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Exploring Interactions Between Police and People with Mental Illness

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**EXPLORING INTERACTIONS BETWEEN POLICE AND PEOPLE WITH
MENTAL ILLNESS**

By

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B.A. (Honours), Psychology, University of Western Ontario, 2013

THESIS

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Abstract

Contact between people with mental illness (PMI) and police is on the rise. The current study analyzed a six-month period of official police data ($N = 400$ occurrences) to provide a description of the PMI that came into contact with police and the typical characteristics and outcomes of these encounters. Results indicated that these interactions were initiated by family members and are taking place at home. Police are most commonly resolving the situations formally with apprehensions under the Mental health Act (55%), however only half of the time these apprehensions result in the PMI being admitted into hospital care, indicating discrepancy between police apprehension and hospital admission criteria. The presence of substances and violence were significant predictors of MHA apprehensions, whereas the PMI initiating the call was protective of this outcome. When police opted to resolve the situation informally, mental health services were engaged less than half of the time. Implications are that PMI are not being connected with mental health services.

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To my partner, Zach: This would have not been possible without you. You have supported me in every way possible and I love you so much.

Finally, I would like to dedicate this thesis to my father, who suffered from mental health issues and who passed away four months into the completion of my Master's degree. This one's for you, Dad.

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Introduction

People with mental illness (PMI) can suffer from a range of mental conditions that are primarily characterized by “alterations in thinking, mood, or behaviour (or some combination thereof) associated with distress and/or impaired functioning” (Canadian Mental Health Association, 2015, p.1). At times, PMI can experience a mental health crisis, which can be defined as “the onset of an emotional disturbance or situational distress (which may be cumulative), involving the sudden breakdown of an individual’s ability to cope” (Ontario Ministry of Health & Long-Term Care, 1999, p. 37). Just like mental illness, people of any age, ethnicity, and socioeconomic status can experience a mental health crisis (Southern Network of Specialized Care, 2014).

Contact between PMI and police has steadily increased over recent decades (Short et al., 2014). PMI have more frequent and repeated police contact than members of the general population (Markowitz, 2011). Reasons for the increased contact between police and PMI include the inaccurate yet pervasive stigma that PMI are dangerous, as well as factors relating to the deinstitutionalization of mental health services such as poor community and inpatient mental health treatment options. These dynamic factors have meant that police are often called to respond when a PMI experiences a mental health crisis (Chaimowitz, 2011). This process has led to police being referred to as ‘front line mental health workers’ (Mclean & Marshall, 2010).

Police have indeed become tasked with managing PMI in the community, and find a disproportionate amount of their time and resources being spent on calls for service involving mental health issues (Durbin, Lin & Zaslavska, 2010). Under the Mental Health Act (MHA) of Ontario police are given the authority to apprehend an individual

experiencing a mental health crises and transport them to the nearest hospital for psychiatric evaluation (Mental Health Act, RSO 1990, c. M.7). As such, police play an important part in determining whether treatment is facilitated for PMI, or whether they are arrested and further criminalized.

In response to the increase in contact between police and PMI, many Canadian police services are attempting to improve the effectiveness of police response to calls that are mental health-related. However, for these efforts to be based in evidence, we must first understand the current state of police-PMI occurrences. Unfortunately, there is a limited amount of information in this regard. Studies that have examined police-PMI interactions have found that PMI who encounter police tend to do so multiple times, that these interactions tend to take place in private residences, and that substances and violence are often noted to be present during these encounters (Charette, Crocker, & Billette, 2011; Hartford et al., 2005). Previous research has also found that these occurrences are commonly resolved informally by police, meaning that formal apprehensions, like an arrest or MHA apprehension, are less common (Charette et al., 2011; Hartford et al., 2005). Previous research has also found that informal police resolutions are not resulting in the PMI being connected with mental health services, likely due to limited access to community mental health services (Short et al., 2014).

It is important to know the demographic characteristics of the PMI who are becoming involved with police, as well as the typical situation characteristics of these interactions, before attempting to improve police response to PMI, so that the needs of this vulnerable population can be appropriately addressed. An understanding of which outcomes police are electing when responding to PMI, and whether or not there are

certain PMI-demographics or situation characteristics that increase the likelihood of a particular police response, would also be beneficial. The current study intends to add to existing literature in this area by exploring police calls for service that have been primarily classified by police as mental-health-related. Analyses of official police records were conducted to provide a description of typical PMI demographics, situational features, and dispositional outcomes of such calls. Further, the study was designed to identify factors that predict three types of dispositional outcomes (MHA apprehensions, involuntary hospital admissions, and community mental health service engagement) common in mental health-related police encounters.

Chapter 1: Literature Review

A Rise in Police-PMI Contact

Contact between police officers and PMI in North America has steadily increased over recent decades. In Canada, it has been estimated that a range of 8-30% of all calls to service made to police involve PMI (Belleville Police Service, 2007; Wilson-Bates, 2008). PMI presently have a higher frequency of police contact than members of the general population; Markowitz (2011) found that people experiencing severe mental health symptoms are likely to be arrested at least once in their lifetime. Today, 40% of Canadians living with mental illness have been arrested, compared to only 15% of members of Canada's general population (Chaimowitz, 2014). Overall, Ontario statistics show that in 2007 over 40,000 police encounters involved PMI. The rise in police contact with PMI has meant that police spend a significant amount of their time and resources responding to calls for service involving PMI (Hartford et al., 2005).

While it has been established that PMI encounter police more frequently than non-PMI, it is also known that PMI have more repeat encounters with police than non-PMI. For example, a study conducted in London, ON, found that PMI who encounter police do so multiple times, and that this repeat contact happens more rapidly than non-PMI who repeatedly encounter police (Hartford et al., 2005). Hartford and colleagues (2005) found that 50% of PMI were re-involved with the police within 59 days, compared to 681 days for non-PMI.

Notably, contact between police and PMI is not necessarily crime-related. PMI have become more visible to members of the public, who often call police when they encounter a PMI displaying bizarre or nuisance-like behaviour indicative of a mental

health crisis (Markowitz, 2011). Police are also contacted by PMI themselves when they have been the victim of a crime, however this type of contact only accounts for a small portion of police-PMI contact. While PMI are more likely to be victims of criminal acts than the perpetrators, crimes against PMI often go unreported (Arboleda-Florez, 2010).

Factors Contributing to the Rise of Police-PMI Contact

There are a number of reasons why PMI have had increased police contact over recent decades. Explanations include the stigmatization of PMI as dangerous, and the deinstitutionalization of mental health treatment (Chaimowitz, 2011).

These interconnected factors, and their role in the rise of police-PMI contact will now be discussed.

The Stigma of PMI as Dangerous

The risk of violence associated with mental illness is small and mediated by several risk factors, such as the comorbidity of addiction (Steadman et al., 1999). Yet it is the image of an individual experiencing psychosis and acting violently that has fueled the stigma of all PMI as dangerous (Phelan & Link, 2004). In reality, the majority of PMI do not engage in violent acts, and PMI are far more likely to be victims of violence than the perpetrators (Canadian Mental Health Association, 2015). Unfortunately, the stigma that PMI are dangerous and unpredictable has meant that many PMI face extensive prejudice and discrimination because of their illness (Alexander & Link, 2003). This stigma is often perpetuated by news media that sensationalize extreme acts of violence committed by PMI. Although rare, these events usually depict individuals who are experiencing a mental health crisis, and who have committed especially heinous

crimes. This was the case with Vince Li who, in 2008, beheaded a fellow passenger on a Greyhound bus in Manitoba (Canadian Broadcasting Corporation, 2008). The judge presiding over the case ruled that Li was suffering from untreated symptoms of schizophrenia at the time and was not criminally responsible (NCR) for his actions. Li was ordered to receive in-patient treatment at a forensic psychiatric facility. Focusing on the graphic nature of the crime, media coverage of the event perpetuated the stigma of PMI as dangerous, even though this event was a rarity and most people with schizophrenia do not engage in violence of any sort (Canadian Mental Health Association, 2015).

Stigmatizing PMI as dangerous has a negative impact on the quality of life for these individuals. Even those who have their symptoms under control are often denied adequate jobs, housing, and social services because of negative perceptions about their illness (Mayville & Penn, 1998). In addition, the stigma associated with mental illness can have a detrimental effect on a PMI's recovery process. The extensive social rejection faced by this population can have harmful and long-lasting effects on an individual's self-esteem and can prevent an individual who is experiencing mental health symptoms from seeking treatment (Alexander & Link, 2003). In addition, the belief that PMI are dangerous can lead to many communities protesting the growth of community-based treatment facilities in their area (Taylor & Dear, 1981), making the already difficult task of seeking and securing treatment even more challenging for PMI. When PMI do receive treatment, they have a tendency to be further stigmatized by mental health treatment staff (Canadian Mental Health Association, 2015).

Notably, the stigma of PMI as dangerous is so pervasive that it has affected Canadian mental health policy. Recently, Canada's Justice Minister Peter MacKay introduced Bill C-14, the Not Criminally Responsible Reform Act, to Parliament. This Bill outlined a strategy to label individuals who have been found NCR for a crime on account of their mental illness as a "high-risk" of reoffending, which would result in tighter restrictions placed on their liberties (Bill C-14, 2014). The Bill also argued that "paramount consideration" be given to the safety of the public when deciding NCR cases (inaccurately implying that finding an individual NCR for a crime would jeopardize public safety), and that the involvement of victims in NCR cases should be enhanced.

This legislation was not driven by empirical evidence. As advocates for PMI have pointed out, any research that presented the problems associated with the Bill (such as the potential for labeling PMI as "high-risk" to further marginalize this population) was dismissed by Parliament (Canadian Association of Social Workers, 2015). Further, mental health advocacy groups expressed concern that the mental health community was not consulted during the process of bringing the Bill to Parliament. Without input from the mental health community, this policy was driven by the inaccurate stereotype of PMI as a danger to members of the public, and added to the marginalization of this already vulnerable population by putting PMI at an increased risk of stigmatization and criminalization. Unfortunately, the Canadian Senate passed Bill C-14 without amendment in April of 2014.

The Deinstitutionalization of Mental Health Treatment

Like today, public opinions of PMI have affected Canadian mental health policy throughout history. At times, mental health advocacy groups have been successful in

eliminating policies that they feel oppress the rights of PMI. This was ostensibly the case with the deinstitutionalization movement that began in North America 65 years ago. During the first half of the 20th century it was very common (and widely accepted) for people in Canada with severe mental illnesses, such as schizophrenia, to be involuntarily institutionalized in psychiatric facilities for lengthy periods of time. However, beginning in the 1950s, attitudes toward the involuntary and indefinite institutionalization of PMI began to shift (Lamb et al., 2002). It was at this time that new psychotropic medications were becoming available to control symptoms of severe mental illness. In addition, community-based mental health care services were emerging as an alternative form of psychiatric care, and were considered more curative than traditional hospitalization (Sealy, 2012).

Community treatment models have been demonstrated to be more effective than hospital treatment models given they reduce relapses and hospital admissions, and shorten the length of stay in hospital (Sealy, 2012). As a result, the necessity of such grim psychiatric institutions, where PMI were isolated from their families and forced to adhere to strict daily regimes, began to be questioned (Chaimowitz, 2011). Many advocates for PMI felt that the advancement of medication and community treatment options meant that PMI should instead be given the opportunity to live in the community where they could be supported by their family and potentially become active members of society (Chaimowitz, 2011). This premise was also favourable to the government who saw this as an opportunity to decrease the heavy costs associated with psychiatric institutions (Prins, 2011). Thus began the deinstitutionalization era of mental illness treatment.

As the deinstitutionalization movement gained popularity, the Canadian federal government began to systematically close (or drastically reduce the capacity of) psychiatric institutions across the country. At the time, some psychiatrists voiced their concerns about removing this form of long-term mental health care, but they were silenced by government promises of hefty financial support for community-based mental health services (Chaimowitz, 2011). At the time, many people saw the deinstitutionalization movement as a progressive change from the dark days of psychiatric institutionalization.

The shift in attitudes toward involuntary psychiatric institutionalization has also translated into more strict criteria for involuntary hospital admissions of PMI (also called civil commitment) (Shen & Snowden, 2014). Proponents of the deinstitutionalization of psychiatric facilities felt that involuntary admissions infringed on the rights of PMI, and so legal reforms were made to protect the rights of PMI. Prior to the deinstitutionalization movement, PMI suffering from any type of mood disorder could be involuntarily hospitalized. However, reforms to civil commitment criteria have meant that physicians can now involuntarily admit an individual only if they consider the PMI to be a serious threat to themselves or others (Mental Health Act, RSO 1990, c. M. 7).

Other than stricter civil commitment criteria, the ideals of deinstitutionalization never materialized. Funding that was removed from psychiatric hospitals as they closed down or diminished in capacity was not transferred as promised to community mental health services. Consequently, the underfunded mental health treatment services that currently exist are not able to adequately serve the ever-increasing population of PMI in the community (Lamb et al., 2002).

