L., Nicholls, T. N., & Caulet, M. (2015). The national trajectory project of individuals found not criminally responsible on account of mental disorder in Canada: Part 4 - criminal recidivism. *Canadian Journal of Psychiatry, 60*(3), 127-134.
Charette, Y., Crocker, A.G., & Billette, I. (2011). **The judicious judicial dispositions juggle: characteristics of police interventions involving people with a mental illness**. *Canadian Journal of Psychiatry, 56*(11), 677-685.
Cherner, R., Aubry, T., Ecker, J., Kerman, N., & Nandlal, J. (2014). Transitioning into the Community: Outcomes of a Pilot Housing Program for Forensic Patients. *Int J Forensic Ment Health, 13*(1), 62-74. doi: 10.1080/14999013.2014.885472
Chipperfield, S., & Aubry, T. (1990). The supportive housing program in Winnipeg. *Psychosocial Rehabilitation Journal, 13*(4), 91-94.
Cimino, Tony, & Jennings, Jerry L. (2002). Arkansas Partnership Program: An Innovative Continuum of Care Program for Dually Diagnosed Forensic Patients. *Psychiatric Rehabilitation Skills, 6*(1), 104-114. doi: 10.1080/10973430208408425
Corrigan, P.W., & McCracken, S.G. (2005). Place first, then train: an alternative to the medical model of psychiatric rehabilitation. *Social Work`, 50*(1), 31-39.
Criminal Code of Canada, R.S.C (1985), C.46, part XX.I.
Crisp, A., Gelder, M., Goddard, E., & Meltzer, H. (2005). Stigmatization of people with mental illnesses: a follow-up study within the changing minds campaign of the Royal College of Psychiatrists. *World Psychiatry, 4*(2), 106-113.
Crocker, A.G., Braithwaite, E., Côté, G., Nicholls, T.L., & Seto, M.C. (2011). To detain or to release? Correlates of dispositions for individuals declared not criminally responsible on account of mental disorder. *The Canadian Journal of Psychiatry, 56*(5), 293-302.
Crocker, A.G., Charette, Y., Seto, M. C., Nicholls, T.N., Cote, G., & Caulet, M. (2015). The National Trajectory Project of Individuals found Not Criminally Responsible on Accoung of Mental Disorder in Canada: Part 3 - Trajectories and Outcomes Through the Forensic System. *Canadian Journal of Psychiatry, 60*(3), 117-126.
Crocker, A.G., Charette, Y., Seto, M. C., Nicholls, T.N., Cote, G., & Caulet, M. (in press). The National Trajectory Project of Individuals found Not Criminally Responsible on Accoung of Mental Disorder in Canada: Part 3 - Trajectories and Outcomes Through the Forensic System. *Canadian Journal of Psychiatry*.
Crocker, A.G., & Côté, G. (2009). Evolving systems of care: Individuals found not criminally responsible on account of mental disorder in custody of civil and forensic psychiatric services. *Eur Psychiatry, 24*(6), 356-364.
Crocker, A.G., Nicholls, T.L., Charette, Y., & Seto, M.C. (2014). Dynamic and static factors associated with discharge dispositions: the National Trajectory Project of individuals

found not criminally responsible on account of mental disorder (NCRMD) in Canada. *Behav Sci Law, 32*(5), 577-595. doi: 10.1002/bsl.2133

Crocker, A.G., Nicholls, T.N., Seto, M. C., Charette, Y., Cote, G., & Caulet, M. (in press). The National Trajectory Project of Individuals found Not Criminally Responsible on Account of Mental Disorder in Canada. Part 2–The people behind the label. *Canadian Journal of Psychiatry*.

Crocker, A.G., Nicholls, T.N., Seto, M. C., Cote, G., Charette, Y., Latimer, E., & Caulet, M. (in press). The National Trajectory Project of Individuals found Not Criminally Responsible on account of Mental Disorder in Canada. Part 1: Context and Methods. (accepted).

De Vogel, V., De Ruiter, C., Bouman, Y., & De Vries Robbé, M. . (2009). SAPROF. Guidelines for the assessment of protective factors for violence risk. English version. In F. Educatief (Ed.). Utrecht.

Dear, M., Takahashi, L., & Wilton, R. (1996). *Factors influencing community acceptance: summary of the evidence*. Washington DC.

Desmarais, Sarah L., Hucker, Stephen, Brink, Johann, & De Freitas, Karen. (2008). A Canadian Example of Insanity Defence Reform: Accused Found Not Criminally Responsible Before and After theWinkoDecision. *International Journal of Forensic Mental Health, 7*(1), 1-14.

Dorvil, Henri., Morin, Paul., Beaulieu, Alain., & Robert, Dominique. (2005). Housing as a Social Integration Factor for People Classified as Mentally Ill. *Housing Studies, 20*(3), 497-519.

Douglas, K. S., Guy, L. S., & Hart, S. D. (2009). Psychosis as a risk factor for violence to others: a meta-analysis. *Psychol Bull, 135*(5), 679-706.

Douglas, K.S., & Skeem, J.L. (2005). Violence Risk Assessment: Getting Specific About Being Dynamic. *Psychology, Public Policy, and Law, 11*(3), 347-383. doi: 10.1037/1076-8971.11.3.347

Estroff, S.E., Swanson, J.W., Lachicotte, W.S., Swartz, M., & Bolduc, M. (1998). Risk reconsidered: targets of violence in the social networks of people with serious psychiatric disorders. *Soc Psychiatry Psychiatr Epidemiol, 33*, S95-S101.