Currently, community based and/or private psychiatric services generally have wait times that span several days for individuals experiencing severe mental health symptoms, and several months for individuals experiencing less severe symptoms (Williams, Latta, & Conversano, 2008). As Williams et al. (2008) note, long wait times for mental health care increases the likelihood that an individual will not attend their appointment. Missed appointments place an unnecessary drain on these already underfunded services. More importantly, the subsequent lack of care received by PMI when they wait excessively or miss their appointment altogether means that mental health symptoms go untreated. Untreated mental health symptoms are at risk of worsening, and increase the likelihood that the PMI will experience a mental health crisis that will necessitate a call to police, a visit to the emergency room of a hospital, or both (Williams et al., 2008).

Police as Front-Line Mental Health Workers

The dismantling of long-term psychiatric care, coupled with strict civil commitment criteria and inadequate community mental health treatment, has meant that there has been an influx of PMI who are not receiving care for their symptoms into communities (Shen & Snowden, 2014). Poor access to treatment, paired with the stigma that PMI are dangerous has meant that police are often called to the scene to manage this population (Kara, 2014). In response to the high rates of police-PMI contact, Canadian police officers have been given a considerable amount of discretionary power when deciding how to resolve situations involving PMI. Officer discretion can be defined as an

officer's decision "not to invoke formal social control even when circumstances warrant or legally allow for it" (Schulenberg, 2014, p.299).

The Mental Health Act of Ontario

Each Canadian province and territory has implemented its own legislation that, in part, governs an officer's use of discretion when dealing with PMI. In Ontario, this legislation is called the Mental Health Act (MHA) and was first implemented in 1990 (with the most recent revision made in 2010). According to the MHA, Ontario police may apprehend any individual that they believe is suffering from a mental disorder, and whom they believe poses a threat to themselves or others (Mental Health Act, RSO 1990, c. M.7). This does not necessarily mean that violence or the threat of violence needs to be present as police can deem an individual to be a danger to themselves if they are unable to engage in self-care. Section 17 of the Mental Health Act outlines police authority to apprehend a PMI, and states the following:

Action by police officer

17. Where a police officer has reasonable and probable grounds to believe that a person is acting or has acted in a disorderly manner and has reasonable cause to believe that the person,

- (a) has threatened or attempted or is threatening or attempting to cause bodily harm to himself or herself;
- (b) has behaved or is behaving violently towards another person or has caused or is causing another person to fear bodily harm from him or her; or
- (c) has shown or is showing a lack of competence to care for himself or herself,

and in addition the police officer is of the opinion that the person is apparently suffering from mental disorder of a nature or quality that likely will result in,

- (d) serious bodily harm to the person;

(e) serious bodily harm to another person; or

(f) serious physical impairment of the person,

and that it would be dangerous to proceed under section 16, the police officer may take the person in custody to an appropriate place for examination by a physician. 2000, c. 9, s. 5. (Mental Health Act, RSO 1990, c. M.7).

Once an officer apprehends an individual under the MHA, they must transport them to the nearest government-run psychiatric facility (usually a hospital) and wait with the individual until a physician completes a psychiatric assessment and admits the individual into the care of the facility or dismisses the individual altogether (Hoffman & Putnam, 2000). Some police services require two officers to accompany PMI during MHA apprehensions. Officers often spend hours waiting with PMI in hospitals before they see a physician thereby increasing the strain placed on police resources.

The implementation of the MHA has increased the burden that PMI-contact has placed on police, but has also highlighted the importance of police response to PMI. Police have been given the authority to, in some instances, avoid criminalizing the PMI and instead divert the individual into the mental health system (Arboleda-Florez, 2010). As a first point of contact between PMI and the health or justice system, the decisions made by police officers play a significant role in whether mental health treatment is facilitated, whether the PMI will enter the criminal justice system (where mental health symptoms are at risk of worsening), or whether the PMI will simply stagnate in their current predicament.

The ability for police to apprehend an individual under the MHA and subsequently initiate the treatment process for PMI has led to police officers being increasingly referred to as 'front-line mental health workers' (McLean & Marshall, 2010).

Indeed, PMI and their family members often become frustrated with the lack of mental health services available to them, and call police in an attempt to receive assistance in accessing mental health services (Short et al., 2014). Some research has suggested that up to one third of all mental health referrals are made by police officers (Mclean & Marshall, 2010).

However, officers who are attempting to connect PMI with mental health services through the MHA often endure extensive wait times in hospitals only to have the PMI dismissed by a physician. This discrepancy between police apprehensions and hospital admissions is curious, as criteria for hospital admission under the MHA (also known as a Form 1) is very similar to criteria for a MHA apprehension, and includes the following:

Application for Psychiatric Assessment

15. (1) Where a physician examines a person and has reasonable cause to believe that the person,

- (a) has threatened or attempted or is threatening or attempting to cause bodily harm to himself or herself;
- (b) has behaved or is behaving violently towards another person or has caused or is causing another person to fear bodily harm from him or her; or
- (c) has shown or is showing a lack of competence to care for himself or herself,

and if in addition the physician is of the opinion that the person is apparently suffering from mental disorder of a nature or quality that likely will result in,

- (d) serious bodily harm to the person;
- (e) serious bodily harm to another person; or
- (f) serious physical impairment of the person,

the physician may make application in the prescribed form for a psychiatric assessment of the person. 2000, c. 9., s. 15 (1) (Mental Health Act, RSO 1990, c. M. 7).

Based on the similarities between section 17 (police apprehension criteria) and section 15 (psychiatric assessment criteria) of the MHA – specifically that both emphasize the need for the presence of a threat to the PMI or others – it would seem as though there should be consistency between MHA apprehensions and hospital admissions. It is possible that other factors may be affecting the rates of hospital Form 1 admissions, such as the lack of space available at hospitals for psychiatric patients.

The ‘Revolving Door Phenomenon’ of Emergency Mental Health Services

While psychiatric treatment that is offered through hospitals is appropriate for PMI who are in crisis, increasing pressure placed on hospitals to adhere to strict budget cuts has meant that many hospitals can no longer adequately serve PMI in need of emergency or long-term care. According to Sealy & Whitehead (2004) the number of hospital beds for PMI in Canada has decreased by 71% since 1965 (and has decreased by 75% in Ontario during this time period). Today, hospitals with psychiatric departments have a limited number of beds available for long-term psychiatric treatment.

A lack of funding for hospitals have meant that wait times for emergency mental health services are excessively lengthy and often leave PMI who are in crisis (and the police who accompany them) waiting for several hours before they are seen by a physician (Markowitz, 2011). Mental health crisis symptoms that PMI are experiencing when they are brought to hospitals by police might subside (either naturally or due to chemical sedation) during the lengthy period they spend waiting to be seen by a

physician. Due to limited bed capacity, hospitals have had to adopt the practice of discharging patients as quickly as possible and physicians can only admit individuals whom they have deemed to be in the most critical of mental health circumstances into hospitals for long-term care (Markowitz, 2011). As such, most PMI are quickly released from hospital care after their mental health symptoms have been stabilized. However, this does not appear to be an effective solution and only leads to more frequent hospital visits for PMI.

As Markowitz (2011) notes, while the length of time individuals spend at hospitals receiving treatment for mental health issues has decreased (from an average of 6 months in the 1960s to an average of less than 10 days in 2007), the frequency of hospital admissions for these individuals has increased, leading to what many have termed a 'Revolving-Door Phenomenon' (Shen & Snowden, 2014). PMI find themselves perpetually in-and-out of hospital waiting rooms in an attempt to receive care for mental health crises. Officers have also noted that the 'Revolving Door Phenomenon' that occurs when PMI are taken to hospitals and quickly dismissed after acute symptoms are stabilized means that the PMI will likely experience a similar mental health crisis a short time later and police will again be called to the scene (Borum, Deane, Steadman, & Morrissey, 1998).

Transinstitutionalization

Many researchers feel that the deinstitutionalization of psychiatric hospitals, and the subsequent lack of inpatient treatment options for PMI, has meant that institutions like prisons and jails have supplemented "public psychiatric hospitals as institutions of social control of the mentally ill" (Markowitz, 2011, p. 37), and have termed this

phenomenon *transinstitutionalization* (Chaimowitz, 2011; Lamb et al., 2002). It has been established that PMI are currently overrepresented in the justice system, and the transinstitutionalization hypothesis posits that there is a direct causal link between the closure of psychiatric facilities (deinstitutionalization) and the rise of PMI in prisons (Lamb et al., 2002). The premise here is that community-based treatment is not an adequate alternative to institutional care for many PMI (i.e., those with serious mental illness and who require intensive and long-term care), and that a large portion of PMI who would have been cared for in psychiatric facilities are now being housed in prisons and jails (Prins, 2011).

While proponents of the transinstitutionalization hypothesis point to deinstitutionalization and the subsequent lack of inpatient treatment for PMI to explain the rising influx of PMI entering the justice system, others caution that this relationship might not be so direct after all. Critics of the transinstitutionalization hypothesis cite fundamental differences between the population of PMI who were institutionalized in psychiatric facilities and the population of PMI who are currently in prisons as evidence against a direct causal link. As Prins (2011) notes, PMI who received treatment in psychiatric facilities in the early part of the 20th century were “predominantly white, middle-aged, and had a diagnosis of schizophrenia” (p. 719), and PMI in prisons today tend to be ethnic minorities, in their early twenties, and have a wide range in type and severity of mental health issues. The argument here is that there is only a small proportion of PMI in prisons who would likely benefit from psychiatric institutionalization, and that more adequate (and better-funded) community mental health

treatment would better serve this population than the re-emergence of psychiatric institutions (Prins, 2011).

Implications of Increased Police-PMI Contact

While there is debate as to whether or not deinstitutionalization directly caused the overrepresentation of PMI in the justice system, researchers agree that the lack of mental health treatments made available to PMI, coupled with the stigma of PMI as dangerous, has led to what is termed the “criminalization” of mental illness (Godfredson et al., 2011; Hartford et al., 2005; Markowitz, 2011). With PMI experiencing a worsening of their symptoms (due to lack of treatment), and becoming increasingly visible to the public (who perceive this population as dangerous), many PMI are arrested for bizarre or unmanageable behaviour that is likely a result of their illnesses (Godfredson et al., 2011). Justice systems are increasingly being tasked with managing the symptomatic behavior of PMI – an issue that was once solely under the purview of the healthcare system.

There are many negative repercussions associated with high rates of police-PMI contact. First and foremost, anytime a PMI encounters police they are at risk of being criminalized (Arboleda-Florez, 2010). Even if police officers elect to resolve the situation informally, the PMI’s name is still permanently entered into the police service’s database. When police instead decide to resolve the situation formally they must arrest the individual and charge them with a crime and/or apprehend the individual under the MHA and transport them to the nearest psychiatric facility. If police choose to pursue

charges the PMI is at risk of being incarcerated where treatment for mental health symptoms is potentially delayed or altogether deterred.

Increased and repeated police-PMI contact has also placed a strain on police departmental resources and has left many officers feeling frustrated. As mentioned, a large proportion of a front-line police officer's time is spent responding to calls that involve PMI (Short et al., 2014). Indeed, calls for service that involve PMI tend to take more time and officer manpower than calls that do not involve PMI (Hartford et al., 2005). A report by an Ontario police department estimated that their Service spent over 12 million dollars of its budget in one year on responding to calls involving PMI (Hartford et al., 2005).

In addition to financial strain, individual police officers report personal frustrations with regards to encounters with PMI, including a reported lack of training (Borum et al., 1998). While police officers note that PMI in crisis is an important issue for their departments (Borum et al., 1998), they also note that they do not feel adequately trained to handle this type of situation (Godfredson et al., 2011). An American study noted that police, on average, receive a total of 6.5 hours of training on mental health-related topics (Godfredson et al., 2011). In Canada, police receive anywhere from 1 hour to 20 hours of PMI related training before they enter the Service, yet as Cotton and Coleman (2008) note, the industry standard for mental health training programs, such as crisis intervention training (CIT) in Canada is 40 hours. The Ontario Police College provides only 7 hours of PMI-specific training in its curriculum (Cotton & Coleman, 2008). Further, Cotton and Coleman (2008) found that many officers who graduated from police college in Canada prior to 2000 received no college training related to PMI.

PMI are a vulnerable population with a unique set of needs, and police have been tasked to manage this population without adequate training. This means that police might not be equipped with the knowledge to recognize a PMI, nor with the knowledge to respond effectively (Cotton & Coleman, 2008). For instance, an officer who has received inadequate mental health training and who is responding to a PMI might aggravate the symptoms of a mental health crisis if the officer's demeanor is overly aggressive. Poor police response also puts PMI at an increased risk of being criminalized and also increases the risk of the police-PMI encounter resulting in a lethal outcome (Iacobucci, 2014). When Justice Iacobucci conducted an inquiry into the fatal police shooting of a young man exhibiting symptoms of a mental health crisis, he noted that in his report that the current lack of police training on the subject of mental illness increased the potential for lethal force to be applied by police when responding to PMI (Iacobucci, 2014). Police who are not trained to deal with PMI can trigger or exacerbate symptoms of a mental health crisis, only making the situation worse for all parties involved. Addressing these issues, the Mental Health Commission of Canada concluded that while mental health training for police is increasing both at the basic and in-service level, there is not yet a commonly accepted curriculum or standard for this training (Cotton & Coleman, 2008). A lack of standardized training based on best-practices is problematic because it indicates no formal strategy to target the issue of poor police training in identifying and responding to PMI.