Evans-Lacko, S., Brohan, E., Mojtabai, R., & Thornicroft, G. (2012). Association between public views of mental illness and self-stigma among individuals with mental illness in 14 European countries. *Psychol Med, 42*(8), 1741-1752. doi: 10.1017/S0033291711002558

Fakhoury, W.K.H., Murray, A., Shepherd, G., & Priebe, S. (2002). Research in supported housing. *Social Psychiatry and Psychiatric Epidemiology, 37*, 301-315.

<family and client perspective of alternative residential prgrams.pdf>.

Farrington, D.P. (2000). Psychosocial predictors of adult antisocial personality and adult convictions. *Behav Sci Law, 18*, 605-622.

Farrington, D.P., & Lober, R. (2000). Some benefits of dichotomization in psychiatric and criminological research. *Crim Behav Ment Health, 10*, 100-122.

Fazel, S., & Yu, R. (2011). Psychotic disorders and repeat offending: systematic review and meta-analysis. *Schizophr Bull, 37*(4), 800-810.

Fisher, W.H., Simon, L., Roy-Bujnowski, K., Grudzinskas, A.J., Wolff, N., Crockett, E., & Banks, S. (2011). Risk of arrest among public mental health services recipients and the general public. *Psychiatric Services 62*, 67–72.

Forchuk, C., Nelson, G., & Hall, B. (2006). It's important to be proud of the place you live in: housing problems and preferences of psychiatric survivors. *Perspectives in Psychiatric Care, 42*(1), 42-52.

Freudenberg, W.R., & Pastor, S.K. (1992). NIMBY and LULUs: Stalking the syndrom. *Journal of Social Issues, 48*(4), 39-61.

Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: what works! *Criminology, 34*(4), 575-607.

Goering, P., Veldhuizen, S., Watson, A., Adair, C., Kopp, B., Latimer, E., . . . Aubry, T. (2014). National At Home/Chez Soi Final Report. Calgary, AB: Mental Health Commission of Canada.

.

Goldfinger, S.M., Schutt, R.K., Tolomiczenko, G.S., Seidman, L.J., Penk, W.E., Turner, W., & Caplan, B. (1999). Housing placement and subsequent days homeless among formerly homeless adults with mental illness. *Psychiatric Services, 50*(5), 674-679.

Goldfinger, S.M., Schutt, R.K., Turner, W., Tolomiczenko, G., & Abelman, M. (1996). Assessing homeless mentally ill persons for permanent housing: screening for safety. *community Ment Health Journal, 32*(3), 275-288.

Granerud, A., & Severinsson, E. (2003). The new neighbour: Experiences of living next door to people suffering from long-term mental illness. *International Journal of Mental Health Nursing, 12*(3), 3-10.

Grant, I. (1997). Canada's new mental disorder disposition provisions: a case study of British Columbia criminal code review board. *Int J Law Psychiatry, 20*(4), 419-443.

Grant, I., Ogloff, J.R.P., & Douglas, K.S. (2000). The British Columbia Review Panel: factors influencing decision-making. *International Journal of Law and Psychiatry, 23*(2), 173-194.

Griffiths, C.T., Dandurand, Y., & Murdoch, D. (2007). The social reintegration of offenders and crime prevention. In T. I. C. f. C. L. R. a. C. J. Policy (Ed.). Ottawa, ON: National Crime Prevention Center.

Harris, G. T., Rice, M. E., & Quinsey, V. L. (1993). Violent Recidivism of Mentally Disordered Offenders: The Development of a Statistical Prediction Instrument. *Criminal Justice and Behavior, 20*(4), 315-335.

Hartford, K., Heslop, L., Stitt, L., & Hoch, J. S. (2005). Design of an algorithm to identify persons with mental illness in a police administrative database. *Int J Law Psychiatry, 28*(1), 1-11. doi: 10.1016/j.ijlp.2004.12.001

Heilbrun, K., Lawson, K., Spier, S., & Libby, J. (1994). Community placement for insanity acquittees: A preliminary study of residential programs and person-situation fit. *Bull Am Acad Psychiatry Law, 22*(4), 551-560.

Herman, A., Cadorette, S., Champagne, S., Cousineau, L., Gagnon, D., Gendron, P., . . . Sirois, C. (2008). L'urgence d'agir: pour un hébergement et une réinsertion sociale de qualité en psychiatrie légale. Montréal QC: Hôpital Louis-H.Lafontaine; Institut Philippe-Pinel de Montréal.

Hodgins, S. (1992). Mental disorder, intellectual deficiency, and crime. *Archives of General Psychiatry, 49*, 476-483.

Hodgins, S. (2001). The major mental disorders and crime: stop debating and start treating and preventing. *Int J Law Psychiatry, 20*, 427-446.

Hodgins, S., Müller-Isberner, R., Freese, R., Tiihonen, J., Repo-Tiihonen, E., Eronen, M., . . . Kronstrand, R. (2007). A Comparison of General Adult and Forensic Patients with Schizophrenia Living in the Community. *International Journal of Forensic Mental Health, 6*(1), 63-75. doi: 10.1080/14999013.2007.10471250

Hwang, S.D., & Segal, S.P. (1996). Criminality of the mentally ill in sheltered care: are they more dangerous? *International Journal of Law and Psychiatry, 19*(1), 93-105.

Jacobs, P., Moffatt, J., Dewa, C.S., Nguyen, T., Zhang, T., & Lesage, A. (2014). Criminal justice and forensic psychiatry costs in Alberta. In I. o. H. Economics (Ed.). Edmonton AB.

Jacobson, N., & Greenley, D. (2001). What is recovery? A conceptual model and explication. *Psychiatric Services, 52*, 482-485.

Jansman-Hart, E. M., Seto, M. C., Crocker, A.G., Nicholls, T. L., & Côté, G. (2011). International Trends in Demand for Forensic Mental Health Services. *International Journal of Forensic Mental Health, 10*(4), 326-336.

Johnstone, P., & Zolese, G. (1999). Systematic review of the effectiveness of planned short hospital stay for mental health care. *British Medical Journal, 318*, 1387-1390.

Jones, N.J., & Brown, S.L. (2008). Positive reframing: the benefits of incorporating protective factors into risk assessment protocols. *Crime Scène, 15*, 22-24.

Kirby, M.J.L., & Keon, W.J. (2006). Out of the shadows at last. The Standing Senate Comittee on Social Affairs, Science and Technology.

Laberge, D., & Morin, D. (1995). The overuse of criminal justice dispositions: failure of diversionary policies in the management of the mental health problems. *International Journal of Law and Psychiatry, 18*(4), 389-414.

Lamb, R.H., & Bachrach, L.L. (2001). Some perspectives on deinstitutionalization. *Psychiatric Services, 52*, 1039-1045.

Lamb, R.H., & Weinberger, L.E. (1998). Persons with severe mental illness in jails and prisons: a review. *Psychiatric Services, 49*(4), 483-493.

Lamb, R.H., Weinberger, L.E., & Gross, B.H. (1999). Community treatment of severely mentally ill offenders under the jurisdiction of the criminal justice system: a review. *Psychiatric Services, 50*, 907-913.

Latimer, J., & Lawrence, A. (2006). The review board systems in Canada: an overview of the results from the mentally disordered accused data collection study (R. a. S. Division, Trans.). Canada: Department of Justice Canada.

Lecomte, Y. (1997). De la dynamique des politiques de désinstitutionalisation au Québec. *Santé Mentale au Québec, XXII*(2), 7-24.

Lee, Donald Thomas. (2003). Community-treated and discharged forensic patients: an 11-year follow-up. *Int J Law Psychiatry, 26*(3), 289-300. doi: 10.1016/s0160-2527(03)00039-6

Leff, S.H., Chow, C.M., Pepin, R., Conley, J., Allen, E.I., & Seaman, C.A. (2009). Does one size fit all? What we can and can't learn from a meta-analysis of housing models for persons with mental illness. *Psychiatric Services, 60*(4), 10.

Lindqvist, P., & Allebeck, P. (1990). Schizophrenia and crime: a longitudinal follow-up of 644 schizophrenics in Stockholm. *British Journal of Psychiatry, 157*, 345-350.

Lindqvist, P., & Skipworth, J. (2000). Evidence-based rehabilitation in forensic psychiatry. *The British Journal of Psychiatry, 176*(4), 320-323.

Link, B.G., Andrews, H., & Cullen, F.T. (1992). The violent and illegal behavior of mental patients reconsidered. *American Sociological Review, 57*(3), 275-292.

Link, B.G., Stueve, A., & Phelan, J. (1998). Psychotic symptoms and violent behaviors: probing the components of "threat/control-override" symptoms. *Soc Psychiatry Psychiatr Epidemiol, 33*, S55-S60.

Livingston, J.D., Wilson, D., Tien, G., & Bond, L. (2003). A follow-up study of persons found not criminally responsible on account of mental disorder in British Columbia. *Canadian Journal of Psychiatry, 48*(6), 408-415.

Luettgen, J., Chrapko, W.E., & Reddon, J.R. (1998). Preventing violent re-offending in not criminally responsible patients. *International Journal of Law and Psychiatry, 21*(1), 89-98.

Masand, P., Daniel, D., & Harvey, P. (2003). Improving outcomes in schizophrenia: report advances in treatment of cognitive and affective domains. *Medscape*, 1-30.

McDermott, B. E., Scott, C.L., Busse, D., Andrade, F., Zozaya, M., & Quanbeck, C.D. (2008). The conditional release of insanity acquittees: three decades of decision-making. *J Am Acad Psychiatry Law, 36*, 329-336.

McDermott, B. E., & Thompson, J. W., Jr. (2006). The review panel process: an algorithm for the conditional release of insanity acquittees. *Int J Law Psychiatry, 29*(2), 101-111. doi: 10.1016/j.ijlp.2003.12.008

McNeil, D.E., Binder, R.L., & Robinson, J.C. (2005). Incarceration associated with homelessness, mental disorder and co-occuring substance abuse. *Psychiatric Services, 56*(7), 7.

Melnychuk, Rachel M., Verdun-Jones, Simon N., & Brink, Johann. (2009). Geographic Risk Management: A Spatial Study of Mentally Disordered Offenders Discharged from Forensic Psychiatric Care. *International Journal of Forensic Mental Health, 8*(3), 148-168.

Miller, A.L., & Velligan, D.I. (2008). Treatment planning. In K. T. Mueser, & Jeste, D.V (Ed.), *Clinical Handbook of Schizophrenia* (pp. 145-159). New York: The Guilford Press.

Minsky, S., Reisser, G.G., & Duffy, M. (1995). The eye of the beholder: Housing preferences of inpatients and their treatment teams. *Psychiatric Services, 46*(2), 173-176.

Miraglia, R., & Hall, D. (2011). The effect of length of hospitalization on re-arrest among insanity plea acquittees. *J Am Acad Psychiatry Law, 39*, 11.

Modestin, J., & Ammann, R. (1995). Mental disorders and criminal behaviour. *The British Journal of Psychiatry, 166*(5), 667-675.

Mojtabai, R. (2006). Psychotic-like experiences and interpersonal violence in the general population. *Soc Psychiatry Psychiatr Epidemiol, 41*(3), 183-190. doi: 10.1007/s00127-005-0020-4

Monahan, J., Steadman, H.J., Silver, E., Appelbaum, P.S., & Robbins, C.P. (2001). *Rethinking risk assessment: the MacArthur study of mental disorder and violence*. New York: Oxford University Press.