Police are also frustrated by the apparent disconnect between police and health care services. As mentioned, an officer attempting to connect a PMI with mental health services through the MHA often spends hours waiting with PMI at a hospital, just to have

the PMI dismissed by the physician (Short et al. 2014). It could be that the symptoms the PMI was presenting with upon being brought to the hospital by police have subsided during the lengthy period of time before they are seen by a physician. Or, the physician might not be able to admit the PMI due to limited bed space. Unfortunately, Often times, it is it is often these individuals who are returned to police custody at a later date (Godfredson et al., 2011), fueling police frustration. Officers feel that this places an unnecessary drain on their time and resources, and report frustration with not being able to secure mental health care for the individual in crisis or use their time engaging in more conventional police duties (Mclean & Marshall, 2010).

Police Service Reaction to Mental Health Issues

Many police services and spokespeople have acknowledged the significant challenges faced by police when encountering PMI, and are publicly addressing these issues. Recently, the Ontario Association for Chiefs of Police partnered with the Mental Health Commission of Canada held a public conference titled “Balancing Individual Safety, Community Safety, and Life Quality: A Conference to Improve Interactions for Persons with Mental Illness” (Canadian Association of Chiefs of Police, 2013). This conference signified a commitment by Ontario’s police services to address the issues of police interactions with PMI.

In addition to holding public forums on the issue, many police services are investing in and implementing new programs that are aimed at improving police response to PMI (Borum, 1998; Kisley et al., 2010). While these programs vary across departments and jurisdictions, they tend to have the same three core elements: 1) a focus on police

training, 2) collaboration between police and mental health services, and 3) an expansion of the role of law enforcement officers (Kisely et al., 2010).

While there are many differences between these programs, Borum and colleagues (1998) have noted that all programs tend to fit within one of three models. In ‘police-based specialized response’ models, law enforcement officers receive specialized mental health training and act as both front-line responders to calls for service involving PMI, and as liaisons between the police force and the mental health care system. In ‘police-based specialized mental health response’ models, mental health professionals are employed by police departments and provide face-to-face or telephone support to officers encountering PMI who are in crisis. Finally, in ‘mental health-based specialized mental health response’ models, formal partnerships are established between police and mental health crisis-response teams in the community. While ‘police-based specialized response’ models are more common in the U.S., ‘police-based specialized mental health response’ models tend to be implemented more often in Canada (Kisely et al., 2010).

One of the first Canadian examples of a partnership between police and mental health services is the Crisis Outreach and Support Team (COAST) that was implemented in 1998 in Hamilton, Ontario. COAST is a program where plainclothes police officers, accompanied by mental health care workers, respond to calls made by civilians on a 24-hour mental health crisis line. Once on scene, the goal of COAST is to diffuse the immediate crisis situation and create a follow-up plan with the PMI and their family (COAST Hamilton, 2013).

The implementation of these collaborative models, such as COAST, have begun to be evaluated by researchers in terms of their effectiveness for all parties involved. A study

in the U.S. compared the use of the three model types and asked officers to rate their perceived effectiveness (Borum et al., 1998). The study found that officers perceived police-based specialized response models as the most effective in meeting the needs of PMI, reducing the burden on police resources, and maintaining community safety. It should be noted that this study rated perceived – and not actual – effectiveness of these programs. Conclusions based on perceived effectiveness may be biased or inaccurate. Studying actual outcomes of these models – although difficult to access – would be more reliable and could potentially yield different results.

More locally, Kisely et al. (2010) evaluated the effectiveness of a ‘police-based specialized response’ model that has been used in Nova Scotia. The Integrated Mobile Crisis Service pairs police and mental health professionals together to respond to mental health crises. In addition, mental health professionals provide 24-hour telephone support to all front-line officers in the area. Results from the study found that the program was effective at reducing police response times, and that PMI who came into contact with the Integrated Mobile Crisis Service showed greater treatment engagement than those who did not. This study provides support for the notion that collaboration and cooperation between police and mental health professionals will improve interactions between police and PMI.

Collaborations between police and mental health services are undoubtedly a positive alternative to traditional police interventions with PMI, yet there is limited empirical evidence on their effectiveness. Further, for the creation implementation of such programs to be evidence-based, one must first understand the baseline state of police-PMI contact. For example, it is important to know the situation characteristics of these

interactions (such as whether violence or substances are typically a factor), and what the typical outcomes of these interactions are (such as whether the PMI is arrested or apprehended under the MHA). Unfortunately, there is currently limited research that has investigated the current state of police-PMI contact. The literature that is available on this topic will now be described.

Current Evidence Base Concerning Police-PMI Contact

Of the studies that have examined police-PMI interactions, the focus has been more so on the outcome of these interactions (such as whether or not a Mental Health Act apprehension was made), rather than situational characteristics or the profile of PMI who encounter police. However, some studies have gone beyond the outcome of police-PMI to describe situation and PMI-profile characteristics. These studies will now be described.

Situation Characteristics

A study of 272 police occurrences involving PMI in Montreal, QC, examined the situation characteristics of police-PMI interactions and found that these interactions took place primarily in private residences, and secondarily in an outdoor public place, such as a park (Charette et al., 2011). The authors of this study also found that the most common initiator of police contact in these occurrences was a family member of the PMI or the PMI themselves.

Charette and colleagues (2011) also identified substance abuse, suicide-related behavior and aggressive behaviours to be reoccurring themes through these occurrences. It is known that there is a high comorbidity between mental illness and substance

dependency/abuse, and that PMI who have substance abuse issues are more likely to engage in violent behaviour (Arboleda-Florez, 2010). It is therefore not surprising that Charette et al., (2011) found a high prevalence of substance abuse and of suicidal/aggressive behaviour when examining situational characteristics of police-PMI interactions. While the Montreal study (Charette et al., 2011) shows a high prevalence of substance-related occurrences during police-PMI interactions, there is limited insight into what particular substances are most commonly recorded to be present by police during these interactions. Further, it is not known whether the presence of substances during police-PMI interactions increase the likelihood that a formal outcome (such as an arrest) will be made.

Several studies have found violence to be a factor during police interactions with PMI (Charette et al., 2011; Hartford et al., 2005). However, further exploration into what type of violence occurred would be beneficial. For instance, “aggressive behaviour” (as noted in the study by Charette et al., 2011) could include the PMI verbally accosting police, the PMI engaging in self-harm, or the PMI engaging in violence with another individual. Thus, understanding what specific form of violence typically takes place during these interactions is important information to incorporate into efforts aimed at improving police response to PMI. For example, an individual engaging in self-harm would likely necessitate a different police response than an individual threatening to harm others.

When Hartford and colleagues were examining the typical situational characteristics of police-PMI interactions, they found that PMI were disproportionately flagged as “violent” by police compared to non-PMI (Harford et al., 2005). All police

services have an online records management system (RMS) that, in part, allows police to quickly access any information that has been previously recorded about an individual that they are responding to (Sanders & Henderson, 2013). Police can apply cautionary “flags” to individuals on their RMS database at any time. For example, a “mental illness” flag can be applied to indicate that an individual has known mental health issues, or a “violent” flag can be applied to indicate an individual is known to act violently. While flags can undoubtedly provide police with useful information, they are not always verified before entered into the RMS. As such, the presence of pre-recorded information, such as a flag that indicates an individual has the potential to act violently, can unfairly stigmatize an individual and influence how a police might respond to a given situation (Godfredson et al., 2011).

In their study, Hartford et al. (2005) found that 20% of PMI in their sample (compared to only 2% of non-PMI) were flagged as violent without ever being involved with the police in a violent situation. Given the inaccurate stigma that PMI are violent and dangerous individuals (Alexander & Link, 2003), police might assume PMI are violent and apply a cautionary “violent” flag without verifying the accuracy of this information. This is problematic, as the presence of a violent flag might invoke a more formal and criminalizing response than is necessary during encounters with PMI.

Outcome Characteristics

The majority of studies that have examined police-PMI encounters tend to focus on the outcome of these interactions (Charette et al., 2011; Hartford et al., 2005; MCIT Report, 2013; Short et al., 2014). There are a number of possible outcomes that can result from these occurrences; the situation can be resolved informally (i.e., the officer

can elect to connect the PMI with community mental health services, or the officer may find no grounds to take any action at all), or formally (i.e., the officer can apprehend the PMI and lay charges and/or make a MHA apprehension and take the PMI to the nearest psychiatric facility).

In their study, Charette et al. (2011) found that informal dispositions were the most common outcome of police-PMI interactions. This study also found that 36% of occurrences in their sample resulted in the PMI being referred to the local hospital (likely the result of a MHA apprehension). These findings demonstrate high rates of police using their discretion during interactions with PMI, and suggest that police are indeed attempting to reduce the criminalization of PMI and instead facilitate treatment for their mental health issues.

The London, ON, study also investigated the rates of PMI-criminalization and found that nearly twice as many PMI were arrested and charged with a crime as a result of their interaction with police, compared to arrest/charge rates of the general population (Hartford et al., 2005). These researchers found that, of the charges laid against PMI in their sample, almost half were for minor, nuisance-type offenses. Further, this study found that once charged, PMI were more likely to be convicted than members of the general population. Of note, the London study also found that PMI are victimized by others at a rate 2-4 times higher than non-PMI, and reported as a missing person at a rate 3-4 times higher than non-PMI (Hartford et al., 2005).

A report on the Toronto Police Service's response to PMI found that, in 2011, Toronto police officers responded to 19,000 calls for service that involved PMI, 45% of which resulted in a formal MHA apprehension (MCIT Report, 2013). This report also

noted that a very small portion (less than 0.5%) of these incidences resulted in serious injury or death. While use-of-force incidents tend to be the most publicized outcome of police-PMI contact by the media, these incidents are indeed rare (Phelan & Link, 2004).

A recent Australian study investigated rates of police mental health transfers (similar to MHA apprehensions in Canada) and found that one third of these transfers were in response to suicide-related behaviour (Short et al., 2014). This study went on to examine factors that might influence an officer's decision to choose a particular outcome to resolve situations involving PMI. Literature on the decision-making processes in which police engage when resolving encounters with civilians has found that these processes are complex and are influenced by a plethora of factors beyond simply whether or not a crime was committed (Schulenberg, 2012). As Schulenberg (2007) notes, individual officer characteristics (such as the officer's age), as well as characteristics of the people and situations they encounter all affect the outcome an officer will elect to resolve a situation.

In the study of mental health transfers by Short et al., (2014), the researchers found that the presence of pre-recorded information (such as previous police contacts and RMS flags), the perceived time that each outcome will take, knowledge about community mental health resources, and an officer's history of experience with PMI all influence the decision of an officer to elect a particular outcome during their encounters with PMI (Short et al., 2014). Other studies corroborate these findings; the Montreal study found that the choice an officer makes when resolving an occurrence with PMI depends, in part, on the time they expect a particular outcome to take (Charette et al., 2011). It was also found that violent or aggressive behaviour, substance abuse, and citizens initiating the

call for police all influence the likelihood that police will resolve situations involving PMI with an arrest (Charette, et al., 2011). Lastly, research by Godfredson et al. (2011), suggests that the accessibility of community mental health services impacts whether or not police resolve the situation informally by attempting to connect the PMI with these services. This indicates that police decision-making in various jurisdictions will depend, at least in part, on situation factors such as the presence of substance or violence, and the availability of local community mental health services.

In sum, research has clearly established that PMI have been criminalized and are more likely to come into contact with police than non-PMI (Durbin et al., 2010; Hartford et al., 2005). Factors leading to this increase in contact include the stigmatization of PMI as dangerous, the deinstitutionalization of long-term mental health care, stricter civil commitment criteria, poor funding of community mental health treatment, and the ‘Revolving-Door Phenomenon’ that occurs when PMI are taken to emergency care facilities. Legislation such as the Mental Health Act of Ontario has given police the power to apprehend PMI that they feel are a threat to themselves or others and transport the PMI to the nearest hospital (Mental Health Act, RSO 1990, c. M.7). As such, police play an important role in determining whether PMI are connected with mental health services or instead further criminalized by the criminal justice system. However, the increase in contact has also put PMI at an elevated risk of being criminalized, and has placed a significant strain on police departments.

In response, many researchers and police services are attempting to improve police response to PMI by implementing better training for officers and collaborative

programs between police and mental health services. Yet there is limited research on the current state of police-PMI interactions, and research that does exist tends to focus on the outcome of these occurrences rather than the PMI-profile and situational characteristics. While limited, this information is imperative to provide an evidence base for improving police-PMI interactions. The gap in research involving police-PMI interactions, and how the current study will address this gap, will be discussed in the following chapter.

Chapter 2: Research Questions & Hypotheses

A Gap in Research

It has clearly been established that police contact with PMI has dramatically increased (Durbin et al., 2010; Hartford et al., 2005), and that the result has been two-fold: First, this increase in police contact puts PMI at an elevated risk of criminalization (Godfredson et al., 2011), and police response can contribute to the worsening of mental health symptoms for PMI. Second, the time spent and frustration often felt by police who encounter PMI has placed a significant strain on individual officers as well as their departmental resources (Charette et al., 2011). As such, these issues have gained national attention, and many police services across Canada have responded by implementing new policies and programs aimed at reducing the burden on police departments and facilitating diversion/treatment for PMI. As mentioned, these programs typically include a partnership between police and mental health services.

Programs like COAST in Hamilton, ON, have become the benchmark for police-mental health care partnerships in Canada, and are undoubtedly a positive alternative to traditional police interventions with PMI. However, for the implementation and evaluation of such programs to be evidence-based, one must first understand the baseline state of affairs before such programs are created (Goding & Edwards, 2002). As Head (2008) notes, systemic analyses of the current (and past) trends of social problems are imperative to producing evidence-based knowledge, which in turn is a fundamental part of program evaluation. For instance, police are given a considerable amount of discretion during their interactions with any citizen, and have a wide range of dispositional

outcomes that they can choose from (e.g., resolve the situation informally, apprehend an individual, etc.). It is also known that the process by which police decide to take certain actions during an interaction are influenced by a complex myriad of characteristics beyond whether or not a crime has occurred (Schulenberg, 2012). For example, literature suggests that factors like the presence of a weapon, the age of an individual, and the number of previous encounters with police an individual all contributes to an officer deciding to take formal action (such as an arrest) over informal action (Carrington & Schulenberg, 2003). Therefore, it is important to fully understand all of the factors present during police-PMI encounters, and how these factors might influence the outcome of these encounters, before designing and implementing programs that are aimed at changing the outcome of these encounters.

The problem here is that there is limited research on the current state of police-PMI interactions in Canada, especially with regards to PMI-profile and situational characteristics of these interactions, and the state of affairs will differ depending on the location and resources available. As Godfredson and colleagues state (2011), “there is clearly a pressing need to gain a detailed understanding of the commonality and circumstances around these encounters” (p. 182).

However, it can be difficult for empirical researchers to gain access to official police data, and as Cotton and Coleman (2010) note, the absence of statistical information on police-PMI interactions makes program evaluation difficult. Of the empirical studies that do exist in this area, results vary widely. This is likely due to the varying nature of populations across regions, and of policies across jurisdictions, again emphasizing a need for further research on this topic to be conducted in a wide breadth of

locations. Small sample timeframes could also be contributing to the wide range of results found across previous studies in this area. It is difficult to gain access to official police data, and even more difficult to gain access to (and to analyze) large sets of police data (Charette et al., 2011). While the empirical studies that exist have provided invaluable information on police-PMI interactions, those that take place in large metropolises tend to have smaller sample timeframes (Charette et al., 2011). For example, a study of police-PMI interactions taking place in Montreal, QC, had a substantial sample size of 485 occurrences, but gleaned this sample from a mere three days of calls made to the service that involved PMI (Charette et al., 2011). The researchers noted this as a limitation in their study, stating “three days of interventions may not be representative of all interventions made by the police service over a full year” (p. 683). The current study will add to previous findings in this area of research by including a sample that spans a six-month period of police calls for service that involve PMI. Adding to existing literature by conducting further empirical analyses of the PMI who encounter police, as well as the situational and outcome characteristics of these encounters, would give insight into the needs of all parties involved and provide an evidence-base for making improvements.

Research Questions & Hypotheses

The purpose of this study was to explore calls for police service that were classified by police as primarily mental-health related calls for service through conducting a descriptive analysis of typical a) client demographics, b) situational features, and c) dispositional outcomes of such calls. Further, the study was designed to

identify factors that predict three types of dispositional outcomes common in mental health-related police encounters. Specifically, this study tested three *descriptive*-oriented research questions, and three *predictive*-oriented research questions. The research hypotheses guiding each research question are presented below.

Descriptive Research Questions:

Research Question 1: What is the typical Mental Health client profile? This study examined the demographic characteristics of PMI that police encounter during primarily mental health-related calls for services. Specifically, this study described the age, sex, and ethnicity of sampled PMI who encountered the police, as well as the historical frequency of their police contact. There is a paucity of extant research to indicate patterns in age, sex, or ethnicity of PMI who typically encounter police; therefore, it was difficult to hypothesize resultant PMI-profile characteristics. As such it was expected that these characteristics would mirror population statistics of the area, and that the majority of PMI in the sample would be Caucasian, that there would be an even split between males and females, and that the average age would be 39 years (Statistics Canada, 2011). Previous research has established that PMI have more frequent police interactions than non-PMI (Hartford et al., 2005); thus, it was hypothesized that the sampled PMI would have, on average, multiple previous contacts with the police as opposed to a single interaction.

Research Question 2: What are typical situational characteristics of mental health related calls? The situational characteristics present in police-PMI encounters during mental health-related calls for service were also examined. Variables capturing situational characteristics of interest included when and where these occurrences took

place, who initiated police contact, and whether the presence of substances or violence towards self and others were noted during the occurrence. Given the high comorbidity between substance abuse and mental health issues (this rate can reach as high as 80% according to the Mental Health Association, 2015), it was hypothesized that substances would be noted as present during at least half of occurrences in the sample. There is a known association between mental illness and violence (Flynn et al., 2014), and some research on police-PMI interactions has found that violence toward the self was noted during 20% of occurrences, and that aggressive behaviour was noted in 30% of occurrences (Charette et al, 2011). It was therefore hypothesized that violence would be noted as present in at least 20% of occurrences in the current study's sample. Moreover, research suggests that the rise in police contact with PMI is due to the inability of PMI to access adequate mental health services coupled with public reliance on summoning the police service to manage individuals in a mental health crisis (Markowitz, 2011). It was therefore hypothesized that in the majority of occurrences in the current study's sample, police would be called to the private residence of the PMI.

Research Question 3: What are the common outcomes of mental health related calls for police service? This study estimated the typical outcomes of occurrences between police and PMI in primarily mental health-related calls for service. Possible outcomes included informal police resolutions (e.g., attempts to connect the PMI with community mental health services in situations where apprehension is not indicated) and formal resolutions (e.g., the police apprehending the individual under Section 17 of the MHA and transporting them to the nearest hospital, or arresting the individual and charging them with a crime). Prior research has found that police tend to elect informal

resolutions when resolving situations with PMI more often than formal resolutions. Consistent with prior research (Charette et al., 2011; Hartford et al., 2005), it was expected that in the current study police would select informal resolutions during their encounters with PMI more often than formal resolutions. Prior research has also found that, when police do opt to resolve the situation formally, they are far more likely to apprehend a PMI under the MHA than arrest them and charge them with a crime (Charette et al., 2011). Thus it was expected in the current study that apprehensions made under the Mental Health Act would be more common than police charging the PMI with a crime.

Predictive Research Questions

Many factors can affect the outcome of any police call to service; as Schulenberg (2007) notes, the decisions police make are often influenced by factors beyond whether a crime has been committed, such as individual officer characteristics (e.g., the officer's age), and characteristics of the people and situations that the officer encounters. Further, research on police-PMI interactions has identified several factors that influence the outcome of the interaction, such as the presence of pre-recorded information (like RMS flags associated with an individual) (Short et al., 2014). Charette and colleagues (2011) found that the presence of violence and substance abuse were among some of the factors that influence an officer's decision to elect to make a formal arrest during their interaction with PMI. This study went beyond a descriptive analysis with which certain outcomes are employed during mental health-related calls to police, and explored what PMI-profile and situational characteristics predict particular outcomes during MH calls for police service.

Research Question 4: What PMI client demographics and situational characteristics are predictive of MHA Section 17 Apprehensions by police officers?

The current study seeks to add to the growing literature on empirically identified factors that influence police officer decision-making related to initiating a MHA apprehension by testing whether specific situational and individual-related factors are predictive of police MHA apprehensions. Criteria outlined in Section 17 of the MHA details the necessity of a threat to be present for a MHA apprehension to be made (Mental Health Act, RSO 1990, c. M.7). It is therefore logical to expect that the presence of violence (whether toward the PMI themselves or against other) would be interpreted by police as a threat and would increase the likelihood of a MHA apprehension. Further, since police officers are trained to focus on the criminal elements of a situation, and respond with authority and control (Markowitz, 2011) it was expected that factors relating to criminality, such as the presence of violence or weapons, and whether the PMI had frequent police contact, would predict Mental Health Act Apprehensions.

Research Question 5: What PMI client demographics and situational characteristics are predictive of Form 1 hospital admissions? Research has found that certain PMI characteristics are predictive of involuntary psychiatric assessment (Form 1s) for PMI; Hoffman et al. (2013) found that the PMI experiencing hallucinations or delusions, and the amount of insight PMIs had into their own mental health were all predictive of a Form 1. Other research on predictors of involuntary hospital admissions for patients with major depressive disorder found that age, sex (female), and prior hospital admissions all increased the rate of hospital admissions (Innes et al., 2014). Further, the MHA of Ontario outlines the criteria for a Form 1 psychiatric assessment,

which includes the PMI acting violently toward themselves or others (Mental Health Act, RSO 1990, c. M. 7). Therefore it was hypothesized that the age, sex, and the PMI acting violently during their occurrence with police, would all predict a Form 1 psychiatric admission.

Research Question 6: What PMI client demographics and situational characteristics are predictive of mental health service engagement by police?

Research has shown that information available to officers regarding the availability of community mental health treatment options will influence whether or not these services are engaged as a result of police-PMI occurrences (Godfredson et al., 2011). Again, the dataset in the present study did not include information on the amount of MH service information available to officers. However, it has previously been hypothesized that factors relating to criminality (the presence of violence and weapons, and previous police contact) will increase the likelihood of formal outcomes such as a MHA apprehension. Therefore, it is expected that these same factors would also act as predictors for informal resolutions such as MH service engagement, only that they will instead decrease the likelihood of this outcome.

Chapter 3: Methodology

Method of Data Collection

This study employed a secondary analysis of a dataset that contained official police information on police-PMI interactions. First defined by Glaser (1963), a secondary analysis is “the study of specific problems through analysis of existing data which were originally collected for other purposes” (p. 11). In the case of the current study, the data were originally collected by individual police officers who submit reports to their service’s Records Department for internal record keeping and monthly reporting to the government for Canada’s Uniform Crime Report (UCR). It should be noted here that the term “secondary” does not imply that this method of analyses is of any lesser quality than others; only that the analysis is carried out at a later date and for a different purpose than the original data collection (Hakim, 1982).

According to Heaton (1998), there are three modes by which data can be obtained for the purpose of a secondary analysis. The first mode is ‘formal data sharing’, whereby researchers obtain the data from public or institutional archives. This is the mode being employed in the current study, as the original dataset was obtained from police record archives. The other modes of secondary analysis include ‘informal data sharing’ (where researchers share their datasets with other researchers), and ‘self-collected data’ (where researchers use their own previously collected data for a new investigation).

While the primary purpose of secondary data analysis is to add a new perspective or answer a new research question with regards to previously collected data (Heaton, 1998), there are many latent benefits of employing this methodology. For one, secondary analysis is a method to analyze a vulnerable group (in this case, PMI), while minimizing

the exploitation of that population (Fielding & Fielding, 2008). By using previously collected data on PMI (e.g., the police records), this study is answering novel research questions about police-PMI interactions without exposing PMI to further data collection processes.

When discussing a secondary analysis of data that was originally collected by the government (similar to the current study), Hakim (1982) concluded that a secondary analysis can be a way for social science researchers to gain access to data that could be otherwise challenging to access. This is true for the current study, as collecting data on the interactions that take place between police and PMI can be difficult due to the private nature of many police services (most police organizations do not make their data accessible to the public without special permission), and the vulnerability of a person in crisis.

Further, Hakim (1982) noted that the true value of government data is only realized once it has been analyzed by both government and non-government researchers. Elaborating on this, Hakim purported that the orientations of government and academic researchers tend to be fundamentally different. Government research is usually completed quickly and for the purpose of policy development, while academic research tends to be more in-depth and is focused on “explaining relationships between social factors, assessing the strength of causal connections, and with the development of testing a theory” (Hakim, 1982, p. 31). Even though police records are analyzed internally and at the government level, conducting an academic analysis of the interactions that take place between police and PMI would provide additional and more in-depth understanding

of these interactions, which could subsequently be utilized by researchers and government organizations alike.

The Dataset

Each call for service made to a police service dispatch in Ontario is given an independent occurrence number (formally known as an “incident number”). All information pertaining to that particular occurrence (such as the classification of the occurrence made by dispatchers, or officers’ reports of the interaction) is filed on the service’s online internal RMS database under the respective occurrence number. Further, all individuals involved in the occurrence, and whose names were recorded by the police during the encounter, are also filed on the RMS database under the occurrence number. Police and other authorized personnel can access the information on this database at any time. For example, using the intranet at secure terminals at the station, or using the tablets in the cruisers, police officers can enter an individual’s name in a query on the RMS and access all occurrences that involve that particular individual.

Records personnel sort all occurrences on the RMS database into categories, depending on the type of situation that occurred (for example, all occurrences that relate to domestic violence are sorted into one category on the RMS database). This allows for police officers to review any available information about a call on their way to the location they have been dispatched to. The RMS database also allows officers and police personnel to review and follow-up on occurrences, as well as produce aggregated information about the activity that takes place in their respective departments (i.e., crime rates).