Monson, C.M., Gunnin, D.D., Fogel, M.H., Kyle, L.L. (2001). Stopping (or slowing) the revolving door: factors related to NGRI acquittees' maintenance of a conditional release. *Law and Human Behavior, 25*(3), 11.

Morrissey, J., Meyer, P., & Cuddeback, G. (2007). Extending Assertive Community Treatment to criminal justice settings: origins, current evidence, and future directions. *Community Ment Health J, 43*(5), 527-544. doi: 10.1007/s10597-007-9092-9

MSSS. (2005-2010). *Plan d'action en santé mentale*. Québec: Gouvernement du Québec.

Mueser, K.T., Bellack, A.S., & Blanchard, J.J. (1992). Comorbidity of schizophrenia and substance abuse: implications for treatment. *Journal of Consulting and Clinical Psychology, 60*(6), 845-856.

Mueser, K.T., & Drake, R.E. (2007). Comorbidity: What have we learned and where are we going? *Clinical Psychology, 14*, 64-69.

Nelson, G., Aubry, T., & Hutchison, J. (2010). Housing and mental health *International Encyclopedia of Rehabilitation*. University of Buffalo: Center for International Rehabilitation Research Information and Exchange.

Nelson, G., Aubry, T., & Lafrance, A. (2007). A review of the literature on the effectiveness of housing and support, assertive community treatment, and intensive case management interventions for persons with mental illness who have been homeless. *American Journal of Orthopsychiatry, 77*(3), 12.

Newman, S.J., Reschovsky, J.D., Kaneda, K., & Hendrick, A.M. (1994). The effects of independent living on persons with chronic mental illness: An assessment of the Section 8 certificate program. *Milbank Quarterly, 72*(1), 171-198.

Nicholls, T.L., Crocker, A.G., Seto, M. C., Wilson, C.M., Charette, Y., & Cote, G. (in press). The National Trajectory Project of Individuals Found Not Criminally Responsible on account of Mental Disorder. Part 5: How essential are gender-sensitive forensic psychiatric services? (Special Issue).

Nijdam-Jones, A., Livingston, J. D., Verdun-Jones, S., & Brink, J. (2014). Using social bonding theory to examine 'recovery' in a forensic mental health hospital: A qualitative study. *Crim Behav Ment Health*. doi: 10.1002/cbm.1918

O'neill, C., Sinclair, H., Kelly, A., & Kennedy, H. (2002). Interaction of forensic and general psychiatric services in Ireleand: learning the lessons or repeating the mistakes? *Irish Journal of Psychological Medicine, 19*(2), 48-54.

Oakley, D. (2002). Housing homeless people: local mobilization of federal ressources to fight NIMBYism. *Journal of Urban Affairs, 24*(1), 97-116.

Ohayon, M.M., Crocker, A.G., St-Onge, B., & Caulet, M. (1998). Fitness, responsibility and judicially ordered assessments. *Canadian Journal of Psychiatry, 43*, 491-495.

Owen, C., Rutherford, V., Jones, M., Wright, C., Tennant, C., & Smallman, A. (1996). Housing accomodation preferences of people with psychiatric disabilities. *Psychiatric Services, 47*(6), 628-632.

Parkinson, S., Nelson, G., & Horgan, S. (1999). From housing to homes: a review of the litterature on housing approaches for psychiatric consumer/survivor. *Canadian Journal of Community Mental Health, 18*(1), 145-164.

Peters, R.H., Sherman, P.B., & Osher, F.C. (2008). Treatment in jails and prison. In K. T. s. Mueser, D.V. (Ed.), *Clinical Handbook of Schizophrenia* (pp. 354-364). New York Guilford Press.

Piat, Myra, Lesage, Alain, Dorvil, Henri, Boyer, Richard, Couture, Audrey, & Bloom, David. (2008). Les préférences résidentielles des personnes souffrant de troubles mentaux graves : une étude descriptive. *Santé mentale au Québec, 33*(2), 247. doi: 10.7202/019677ar

Porporino, F.J., & Motiuk, L.L. (1995). The prison careers of mentally disordered offenders. *Int J Law Psychiatry, 18*(1), 29-44.

Pouncey, C.L., & Lukens, J.M. (2010). Madness versus badness: The ethical tension between recovery movement and forensic psychiatry,. *Theoretical Medecine and Bioethics, 31*, 93-105.
Priebe, S., Badesconyi, A., Frioritti, A., Hansson, L., Kilian, R., Torres-Gonzales, F., . . . Wiersma, D. (2005). Reinstitutionalisation in mental health care: comparison data on service provision from six European countries. *BMJ, 330*, 123-126. doi: 10.1136/bmj.38301.686030.63
10.1136/bmj.38296.611215.AE
Pulice, R. T., McCormick, L. L., & Dewees, N. M. (1995). Assessing the effects of system change on mental health consumers, families, and providers: a qualitative approach. *Psychiatric Services, 46*, 575-579.
R. v. Swain [1991] 1 S.C.R. 933.
Rice, M.E., Harris, G.T., Lang, C., & Bell, V. (1990). Recidivism among male insanity acquittees. *The journal of Psychiatry and Lae*, 379-403.
Ridgeway, P., Simpson, A., Wittman, F. D., & Wheeler, G. . (1994). Home making and community building: Notes on empowerment and place. *Journal of Mental Health Administration, 21*(4), 407-418.
Ridgway, P., & Zipple, A. M. (1990). The paradigm shift in residential services: From the linear continuum to supported housing approaches. *Psychosocial Rehabilitation Journal, 13*(4), 11-31.
Riordan, S., Haque, S., & Humphreys, M. (2006). Possible predictors of outcome for consitionnally discharged patients: a preliminary study. *Medicine, Science and the Law, 46*(1), 6.
Robbins, P.C., Monahan, J., & Silver, E. (2003). Mental disorder, violence and gender. *Law and Human Behavior, 27*(6), 561-571.
Roesh, R., Ogloff, J.R.P., Hart, S.D., Dempster, R.J., Zapf, P.A., & Whittermore, K.E. (1997). The impact of canadian criminal code changes on remands and assessments of fitness to stand trial and criminal responsibility in British Columbia. *Canadian Journal of Psychiatry, 42*, 6.
Rogers, R. (2000). the uncritical acceptance of risk assessment in forensic practice. *Law Hum Behav, 24*(5), 595-605.
Rothbard, A.B., Kuno, E., Schinnar, A.P., Hadley, T.R., & Turk, R. (1999). Sevice utilization and cost of community care for discharged state hospital patients: A 3-year follow-up study. *Am J Psychiatry, 156*, 920-927.
Roy, L., Crocker, A.G., Nicholls, T.N., Latimer, E.A., & Reyes, A. (2014). Criminal behavior and victimization among homeless individuals with severe mental illness: a systematic review. *Psychiatric Services, 6*(65), 739-750.
Rusch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma: concepts, consequences, and initiatives to reduce stigma. *Eur Psychiatry, 20*(8), 529-539. doi: 10.1016/j.eurpsy.2005.04.004
Russo, G., Salomone, L. , & Della Villa, L. (2003). The characteristics of criminal and noncriminal mentally disordered patients. *Int J Law Psychiatry, 26*(4), 417-435.
Salem, L., Crocker, A. G., Charette, Y., Earls, C.M., Nicholls, T. N. , & Seto, M. C. (submitted). Custody and housing trajectories of individuals found not criminally responsible on account of mental disorder.