Data for this study was drawn from a police service in Southern Ontario. The police service in this study conducted a review of all occurrences that were primarily categorized as “mental health-related”, and that took place over an approximately 6-month period in 2014 (n = 400). Specifically, a query was performed on the Service’s RMS that returned all occurrences that the Service had categorized as “mental health-related” and that took place between January 1st, 2014 and June 15th, 2014. This timeframe was chosen because it provided the most recent sample possible. The query resulted in a total of 400 occurrences that were then individually opened and reviewed by a researcher. The researcher reviewed all available information associated with each occurrence on the RMS (including but not limited to the information from the time of dispatch, reports written by officers involved in the occurrence, information noted on the system about the civilians involved in the occurrence, and classification/summary information of the occurrence). The researcher extracted the demographic, situational, and outcome variables from each occurrence and recorded them on a separate Excel spreadsheet. For a complete list of all variables recorded, see Appendix A. No identifying information about individuals involved in each occurrence (including both civilians and police officers/staff) was recorded.

The resulting de-identified dataset contained information on the characteristic variables of PMI who come into contact with the police, the situational variables of police-PMI interactions, and the outcome variables of the occurrences. Since the data were originally collected by the Police Service, information gleaned from the dataset are subject to police biases and record collection inconsistencies.

It is important at this point to describe a crucial distinction of the dataset in the current study. This dataset does not include all calls to police that involve elements of mental illness, but rather only includes calls that the police service has classified as being primarily related to PMI. Culturally, police officers and their services view incidents narrowly in terms of whether or not a crime was committed, and if so, in terms of what crime was committed (Markowitz, 2011). As such, occurrences that appear on the Service's online RMS are stored depending on their primary classification, and this is true of the police service in the current study. Thus, the dataset in the current study is comprised only of calls to service that were given a primary classification by police as "mental health-related". While this classification provided a large dataset, it excluded calls that might have been included a PMI but that had been classified by the alleging a more serious crime, like "Homicide" or "Theft Over \$5,000". While this is a potential limitation in the current study (as the dataset does not include *all* calls for service to police that include PMI), it allows for the data to describe a particular niche of mental-health related calls for service. That is, the current dataset will describe characteristics of all calls for service to the police that the Service has primarily classified as being mental health-related (and nothing else). Arguably, it is these calls that are largely contributing to the rise in police-PMI contact, and are therefore very deserving of further study.

A request to use this de-identified dataset for the current research study was approved by the service's Chief of Police. The use of this dataset for the current research study was also approved by Wilfrid Laurier University's Research Ethics Board (REB # 4122). Due to the sensitive nature of the dataset, the data was stored on a USB to which only the researchers involved in this project had access.

Once the dataset was obtained, the data was analyzed using SPSS Software (Version 2.0). A frequency analysis was performed to provide a profile of the PMI who come into contact with police, the characteristics of PMI-police interactions, and the typical outcomes of these interactions. Further, a Spearman correlation and several binary logistic regression analyses were conducted to provide insight into demographic and situational factors that predict police response to PMI.

Case Study Context

The city in which the current study is located is mid-sized (population of 94,000), and the majority of the population consists of Caucasians. Aboriginals account for 3.6% of the population, which is consistent with the Aboriginal population of Canada. However, the city in which the study took place has several unique characteristics such as lower education, higher unemployment, and higher poverty rates compared to provincial or federal rates. According to a recent community profile, 28.5% of the city's residents did not graduate high school, which is comparatively higher than the provincial average (22.2%) and the national average (23.8%) (City Website, 2009). The most current unemployment rate is 9.2%, which is comparatively higher than the provincial unemployment rate (8.0%) and the national unemployment rate (7.8%) (City Report, 2011). Further, 10.1% of the city's residents live below Canada's lower income cut-off (LICO) (City Report, 2011).

Lower education and poverty levels, as well as higher unemployment rates are associated with higher rates of mental illness in the community (World Health Organization, 2015). It is therefore not surprising that a recent Needs Assessment

conducted by the city resulted in “mental health and addictions” being named as one of the city’s seven priority areas for improvement (City Report, 2011). The Needs Assessment, which surveyed 441 citizens (both service users and providers) specifically identified substance abuse services, long-term treatment centres, preventative education, after-hours counseling services, and services for seniors and for Aboriginals as the primary focus of the “mental health and addictions” strategy (City Report, 2011).

Currently the city in which the study took place offers many services to its citizens that are to be expected with a city of its size. The city has one hospital with a staff of 2,300. In addition to a separate mental health wing in the city’s hospital, PMI can receive treatment through many different community mental health services. St. Leonard’s Community Services have a specific department devoted to assisting PMI in the community, and offer services such as counseling, case management, and peer support (St. Leonard’s Community Services, 2015). Woodview Mental Health and Autism Services offers services specifically for children living with mental illness/autism spectrum disorders in the community (Woodview Mental Health and Autism Services, 2015). The local branch of the Canadian Mental Health Association offers a wide variety of services and programs to PMI and their families, including one-on-one counseling, peer support groups, and support for PMI who attend mental health court (Canadian Mental Health Association, 2015).

The city in which the study took place also has a mid-sized police service that receives 23.4% of the city’s budget, and employs 167 sworn officers (140 male officers and 27 female officers) (City Police Service, 2015). A total of seven officers at the Service are visible minorities, with three of these officers identifying as Aboriginal. Once

a cadet is hired by the local Service they are sent to the Ontario Police College and must complete the Basic Constable Training Course prior to beginning their duties with the Service. About 30% of the force has received crisis intervention training, and there are no mobile crisis units or other police-MH collaborative initiatives available to patrol officers at this Service during the time of this study.

Analytical Plan

Data for the current study were analyzed using SPSS Software (Version 20.0). To address the three descriptive research questions, a series of frequency analyses was performed to provide a profile of the PMI who come into contact with police, situational characteristics of PMI-police interactions, and typical outcomes of these interactions. In order to test the three predictive research questions, a Spearman correlation matrix was first calculated to identify significant bivariate relationships between potential PMI client and situational predictor variables and the three outcomes of interest (i.e., MHA Apprehension, Form 1 hospital admission and police-initiated engagement of MH Services). Due to the large number of variables captured in the current study, this correlational analysis was conducted to assist with narrowing down the number of predictors entered into subsequent logistic regression models. A Spearman correlation coefficient is a non-parametric standardized measure of the strength of association between a pair of variables (Field, 2009). The Spearman test was selected given that variables were captured at the ordinal level of measurement. A series of binary logistic regression models were then estimated to identify demographic and situational variables that were significantly predictive of 1) MHA Apprehension, 2) Form 1 admissions, and

3) police-initiated engagement of MH Services, respectively. A binary logistic regression produces a statistical model that estimates the predictive value of independent variables when examining a dichotomous outcome variable (Field, 2009). A meaningful outcome of the logistic regression is the calculation of an odds ratio (*OR*). An *OR* represents the estimated ratio of the odds of an event occurring (e.g., MH Apprehension) compared to the odds of the event not occurring, given a particular predictor. An *OR* of 1 indicates that the odds of a particular outcome are equal in both groups. All significant results were interpreted at $p \leq .05$ level, unless otherwise indicated.

Chapter 4: Results

Frequencies & Descriptives

PMI Profile

This study examined calls for police service that were primarily related to managing a PMI and that took place over a 6-month period. The total dataset contained $n = 400$ occurrences; however since some individuals had repeat occurrences with the police service during that time, the sample of unique PMIs was $n = 293$. The typical characteristics of PMI that came into contact with police in this study are described below.

Demographics. The mean age of PMI in this study was 37 years ($SD = 18.87$) with the youngest PMI being 10 years of age and the oldest being 87 years of age. 15.6% of PMI in the sample were aged 16 years or younger. There was a relatively even split between males and females in the sample (52.7% and 47.3%, respectively). A large majority (86.8%) of PMI in the sample had a recorded ethnicity of “White” (Caucasian). The second most common recorded ethnicity was Aboriginal (9.1%), and the remainder of the sample (4.1%) had a recorded ethnicity of something other than “White” or Aboriginal (such as Asian or Hispanic) or had their recorded ethnicity listed as “Unknown”. These findings support the hypotheses made that demographic characteristics of the PMI in this study would mirror the demographic characteristics of the city within which the sample was drawn.

Records Management System (RMS) Flags. The Police Service in this study used a “flagging” system on their record management system (RMS). Police can note individuals as having mental health issues, for example, and insert specific details about

the individual through the use of a flag. Once entered into the RMS, flags (and corresponding details) are visible anytime an individual's name is queried in the system. Flags are useful in an applied setting for police who are arriving on scene when dispatched, or for follow-up investigations. Multiple flags can be applied to one individual. Besides "mental illness", other common flags included "Violent", "Family Violence", "Hates Police", "Weapons" and "Communicable Disease" cautions.

Half of the PMI in the sample (49.1%) had been flagged on the RMS as having some form of mental health issue. Of these, the most common flag sub-type was "Mentally Disordered" (81.7% of those with a mental health flag had this type of flag). The second most common mental health flag was "Suicide Risk" (35.9%), and the third most common mental health flag was "Previous Mental Health Apprehension Made" (4.9%). 22.5% of the PMI in the sample had non-mental health related flags, with the most common being "Violent or Assaultive" (15.9% of PMI had this type of flag). The second most common non-mental health flag was "Family Violence" (4.8%) and the third most common flag was "Weapon Used" (4.3%). It should be noted here that in many instances an individual had more than one flag associated with their name on the RMS.

Previous Encounters with Police. Most PMI in the sample had previous encounters with the police service. Of all the PMI in the sample ($N=293$), 21.1% ($n=62$) had more than one encounter with this police service during the six-month timeframe that the data was gathered from. One individual had as many as 9 occurrences with this service during the sample timeframe. The median total occurrences each PMI had with this particular police service (dating back to 2005 when the current RMS system was

implemented) was 11.0 ($SD = 26.05$), with one individual having as many as 162 previous occurrences.

Situation Profile

In addition to individual PMI characteristics, this study also examined the typical situational characteristics of mental health calls for service. Situation variables include factors pertaining specifically to the scene, or call to dispatch. Typical situational characteristics are described below.

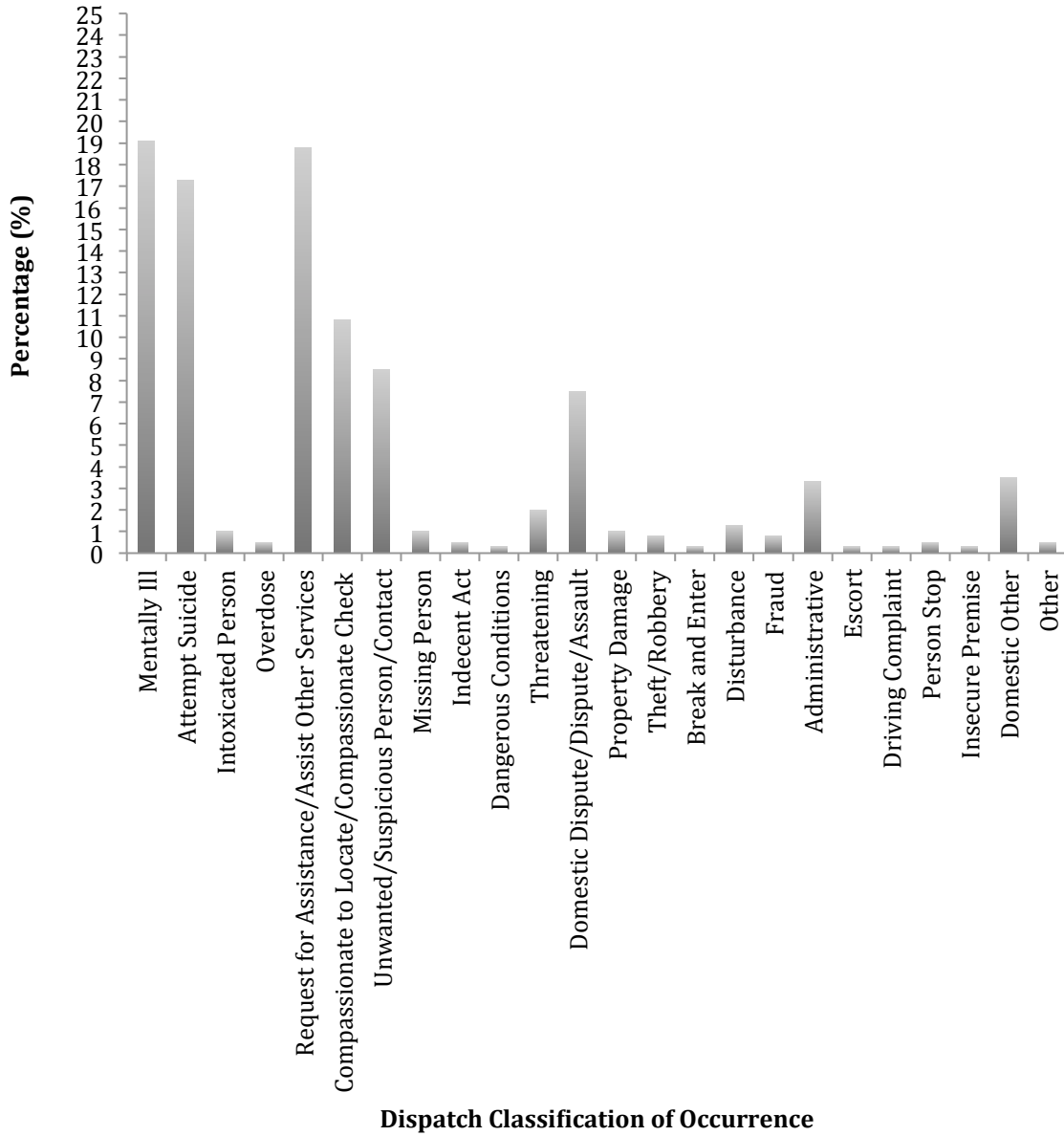
Time and Location of Occurrence. The majority of police-PMI encounters were initiated during the second half of the day, with 34.8% being initiated in the afternoon (between the hours of 12:00PM and 6:00PM) and 30.8% being initiated in the evening (between the hours of 6:00PM and 12:00AM). Of all police-PMI occurrences in the sample, the majority of calls took place (initially) at a residential dwelling (59.7%), which was typically the PMI's place of residence. The second most common place where police-PMI encounters were initiated was in a public outdoor place (9.9%), such as a street or park. The third most common place for the police-PMI encounter to be initiated was a school (6.8%), including primary, secondary, and post-secondary institutions.