Salem, L., Crocker, A.G., Charette, Y., Seto, M.C., Nicholls, T.L., & Cote, G. (2015). Supportive Housing and Forensic Patient Outcomes. *Law and Human Behavior, 39*(3), 311-320. doi: 10.1037/lhb0000112

Sapers, H. (2013). The annual report of the office of the correctional investigator 2011-2012. Ottawa, ON: The Correctional Investigator Canada.

Schneider, R.D., Forestell, M., & MacGarvie, S. . (2002). Statistical survey of provincial and territorial review boards (D. o. J. Canada, Trans.). Ottawa (ON).

Seig, M.D., Ball, E., & Menninger, J.A. (1995). A comparison of female versus male insanity acquittees in Colorado. *Bull Am Acad Psychiatry Law, 23*(4), 523-532.

Seto, M.C., Crocker, A.G., Nicholls, T.N., & Côté, G. (2013). Implementing evidence-based policies for persons found Not Criminally Responsible on account of Mental Disorder (NCRMD). Brief presented to the House of Commons Standing Committee on Justice and Human Rights: Review of Bill C-54.

Seto, M.C., Harris, G.T., & Rice, M.E. (2004). The criminogenic, clinical and social problems of forensic and civil psychiatric patients. *Law Hum Behav, 28*(5), 577-586.

Seto, M.C., Lalumière, M.L., Harris, G.T., Barbaree, H.E., Hilton, N.Z., & Rice, M. E. (2001). Demands on forensic mental health services in the province of Ontario. Toronto: Report prepared for the Ontario Ministry of Health and Long-Term Care.

Sheldon, C. T., Aubry, T. D., Arboleda-Florez, J., Wasylenki, D., & Goering, P. N. (2006). Social disadvantage, mental illness and predictors of legal involvement. *Int J Law Psychiatry, 29*(3), 249-256.

Silver, E. (1995). Punishment or treatment? Comparing the lengths of confinement of successful and unsuccessful insanity defendants. *Law Hum Behav, 19*(4), 375-388.

Silver, E. (2000). Race, neighborhood disadvantage, and violence among persons with mental disorders: the importance of contextual measurement. *Law and Human Behavior, 24*(4), 8.

Silver, E., Mulvey, E.P., & Monahan, J. (1999). Assessing violence risk among discharged psychiatric patients: toward an ecological approah. *Law and Human Behavior, 23*(2), 19.

Silver, E., Mulvey, E.P., & Swanson, J.W. (2002). Neighborhood structural characteristics and mental disorder: Faris and Dunham revisited. *Social Science and Medicine, 55*, 14.

Simpson, A.I., Penney, S.R., Seto, M.C., Crocker, A.G., Nicholls, T.N., & Padraig, L.D. (2014). Changing characteristics of the review board population in Ontario: a population-based study from 1987-2012 (pp. 1-46). Ontario, Canada: Center for Addiction and Menatl Health: Complex Mental Illness/Forensic Services.

Sirotich, Frank. (2008). Correlates of Crime and Violence among Persons with Mental Disorder: An Evidence-Based Review. *Brief Treatment and Crisis Intervention, 8*(2), 171-194.

Skeem, J. L., Schubert, C., Odgers, C., Mulvey, E. P., Gardner, W., & Lidz, C. (2006). Psychiatric symptoms and community violence among high-risk patients: A test of the relationship at the weekly level. *J Consult Clin Psychol, 74*(5), 967-979. doi: 10.1037/0022-006X.74.5.967

Skeem, J. L., Winter, E., Kennealy, P. J., Louden, J. E., & Tatar, J. R., 2nd. (2014). Offenders with mental illness have criminogenic needs, too: toward recidivism reduction. *Law Hum Behav, 38*(3), 212-224. doi: 10.1037/lhb0000054

Skipworth, J., & Humberstone, V. (2002). Community forensic psychiatry: restoring some sanity to forensic psychiatric rehabilitation. *Acta Psychiatrica Scandinavia, 106*(412), 57-53.

Soliman, M., Santos, A.M., & Lohr, J.B. (2008). Emergency, inpatient, and residential treatment. In K. T. Mueser, & Jeste, D.V (Ed.), *Clinical Handbook of Scizophrenia*. United States The Guilford Press.

Solomon, P., & Draine, J. (1999). Using clinical and criminal involvement factors to explain homelessness among clients of a psychiatric probation and parole service. *Psychiatric Quarterly, 70*(1), 75-84.

Stark, C., Patersone, B., & Devlin, B. . (2004). Newspaper coverage of a violent assault by a mentally ill person. *Journal of Psychiatric and Mental Health Nursing 11*, 11.

Steadman, H. J., Mulvey, E.P., Monahan, J., Robbins, P.C., Appelbaum, P.S., Grisso, T., . . . Silver, E. . (1998). Violence by people discharged from acute psychiatric impatient facilities and by others in the same neighborhoods. *Archives of General Psychiatry, 55*, 393-401.

Stuart, H. (2006). Media portrayal of mental illness and its treatments. *CNS Drugs, 20*(2), 99-106.

Stuart, H., Arboleda-Florez, J., & Crisanti, A.S. (2001). Impact of legal reforms on length of forensic assessments in Alberta, Canada. *International Journal of Law and Psychiatry, 24*, 12.

Stueve, A., & Link, B.G. (1998). Gender differences in the relationship between mental illness and violence: evidence from a community-based epidemiological study in Israel. *Soc Psychiatry Psychiatr Epidemiol, 33*(S61-S67).

Swanson, J.W. (1993). Alcohol abuse, mental disorder, and violent behavior: An epidemiologic inquiry. *Alcohol, Health & Research World, 17*(2), 123-132.

Swanson, J.W., Swartz, M.S., Essock, S.M., Osher, F.C., Wagner, R., Goodman, L.A., . . . Meador, K.G. (2002). The social-environmental context of violent behavior in persons treated for severe mental illness. *American Journal of Public Health, 92*, 10.

Swanson, J.W., Swartz, M.S., Estroff, S., Borum, R., Wagner, R., & Hiday, V. (1998). Psychiatric impairment, social contact, and violent behavior: evidence from a study of outpatient-committed persons with severe mental disorder. *Soc Psychiatry Psychiatr Epidemiol, 33*, S86-S94.

Swanson, J.W., Van Dorn, R.A., Monahan, J., & Swartz, M.S. (2006). Violence and leverage community treatment for persons with mental disorders. *American Journal of Psychiatry, 163*(8), 1404-1411.

Sylvestre, J., Ollenberg, M.D., & Trainor, J. (2007). A participatory benchmarking strategy for describing and improving supportive housing. *Psychiatric Rehabilitation Journal, 31*(2), 10.

Tanzman, B. (1993). An overview of surveys of mental health consumers' preferences for housing and support services. *Hospital and Community Psychiatry, 44*(5), 450-455.

Taylor, P.J., & Gunn, J. . (1999). Homicides by people with mental illness: myth and reality. *Br J Psychiatry, 174*, 9-14.

Teplin, L.A. (1984). Criminalizing mental disorder. *American Psychologist, 39*, 794-803.

Teplin, L.A., & Pruett, N.S. (1992). Police as streetcorner psychiatrists: managing the mentally ill *International Journal of Law and Psychiatry, 15*(2), 139-156.

Thornicroft, G. (2008). Stigma and discrimination limit access to mental health care. *Epidemiologia e Psichiatria Sociale, 17*(01), 14-19. doi: 10.1017/s1121189x00002621

Torrey, E.F., Steiber, J., Ezekiel, J., Wolfe, S.M., Sharfstein, J., Noble, J.H., & Flynn, L.M. (1992). *Criminalization of the mentally ill: the abuse of jails as mental hospitals*. Washington, DC.

Tsai, J., Bond, G.R., Salyers, M.P., Godfrey, J.L., & Davis, K. (2010). Housing preferences and choices among adults with mental illness and substance use disorders: a qualitative study. *Community Ment Health J, 46*(4), 381-388.

Tsemberis, S., & Eisenberg, R.F. (2000). Pathways to housing: supported housing for street-dwelling homeless individuals with psychiatric disabilities. *Psychiatric Services, 51*(4), 487-493.

Verdun-Jones, S.N. (2000). Making the mental disorder defence a more attractive option for defendants in a criminal trial: Recent legal developments in Canada *Mental disorders and the criminal code: Legal background and contemporary perspectives,* (pp. 39-75).

Viljoen, S., Nicholls, T., Greaves, C., de Ruiter, C., & Brink, J. (2011). Resilience and successful community reintegration among female forensic psychiatric patients: a preliminary investigation. *Behav Sci Law, 29*(5), 752-770.

Villeneuve, D.B., & Quinsey, V.L. (1995). Predictors of general and violent recidivism among mentally disordered inmates. *Crim Justice Behav, 22*(4), 387-410.

Vincent, K., & Morin, D. (2010). Le logement subventionné. In C. p. l. D. d. L. S. e. S. M. d. Québec (Ed.). Québec.

Vitacco, Michael J., Van Rybroek, Gregory J., Erickson, Steven K., Rogstad, Jill E., Tripp, Alan, Harris, Linda, & Miller, Rodney. (2008). Developing services for insanity acquittees conditionally released into the community: Maximizing success and minimizing recidivism. *Psychological Services, 5*(2), 118-125. doi: 10.1037/1541-1559.5.2.118

Wallace, C. , Mullen, P.E., & Burgess, P. (2004). Criminal offending in schizophrenia over a 25-year period maked by deinstitutionalization and increasing prevalence of comorbid substance use disorders. *American Journal of Psychiatry, 161*, 12.