Initiation of Police Calls for Service. The most common initiator of police-PMI contact was a family member of the PMI; in 23.8% of the police-PMI encounters, a family member of the PMI was the one to call the police to scene. The second most common initiator of police-PMI contact was the local Ambulance Service (16.9%), who were mandated to call the police when they were called to a scene where an individual is posing a threat to themselves or others. Interestingly, the third most common initiator of

police-PMI contact was the PMI themselves (12.5%), indicating that many PMI are calling police in an attempt to receive assistance, likely for their mental health needs.

Occurrence Type at Dispatch. Each time the police are called to service, the police dispatcher classifies the type of call, giving the officer who responds an idea of the situation they are about to encounter. Dispatch classifications include (but are not limited to) “Attempt Suicide”, “Property Damage”, and “Compassionate Check”. The most common dispatch classification of police-PMI occurrences in this study was “Mentally Ill (Code 937) ” (19.1%), indicating to police that they are responding to a situation in which the primary issue is assisting a PMI. The second most common dispatch classification in this sample was “Request for Assistance/Assist Other Services” (18.73%), where another service, such as the local ambulance or hospital, would request police presence. The third most common dispatch classification in this study was “Attempt Suicide” (17.3%). Note that this classification does not mean that only 17.3% of calls involved suicidal behavior on the part of the PMI. Attempted suicides could also be classified as “Mentally Ill” or “Overdose”, or some other classification. The inconsistent use of classification codes, such as for attempted suicide, limits conclusions that can be drawn from the data. For the rates of all dispatch classifications, see Figure 1.

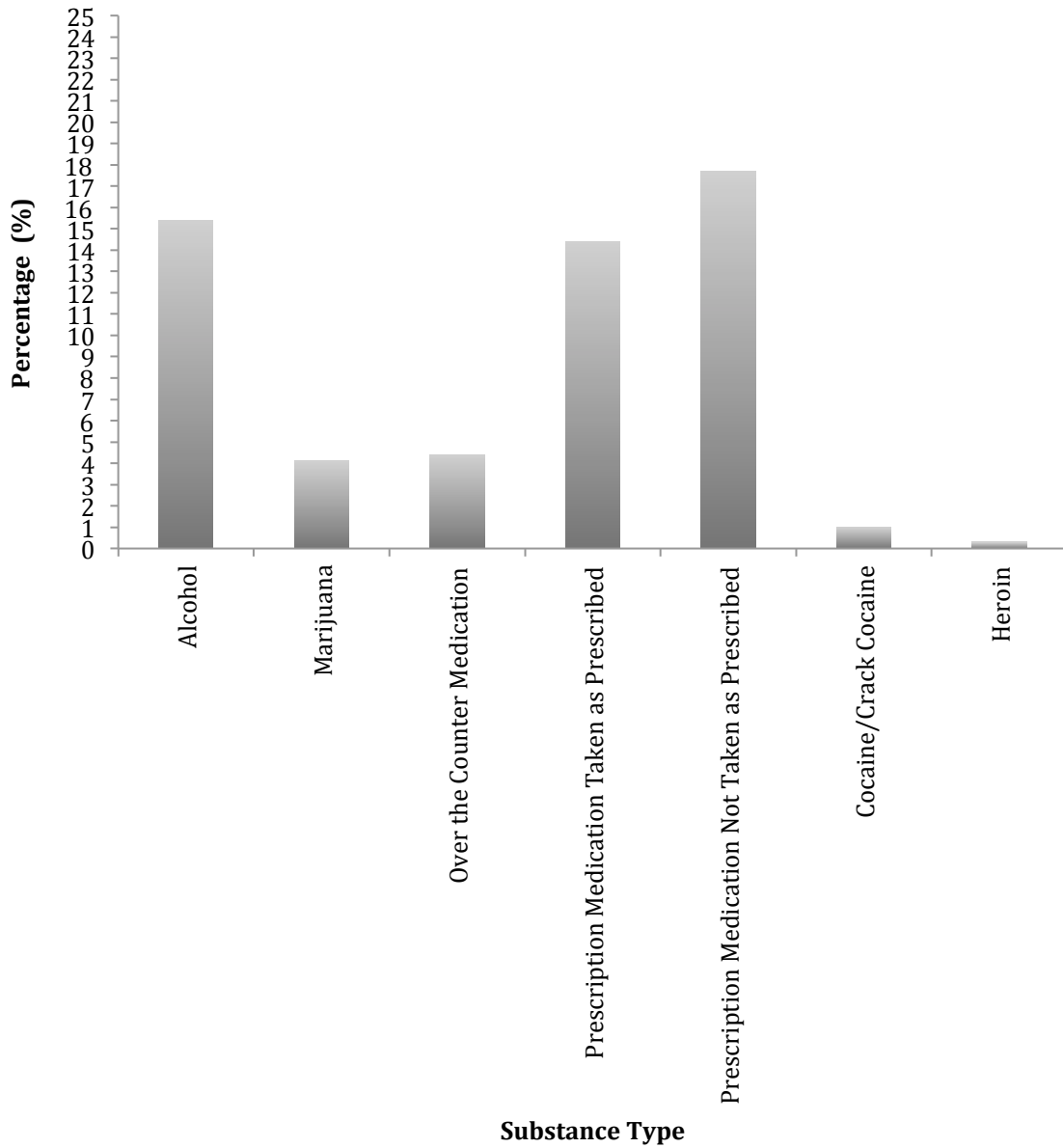
Figure 1. Percentage of dispatch classifications.



Support on Scene for PMI. During 44.8% of occurrences, a family member or friend of the PMI was on scene, and were noted in police reports to be acting as a support for the PMI (usually a family member). During 2.8% of occurrences, some form of medical practitioner/staff (such as a homecare worker) was on scene to advocate for the PMI. Of note, during 52.4% of police-PMI occurrences, there was no one on scene to support or advocate for the PMI during their encounters with police.

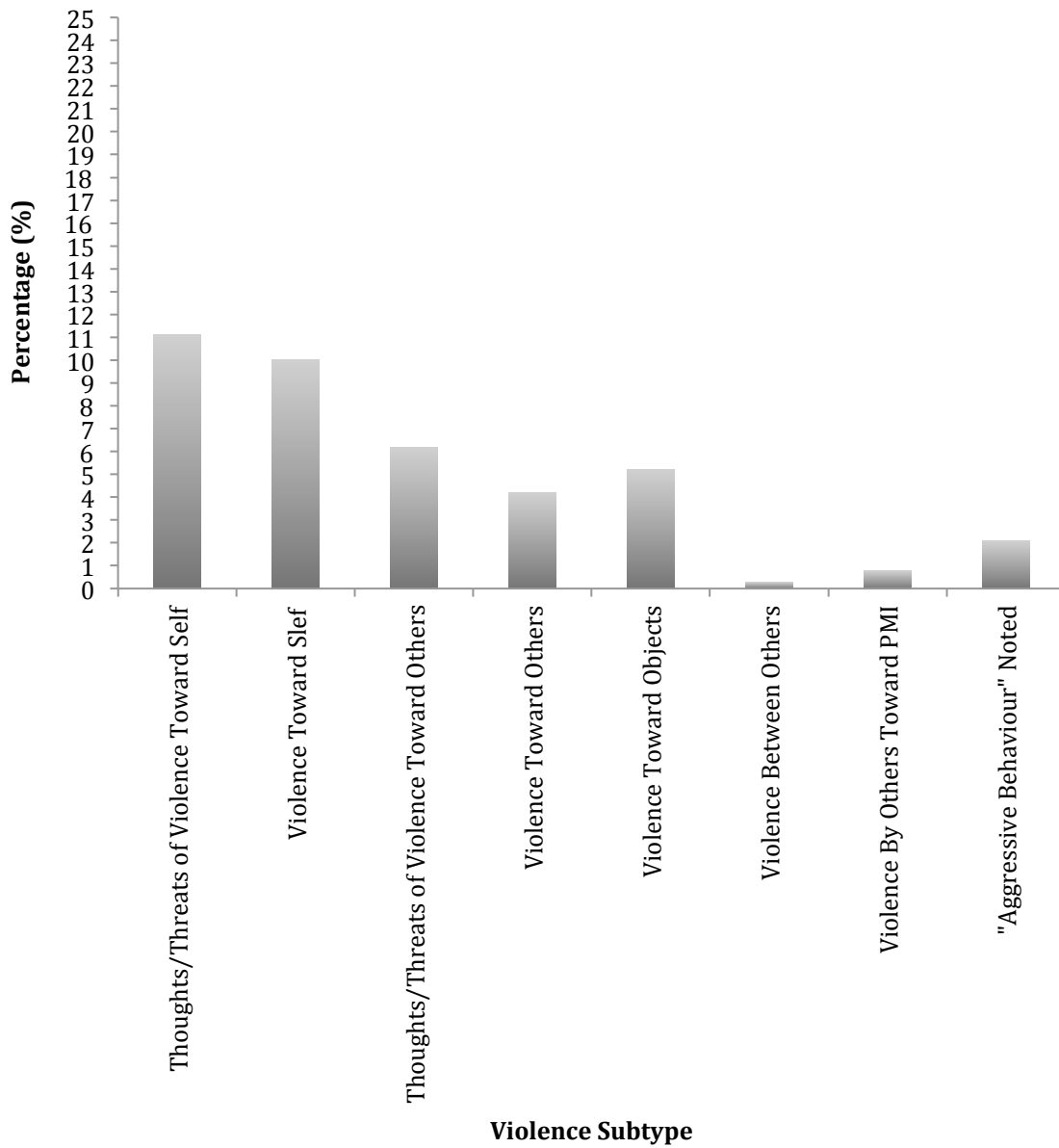
Presence of Substances. During 47.9% of police-PMI interactions, substances were noted in police reports, which is consistent with the hypothesis that substances would be noted in half of the occurrences in this study. The most common type of substance to be noted in police reports was prescription medication not being taken as prescribed (noted in 17.7% of occurrences). Noted substances ranged widely from the police noting that the PMI had abruptly stopped their medication to the PMI overdosing on their prescribed medication. Prescription medication that was taken as prescribed was noted during 14.4% of police-PMI occurrences. The second most common substance to be noted was alcohol (noted in 15.4% of occurrences). Illicit drugs were noted during 5.3% of occurrences. For the frequencies of all types of substances noted during police-PMI encounters, see Figure 2. Note that more than one substance could be present during an occurrence.

Figure 2. Substance types noted by police.



Presence of Violence. Violence towards the self and others was noted in police reports during 32.6% of police-PMI encounters. This supports the hypothesis that violence would be present during at least 20% of the occurrences in this study. During 21.1% of occurrences, the type of violence noted was either actual violence (10%) or the threat of violence (11.1%) by the PMI toward themselves (i.e., suicidal threats/behavior). Thoughts or threats of violence by the PMI toward others was noted in 6.2% of occurrences, and actual violence by the PMI toward others was noted in 4.1% of the occurrences. More than one type of violence could be noted during a particular occurrence. For the rates of all types of violence noted in the sample, see Figure 3. Weapons were noted as present (but not necessarily used) during 15.8% of police-PMI encounters.

Figure 3. Violence subtypes noted by police.



Outcome Profile

This study examined the typical outcomes of police-PMI encounters. Outcomes included whether a mental health apprehension was made, whether mental health services were engaged, and whether the PMI was arrested and/or charged with an offense. The typical outcomes of police-PMI interactions in the current study will now be described.