Webster, C. D., Martin, M. L., Brink, J., Nicholls, T. L., & Desmarais, S. (2009). Manual for the Short-Term Assessment of Risk and Treatability (START) (Version 1.1). In F. P. S. C. a. S. J. s. Healthcare (Ed.). Port Coquitlam, BC.

Wessely, S.C., Castle, D., Douglas, A.J., & Taylor, P.J. . (1994). The criminal careers of incident cases of schizophrenia. *Psychological Medicine, 24*, 483-502.

Whitley, R., & Berry, S. (2013). Analyzing media representations of mental illness: lessons learnt from a national project. *J Ment Health, 22*(3), 246-253. doi: 10.3109/09638237.2012.745188

Winko v. British Columbia, 1999. *Winko v. British Columbia (Forensic Psychiatric Institute) [1999] 2 S.C.R. 625.*

Wong, Y. L. I., & Stanhope, V. (2009). Conceptualizing community: a comparison of neighborhood characteristics of supportive housing for persons with psychiatric and developmental disabilities. *Soc Sci Med, 68*(8), 1376-1387. doi: 10.1016/j.socscimed.2009.01.046

Yoshikawa, K., Taylor, P. J., Yamagami, A., Okada, T., Ando, K., Taruya, T., . . . Kikuchi, A. (2007). Violent recidivism among mentally disordered offenders in Japan. *Crim Behav Ment Health, 17*(3), 137-151.

Appendix 1. Douglas Mental Health University Institute Research Ethics Certificate

Le 13 décembre, 2005

Dr. Anne Crocker
Centre de recherche de l'Hôpital Douglas
Pavillon Perry

Objet: **Protocole 05/26** *Individus déclarés non criminellement responsables pour cause de troubles mentaux : dispositions, ressources, et trajectoires de services*
Nouveau protocole

Chère Dr Crocker;

Lors de sa réunion tenue le 13 décembre 2005, le CÉR a examiné le protocole que vous aviez soumis pour approbation et celui-ci fut jugé satisfaisant. Le Comité a donné son approbation à cette étude car votre soumission était complète et rencontrait les exigences du CÉR.

Le Comité a noté l'excellente qualité de votre projet et tenait à vous en féliciter. En effet, la description et les informations fournies étaient claires et écrites dans un français impeccable. Le CÉR a jugé ce projet comme étant des plus intéressant.

Encore une fois, félicitations et bon succès.

Pour:
Radan Capek, M.D., Ph.D.
Président intérimaire
Comité d'éthique de la recherche
de l'Hôpital Douglas
/lb

6875, boulevard LaSalle, Montréal (Québec) H4H 1R3 • Téléphone : (514) 761-6131 • **www.douglas.qc.ca**

Hôpital d'enseignement de l'Université McGill
McGill University Teaching Hospital

Centre collaborateur OMS/OPS de Montreal pour la recherche et la formation en santé mentale
The Montreal WHO/PAHO Collaborating Centre for Research and Training in Mental Health

Appendix 2. Philippe-Pinel Research Ethics Board's approval

Le 17 septembre 2010

Madame Anne Crocker
Chercheure principale
Centre de recherche de l'Institut universitaire
en santé mentale Douglas
Centre de recherche de l'Hôpital Douglas
6875, boulevard LaSalle
Montréal (Québec) H4H 1R3

Objet : Demande d'approbation du projet intitulé *Le projet national trajectoire (PNT) : une étude des personnes déclarées non criminellement responsables pour cause de troubles mentaux (nº AJ07-001)* – en ce qui a trait à la partie du projet qui sera menée à l'Institut Philippe-Pinel

---

Chère Madame Crocker,

Le comité d'éthique de la recherche (CÉR) de notre établissement a évalué la demande précitée à sa réunion plénière du 17 septembre 2010, tenue à l'Institut, alors qu'il y avait quorum. À cette fin, les documents suivants ont été examinés :

- le formulaire de demande d'évaluation d'une nouvelle activité de recherche, signé le 30 août 2010 ;
- le résumé du projet (non daté, 1 p.) ;
- l'exposé du projet (non daté, 18 p.) ;
- l'amendement au protocole, tel que soumis le 13 février 2009 au CÉR de l'Hôpital Douglas, et approuvé par ce comité le 18 février 2009 ;
- l'amendement au protocole, tel que soumis le 17 juin 2009 au CÉR de l'Hôpital Douglas, et approuvé par ce comité le 30 juin 2009 ;
- les lettres de la Commission d'accès à l'information du Québec, en date du 17 octobre 2007 et du 28 octobre 2009, lesquelles vous autorisent à recevoir de la RAMQ et du MSSS les renseignements personnels nécessaires aux fins de votre projet ;
- le formulaire de demande de renouvellement annuel de l'approbation de votre projet, nécessaire aux fins de la reconduction de l'approbation du CÉR de l'Hôpital Douglas, en date du 11 août 2010, accompagné du certificat d'éthique de ce comité, en date du 24 août 2010 ;
- votre curriculum vitae, en date du 27 août 2010.

/2

10905, boul. Henri-Bourassa Est
Montréal (Québec) H1C 1H1
Téléphone : (514) 648-8461
Télécopieur : (514) 494-4406
www.pinel.qc.ca

Apaiser la souffrance et contrer la violence : une mission unique

D'entrée de jeu, le comité tient à souligner la qualité de votre projet. Bien qu'il se soit montré sensible à la possibilité que les résultats puissent être récupérés par les pouvoirs en place – avec toutes les conséquences que cela pourrait entraîner pour la population en cause – le comité est néanmoins conscient que le chercheur dispose d'un pouvoir limité à ce chapitre. Cela étant, force est de rappeler l'importance, pour le chercheur, de tout mettre en œuvre de manière à éviter ou, à défaut, de réduire le plus possible ce type de dommages. L'ajout de l'utilisation de l'instrument START à votre processus de collecte de données constitue, en ce sens, une façon de réduire les risques pour la population en cause.