Police Classification of Occurrence. When an individual calls for emergency assistance (9-1-1), the dispatcher they speak to classifies the occurrence type on the RMS so that emergency responders have a preliminary idea of the situation they are responding to (e.g. “suicide-related” or “theft”). After an occurrence takes place, the officer on the scene that has been placed in charge of the incident (as there are often more than 1 officer on scene during calls) gives another classification to the occurrence on the RMS. This classification can be different than the original classification given by the police dispatcher, and tends to be more indicative of the outcome of the situation. The most common classification of occurrence by police in the current sample was “Apprehended without Order” (35.7%), meaning that the police made a mental health apprehension without an order to do so from a medical doctor. Note that this value does not represent the total number of times a MHA apprehension was made by police in this way, as mental health apprehensions made by police without an order to do so can be given other primary classifications. Therefore this number indicates the total number of times the occurrence was classified as a MHA apprehension made without an order to do so from a medical doctor. The second most common classification of the occurrence made by police was “Insufficient Grounds for Apprehension” (22.9%), meaning that the officer felt there was no grounds for a formal apprehension, and the situation was resolved

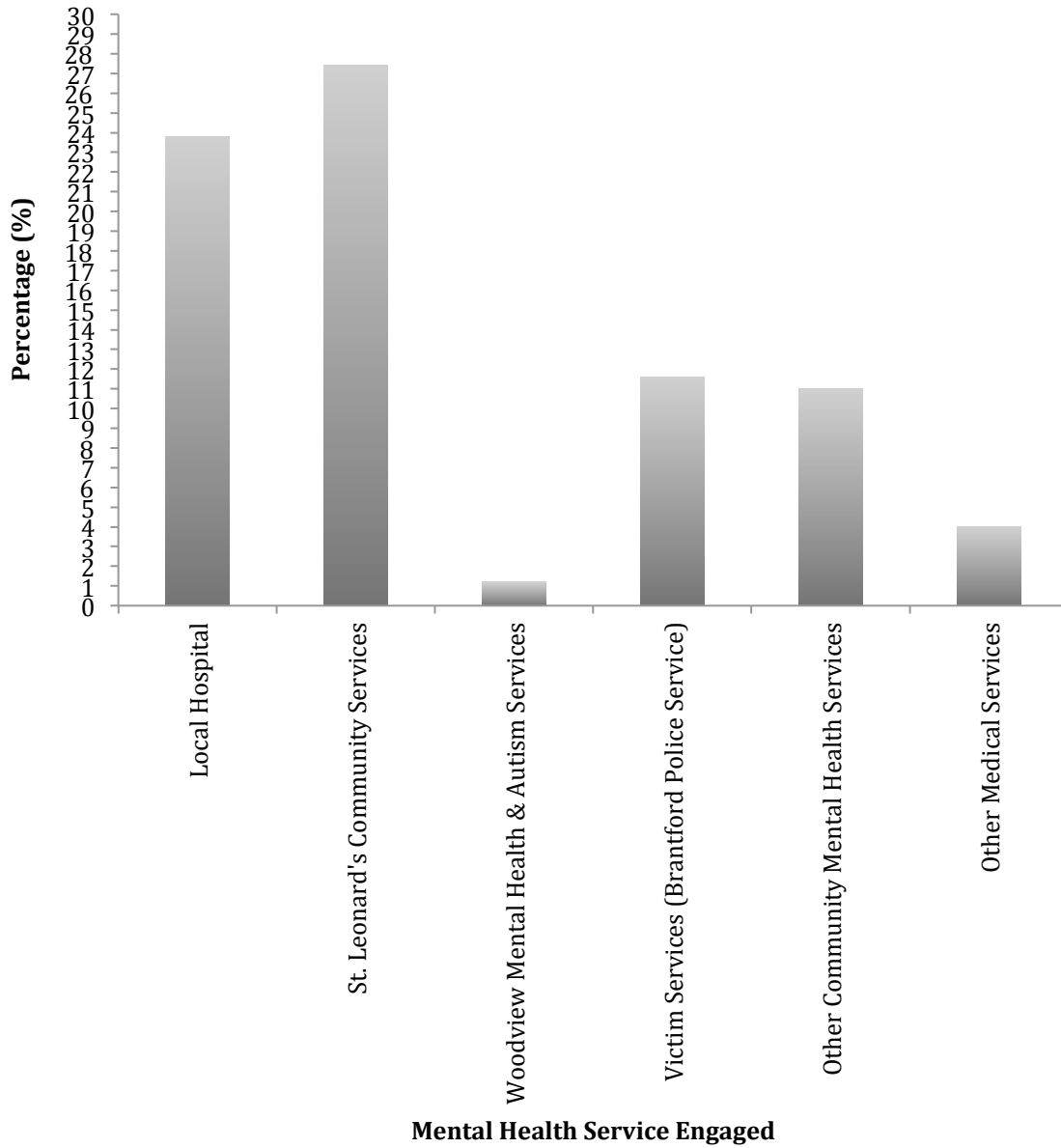
informally. For example, the officer may have given the PMI and/or their family information on community mental health resources before leaving the scene. The third most common classification of the occurrence made by police was “Voluntary Transport” (7.3%), where the police transported the PMI to the mental health unit of the local hospital, at the PMI’s request.

Apprehension under the Mental Health Act. In over half of the occurrences in the sample (54.8%), the police found it necessary to make an apprehension under the Ontario Mental Health Act and transport the PMI to emergency mental health services at the local hospital. 59.2% of all MHA apprehensions made resulted in a Form 1 being placed on the PMI, meaning that, once at the hospital, doctors deemed it necessary to place the PMI on a mandatory 72-hour psychiatric evaluation. Notably, the remaining 40.8% of MHA apprehensions made by police resulted in the PMI being released from hospital care (and subsequently from police custody) after being evaluated by a mental health physician.

Engagement of Mental Health Services. Out of all sampled police-PMI occurrences, mental health services (e.g., hospital, community services) were directly engaged 78.6% of the time. However, given that about half of all sampled police-PMI occurrences resulted in a MHA apprehension, this high rate of MH service engagement can be explained by mandatory involvement of the hospital (whether or not the PMI was admitted to the MH ward by a doctor). When occurrences resulting in MHA apprehensions were removed from analyses, the direct engagement of mental health services (e.g., community services) was 27%. For the rates in which each type of mental

health service was engaged, see Figure 4. Note that more than one type of mental health service could be engaged during a particular occurrence.

Figure 4. Mental health service engagement with MHA Apprehension data removed from the sample.



Criminalization of PMI. PMI were arrested by police during 5.5% of occurrences in the sample, and charged by police with an offence in 3.5% of occurrences. This means that in 2% of occurrences, police made an arrest but then later released the PMI (either conditionally or unconditionally). Results from this study do not accurately represent the rates of criminalization of PMI more broadly by police, as the sample of occurrences used is unique in that it represents interactions between PMI and police that the police have primarily classified as mental health-related. Police-PMI occurrences that have more of a criminal element (i.e., the PMI is charged with theft or assault) are likely classified in terms of the crime committed, not as a mental health-related occurrence, and are therefore missing from the dataset.

Correlational Analyses of Outcomes of Police-PMI Interactions

A Spearman correlational analysis was performed on the dataset to determine which PMI-profile and situation characteristics were associated with specific outcomes of police-PMI interactions. The dataset contained 96 variables, and so this analysis was performed to narrow down the variables included in the logistic regression models so that only predictors that had a significant correlation to the outcome were included in the model. A significance value of $p < .05$ was used to determine significant results in all correlations in this study.

Correlates of MHA Apprehension. Significant positive correlates of MHA apprehensions included the PMI having a non-mental health flag previously assigned to their name on the RMS system ($r_s(366) = .10$), as well as the presence of substances ($r(363) = 0.17$), weapons ($r_s(362) = .14$), and violence ($r_s(364) = 0.24$). Significant

negative correlates of MHA apprehensions included the increasing age of the PMI (r_s (254) = -0.16), and the PMI initiating police contact (r_s (366) = -0.26).

Correlates of Form 1 MH Admissions to Hospital. Significant positive correlates of the PMI being placed on a mandatory 72-hour assessment by a doctor (Form 1) after being transported to the hospital under a MHA apprehension included PMI not taking prescription medication as prescribed (r_s (351) = 0.14), and a MHA apprehension made by police (r_s (341) = 0.46). There were no negative correlates of this outcome.

Correlates of Mental Health Services Engaged (with MHA Apprehension data removed). Significant positive correlates of the police engaging community mental health services (other than the required engagement of hospitals during MHA apprehensions) included the presence of substances (r_s (163) = 0.17), and a supportive figure on scene advocating for the PMI (r_s (163) = 0.21). Negative correlates for this outcome variable included the PMI having a Mental Health flag of “Medical” associated with their name on the service’s RMS (r_s (113) = -0.22), and the PMI initiating contact with the police (r_s (164) = 0.24).

Correlates of Criminal Charge. Significant positive correlates of the PMI being charged with a crime by police included the presence of violence (r_s (20) = 0.69), specifically thoughts or threats of violence by the PMI toward themselves (r_s (20) = 0.44). Significant negative correlates of the PMI being charged with a crime by police included the PMI taking prescription medication as prescribed (r_s (20) = -0.48), and a MHA apprehension being made (r_s (18) = -0.55).

Binary Logistic Regressions

To ascertain whether any independent PMI-profile or police-PMI situational variables contributed to predicting a particular outcome for PMI, binary logistic regression analyses were conducted for each of the four outcomes (MHA Apprehension, Form 1 hospital admission, MH Services Engaged, and Charges Laid). Only variables significantly correlated with the independent variable were included as predictors in respective models (Cohen, 1988). Model diagnostic statistics were interpreted following guidelines provided by Field (2009) to assess model assumptions (e.g., collinearity, linearity, outliers) and model fit. Any predictors that produced excessively large standard errors were removed from the model (Field, 2009). Given power constraints, predictors were split into families of PMI profile and situation characteristics and were entered into separate logistic regression analyses.

Mental Health Act Apprehension

To ascertain whether independent PMI-profile or situational variables influenced whether or not police made a Mental Health Act apprehension during their encounter with PMI, two binary logistic regression models were estimated with Mental Health Act Apprehension as the dichotomous dependent variable (0 = *no*, 1 = *yes*). The categorical predictors that were included in the logistic regression models were dummy-coded to assign control categories (e.g., 0 = no mental health flag, 1 = mental health flag). Predictors were entered into a forced entry logistic regression model for each outcome.

Logistic Regression 1: PMI Profile Characteristics as Predictors of MHA Apprehension. Assumptions for the model were tested before results were interpreted. Cook's Distances (Cook, 1977) were all less than 1 (*range* = .01 – .05, *M* = .03), indicating no datapoints of undue influence (according to Cook & Weisberg, 1982).

DFBeta values for the constant ($range = -.05 - .03$) were also under the threshold of 1 suggesting there were no outliers. Individual cases fell very close to their expected leverage value, being $k + 1 / N = 3 / 255 = .01$ ($range = .01 - .04$, $M = .01$). Overall, no cases were isolated that possessed undue influence on the model. The assumption of collinearity was met, as no tolerance values for predictors were less than 0.96 and no VIF values were greater than 1.00.

In total, $n = 255$ occurrences were included in the model. Age and Non-MH Flag were included in a forced entry logistic regression model. In 58% ($n=147$) of these occurrences, police made Mental Health Act apprehensions. The baseline model, therefore, estimated that in all occurrences police made a Mental Health Act Apprehension (57.6% correct classification). Including two predictor variables in the model increased the percentage of correctly classified responses to 60.8%. Variables did significantly increase the predictive power of the model ($-2LL = 338.93$, model $\chi^2 = 8.59$, $p < .05$). To assess overall goodness-of-fit (GOF), two indices were calculated. Nagelkerke's (1991) $R_N^2 = .05$, and Cox and Snell's (1989) $R^2 = .03$. GOF values indicated that including the predictors produced a significant improvement in the ability of the LR model to predict whether a Mental Health Act apprehension was made, compared to that of the baseline model.

Wald statistics were calculated to evaluate individual predictors. When this index yields statistical significance for a particular variable, evidence is gained that the predictive power of the model is increased with the inclusion of that variable (Crichton, 2001). The model revealed one significant client profile predictor of Mental Health Act Apprehensions; age did significantly contribute to the ability of the model to predict

whether a Mental Health Act apprehension was made (Wald χ^2 (1) = 6.33, $p < .05$). As age increased, the PMI was 1.70% less likely to receive a MHA Apprehension. The presence of a non-mental health flag attached to the PMI on the RMS system (Wald χ^2 (1) = 1.68, *n.s.*), did not make significant contributions to the predictive power of the model. For a detailed list of all *OR* values for this model, refer to Table 1.

Table 1

Logistic Regression Analysis of MHA Apprehension (as a Function of PMI-Profile Variables)

	β (SE)	Lower	Odds Ratio	Upper
Constant	.84** (0.31)			
Age of PMI	-.02* (0.01)	0.97	0.98	1.00
PMI with Non-MH Flag	.36 (0.28)	0.83	1.44	2.49

Note. $R_N^2 = .05$ (Nagelkerke). $R^2 = .03$ (Cox & Snell). Model $\chi^2 = 8.59$, $*p < .05$. $**p < .01$. $***p < .001$.