Pour toutes ces raisons, il me fait plaisir de vous informer que votre projet a été approuvé, à l'unanimité par le comité. Cette approbation suppose que vous vous engagiez :

1. à respecter la présente décision ;
2. à respecter les moyens liés à l'examen continu du projet en vigueur dans l'établissement (nous vous référons à la section 6 du *Guide à l'intention du chercheur*, lequel est disponible à l'adresse http://www.pinel.qc.ca) ;
3. à conserver les dossiers de recherche pour une période d'au moins deux ans suivant la fin du projet afin de permettre leur éventuelle vérification par une instance déléguée par le comité.

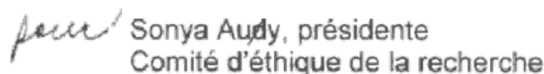
En outre, l'approbation du comité suppose aussi que vous lui ferez parvenir dans les meilleurs délais un complément d'information à l'égard des deux éléments suivants :

1. à la page 11 de l'exposé de votre projet, on peut lire que les données seront détruites une fois les bases de données appariées. Le comité aimerait connaître le temps estimé qui sera nécessaire aux fins de cet appariement ?
2. Quelle sera la durée de conservation des données et des documents relatifs au projet, une fois que celui-ci aura pris fin ?

La présente décision vaut jusqu'au 24 août 2011, de manière à faciliter la gestion de votre dossier et vos obligations envers le CÉR de l'Hôpital Douglas. Elle peut être suspendue ou révoquée en cas de non-respect de ces exigences.

En terminant, je vous demanderais de bien vouloir mentionner, dans votre correspondance, le numéro attribué à votre projet par notre institution. Pour toute question, n'hésitez pas à communiquer avec la coordonnatrice du comité, Mme Ginette Blanchard, en composant le 514-648-8461, poste 574.

Je vous souhaite le meilleur succès dans la poursuite de vos travaux de recherche et vous prie d'agréer, chère Madame Crocker, mes salutations distinguées.



Sonya Audy, présidente
Comité d'éthique de la recherche

c. c. Gilles Côté

/gb

Appendix 3. "Access to Information Commission" approval

Commission d'accès à l'information du Québec

Siège
Bureau 1.10
575, rue Saint-Amable
Québec (Québec) G1R 2G4
Téléphone : 418 528-7741
Télécopieur : 418 529-3102

Bureau de Montréal
Bureau 18.200
500, boulevard René-Lévesque Ouest
Montréal (Québec) H2Z 1W7
Téléphone : 514 873-4196
Télécopieur : 514 844-6170

Sans frais : 1 888 528-7741 | cai.communications@cai.gouv.qc.ca | www.cai.gouv.qc.ca

Québec, le 28 octobre 2009

Madame Anne Crocker
Centre de recherche
Hôpital Douglas
6875, boul. Lasalle
Montréal (Québec) H4H 1R3

N/Réf. : 09 12 55 (07 04 04)

Madame,

Nous avons bien reçu la demande faite par Mme Malijaï Caulet, en votre nom, visant à modifier l'autorisation que vous avez obtenue de la Commission le 17 octobre 2007 et qui vous permettait de recevoir communication de renseignements personnels détenus par la Régie de l'assurance maladie du Québec (RAMQ) et par le ministère de la Santé et des Services sociaux (MSSS), par le biais de son mandataire, la RAMQ, pour votre recherche intitulée « *Individus déclarés non criminellement responsables pour cause de troubles mentaux : dispositions, ressources et trajectoires de services* ».

Nous comprenons que l'autorisation initiale vous permettait de recevoir communication de renseignements concernant les individus ciblés par votre recherche, et ce, pour une période d'extraction des données débutant cinq ans avant la date de verdict et se terminant le 30 avril 2005 (fin de la période d'extraction fixe pour tous les sujets de recherche). De plus, la Commission vous autorisait à conserver la liste maîtresse comprenant le lien entre le numéro de recherche et les renseignements identifiant les individus jusqu'au 30 septembre 2009.

Dans le but d'actualiser la recherche dont le début tardif a été occasionné par une révision à la hausse de la portée de l'étude, vous souhaitez en conséquence prolonger les périodes d'extraction et de détention des renseignements personnels.

Après étude de cette demande et conformément à l'article 125 de la *Loi sur l'accès aux documents des organismes publics et sur la protection des renseignements personnels* (L.R.Q., c. A-2.1), la Commission vous autorise à recevoir de la RAMQ et du MSSS, par l'entremise de son mandataire, la RAMQ, les mêmes renseignements décrits dans notre

lettre d'autorisation du 17 octobre 2007 et pour la même cohorte d'individus, mais pour une période d'extraction débutant cinq ans avant la date de verdict de non-culpabilité et se terminant le 31 décembre 2008. De plus, la Commission vous autorise à conserver jusqu'au 30 septembre 2010 les renseignements personnels. À cette date, vous devez détruire la liste maîtresse comprenant le lien entre le numéro de recherche et les renseignements identifiant les individus (nom, prénom, jour et mois de naissance ainsi que le numéro d'assurance maladie).

Cette autorisation est soumise aux mêmes conditions que celles énumérées dans notre lettre du 17 octobre 2007.

Outre la présente autorisation, la Commission rappelle que la décision de vous communiquer les renseignements personnels demandés relève de la compétence de la RAMQ et du MSSS qui les détiennent légalement.

Veuillez agréer, Madame, l'expression de mes sentiments distingués.

Le secrétaire,

JSD/MB/lp

Jean-Sébastien Desmeules

c.c. Me André Rochon, RAMQ
Mme Joanne Gaumond, RAMQ
M. Claude Lamarre, MSSS