Logistic Regression 2: Situational Characteristics as Predictors of MHA

Apprehension in Model. Assumptions for the models were tested before results were interpreted. Cook's Distances (Cook, 1977) were all less than 1 (*range* = .01 – .14, $M = .01$), indicating no points of undue influence (according to Cook & Weisberg, 1982). DFBeta values for the constant (*range* = -.02 – .02) were also under the threshold of 1, suggesting that there were no outliers. Individual cases fell very close to their expected leverage value, being $k + 1 / N = 6 / 363 = .02$ (*range* = .01 – .06, $M = .01$). Overall, no cases were isolated that possessed undue influence on the model. The assumption of collinearity was met, as no tolerance values were less than 0.85 and no VIF values were greater than 1.17.

In total, $n = 363$ police-PMI occurrences were included in the model. Substances, Weapons, Violence, and PMI as Complainant were included in a forced entry logistic regression model. In 55% ($n=198$) of these occurrences, police made Mental Health Act apprehensions. The baseline model, therefore, estimated that in all occurrences police made a Mental Health Act apprehension (54.5% correct classification). Including four predictor variables in the model increased the percentage of correct classification to 64.7%. Variable coefficients were determined to significantly increase the predictive power of the model overall ($-2LL = 453.68$, model $\chi^2 = 46.54$, $p < .001$). To assess overall goodness-of-fit (GOF), two indices were calculated. Nagelkerke's (1991) R_N^2 was calculated as .16, and Cox and Snell's (1989) R^2 was calculated as .12. GOF values indicated that including the predictors produced a significant improvement in the ability of the LR model to predict whether a Mental Health act Apprehension was made, compared to that of the intercept.

The model revealed three significant situational characteristic predictors of Mental Health Act apprehensions. This analysis revealed that the presence of substances (Wald $\chi^2 (1) = 6.05, p < .05$), the presence of violence (Wald $\chi^2 (1) = 9.57, p < .01$), and the PMI initiating police contact (Wald $\chi^2 (1) = 12.69, p < .001$), all significantly contributed to the ability of the model to predict whether a Mental Health Apprehension was made by police. The presence of substances meant that the PMI was 1.75 times more likely to be apprehended under the MHA. The presence of violence meant that the PMI was 2.26 times more likely to be apprehended under the MHA. This is consistent with the hypothesis that the presence of violence would predict MHA apprehensions. The PMI initiating police contact decreased the odds of the PMI being apprehended under the MHA by 73.6%. The presence of weapons (Wald $\chi^2 (1) = 1.76, n.s.$) did not make a significant contribution to the predictive power of the model. For a detailed list of all *OR* values for this model, please refer to Table 2.

Table 2

Logistic Regression Analysis of MHA Apprehension (as a Function of Situation Variables)

	β (SE)	Lower	Odds Ratio	Upper
Constant	-.23 (0.18)			
Substances	.56* (0.23)	1.12	1.75	2.73
Weapons	.47 (0.35)	0.80	1.59	3.17
Violence	.81** (0.26)	1.35	2.26	3.78
PMI as Complainant	-1.33*** (.18)	0.13	0.26	0.55

Note. $R_N^2 = .16$ (Nagelkerke). $R^2 = .12$ (Cox & Snell). Model $\chi^2 = 46.54$, $*p < .05$. $**p < .01$. $***p < .001$.

Mental Health Form 1 Hospital Admissions

To test whether any independent PMI-profile or situational variable influenced whether or not PMI were placed on a Form 1 (72 hour psychiatric hold) at the hospital, after police made a Mental Health Act apprehension, two binary logistic regressions were conducted with Form 1 as the dichotomous dependent variable (0 = *no*, 1 = *yes*). The categorical predictors that were included in the logistic regression models were dummy-coded to assign control categories (e.g., 0 = substances present during police-PMI occurrence, 1 = substances present during police-PMI occurrence).

Logistic Regression 3: PMI Profile Characteristics as Predictors of MH Form 1 Hospital Admissions. Assumptions for the models were tested before results were interpreted. Cook's Distances (Cook, 1977) were all less than 1 (*range* = .00 – .34, *M* = .01), indicating no points of undue influence (according to Cook & Weisberg, 1982). DFBeta values for the constant (*range* = -.05 – .02) were also under the threshold of 1, suggesting that there were no outliers. Individual cases fell very close to their expected leverage value, being $k + 1 / N = 2 / 259 = .01$ (*range* = .00 – .07, *M* = .01). Overall, no cases were isolated that possessed undue influence on the model. There was no need to test the assumption of no collinearity, as this model only contained one predictor.

In total, $n = 259$ police occurrences were included in the model. Total Occurrences on RMS was included in a forced entry logistic regression model. In 34% ($n=88$) of these occurrences, the PMI was placed on a Form 1. The baseline model, therefore, estimated that in all occurrences the PMI were not placed on a Form 1 (66% correct classification). Including a predictor variable in the model did not increase the percentage of correct classification. Variable coefficients did not significantly increase

the predictive power of the model overall ($-2LL = 327.89$, model $\chi^2 = 6.90$, $p > .05$). To assess overall goodness-of-fit (GOF), two indices were calculated. Nagelkerke's (1991) R_N^2 was calculated as .02, and Cox and Snell's (1989) R^2 was calculated as .02. GOF values indicated that including the predictors did not produce an improvement in the ability of the LR model to predict whether a Mental Health act Apprehension was made, compared to that of the intercept. The model revealed no significant PMI profile characteristic predictors of a Mental Health Form 1. For a detailed list of all *OR* values for this model, refer to Table 3.

Table 3

Logistic Regression Analysis of MHA Form 1 Admissions (as a Function of PMI-Profile Variables)

	β (SE)	Lower	Odds Ratio	Upper
Constant	-.44 (0.17)			
Total Occurrences on RMS	-.012* (0.01)	0.98	.99	1.00

Note. $R_N^2 = .02$ (Nagelkerke). $R^2 = .02$ (Cox & Snell). Model $\chi^2 = 4.09$, * $p < .05$. ** $p < .01$. *** $p < .001$.

Logistic Regression 4: Situational Characteristics as Predictors of MH Form

1. Assumptions for the model were tested before results were interpreted. Cook's Distances (Cook, 1977) were all less than 1 (*range* = .00 – .12, *M* = .01), indicating no points of undue influence (according to Cook & Weisberg, 1982). DFBeta values for the constant (*range* = -.01 – .11) were also under the threshold of 1, suggesting that there were no outliers. Individual cases fell very close to their expected leverage value, being $k + 1 / N = 3 / 339 = .01$ (*range* = .01 – .01, *M* = .01). Overall, no cases were isolated that possessed undue influence on the model. The assumption of no collinearity was met, as tolerance values were all less than 0.97 and no VIF values were greater than 1.03.

In total, $n = 339$ occurrences were included in the model. Substances and MHA Apprehension were included in a forced entry logistic regression model. In 32% ($n=108$) of these occurrences, the PMI was placed on a Form 1. The baseline model, therefore, estimated that PMI were not placed on a Form 1 (68.1% correct classification). Including two variables in the model increased the percentage of correct classification to 71.4%. Predictors were determined to significantly increase the predictive power of the model (-2LL = 329.75, model $\chi^2 = 94.54, p < .001$). To assess overall goodness-of-fit (GOF), two indices were calculated. Nagelkerke's (1991) R_N^2 was calculated as .34, and Cox and Snell's (1989) R^2 was calculated as .24. GOF values indicated that including the predictors produced a significant improvement in the ability of the LR model to predict whether a Mental Health Act Apprehension was made, compared to that of the intercept.

The model revealed one significant situational characteristic predictors of the PMI being placed on a Form 1 by a physician. This analysis revealed that a MHA Apprehension (Wald $\chi^2 (1) = 59.12, p < .001$) significantly contributed to the ability of

the model to predict whether the PMI was placed on a Form 1. A MHA Apprehension meant that the PMI was 16.03 times more likely to be placed on a Form 1 than if no MHA Apprehension was made. The presence of substances (Wald $\chi^2 (1) = .08, n.s.$) did not make a significant contribution to the predictive power of the model. For a detailed list of all *OR* values for this model, please refer to Table 4.

Table 4

Logistic Regression Analysis of Mental Health Form 1 Admissions (as a Function of Situation Variables)

	β (SE)	Lower	Odds Ratio	Upper
Constant	-2.70*** (0.35)			
Substances	0.08 (0.27)	0.64	1.08	1.84
MHA Apprehension	2.77*** (0.36)	7.90	16.03	32.51

Note. $R_N^2 = .34$ (Nagelkerke). $R^2 = .24$ (Cox & Snell). Model $\chi^2 = 94.54$, $*p < .05$. $**p < .01$. $***p < .001$.

Mental Health Services Directly Engaged in Non-Apprehension Cases

The data in the current study captured whether or not mental health services were directly engaged during each police-PMI occurrence. However, many of the occurrences resulted in a Mental Health Act apprehension, where police were mandated to take the PMI to the nearest psychiatric facility (usually a hospital emergency psychiatric unit). Since it is clear that while MHA apprehensions result in the mandatory contacting of a mental health service, such apprehensions do not necessarily result in the PMI accessing these services (e.g., the PMI may not be admitted to the hospital for MH assessment and treatment under a Form 1 despite being apprehended by police).

To better ascertain whether any independent PMI-profile or situational variable influenced whether or not mental health services were directly engaged, all cases of MHA apprehensions were removed from the analysis and two binary logistic regressions were conducted with Mental Health Services Engaged (without Mental Health Apprehension data) as the dichotomous dependent variable (0 = *no*, 1 = *yes*). The categorical predictors that were included in the logistic regression models were dummy-coded to assign control categories (e.g., 0 = support for PMI not present during police-PMI occurrence, 1 = support for PMI present during police-PMI occurrence).

Logistic Regression 5: PMI Profile Characteristics as Predictors in Mental Health Service Engagement. Assumptions for the model were tested before results were interpreted. There were no Cook's Distances (Cook, 1977) greater than 1 (*range* = .00 – 1.00, *M* = .00), indicating no points of undue influence (according to Cook & Weisberg, 1982). DFBeta values for the constant (*range* = -.03 – .01) were also under the threshold of 1, indicating that there were no outliers. Individual cases fell very close to

their expected leverage value, being $k + 1 / N = 2 / 113 = .02$ (*range* = .01 – .20, *M* = .01). Overall, no cases were isolated that possessed undue influence on the model. There was no need to test the assumption of collinearity as there was only one predictor (MH Flag of “Medical”) entered in the model.

In total, $n = 113$ police-PMI occurrences were included in the model. MH Flag of “Medical” was included in a forced entry logistic regression model. In 67% ($n=76$) of these occurrences, mental health services were directly engaged. The baseline model, therefore, estimated that mental health services were directly engaged during the occurrence (67.3% correct classification). Including a variable in the model increased the percentage of correct classification to 69.9%. Variable coefficients were determined to significantly increase the predictive power of the model overall ($-2LL = 137.95$, model $\chi^2 = 4.96$, $p < .05$). To assess overall goodness-of-fit (GOF), two indices were calculated. Nagelkerke’s (1991) R_N^2 was calculated as .06, and Cox and Snell’s (1989) R^2 was calculated as .04. GOF values indicated that including the predictors produced a significant improvement in the ability of the LR model to predict whether mental health services were directly engaged (excluding MHA apprehension cases), compared to that of the intercept.

This analysis revealed one marginally significant PMI profile predictor of Mental Health Services being engaged. The PMI having been given a previous Mental Health Flag of “Medical” on the police service’s RMS (Wald $\chi^2 (1) = 3.77$, $p = .05$) made a significant contribution to the predictive power of the model. When the PMI had a previous Mental Health Flag of “Medical” on the police service’s RMS, they were 89% less likely to have mental health services directly engaged as an outcome of their

interaction with police (excluding cases where a MHA Apprehension took place). For a detailed list of all *OR* values, refer to Table 5.

Table 5

Logistic Regression analysis of MH Service Engagement (as a Function of PMI-Profile Variables)

	β (SE)	Lower	Odds Ratio	Upper
Constant	0.82*** (0.21)			
MH Flag "Medical"	-2.21* (1.14)	0.01	0.11	1.02

Note. $R_N^2 = .06$ (Nagelkerke). $R^2 = .04$ (Cox & Snell). Model $\chi^2 = 4.96$, $*p < .05$. $**p < .01$. $***p < .001$.

Logistic Regression 6: Situational Characteristics as Predictors in Mental Health Service Engagement. Assumptions for the model were tested before results were interpreted. Cook's Distances (Cook, 1977) were all less than 1 (*range* = .01 – .20, *M* = .04), indicating no points of undue influence (according to Cook & Weisberg, 1982). DFBeta values for the constant (*range* = -.21 – .20) were also under the threshold of 1, indicating that there were no outliers. Individual cases fell very close to their expected leverage value, being $k + 1 / N = 5 / 106 = .05$ (*range* = .03 – .13, *M* = .04). Overall, no cases were isolated that possessed undue influence on the model. The assumption of no collinearity in the model was not violated, as all Tolerance values were greater than 0.85, and all VIF values were less than 1.18

In total, $n = 106$ occurrences were included in the model. PMI as Initiator of Police Contact, Substances, Age of PMI, and Support on Scene were included in a forced entry logistic regression model. In 70 of these occurrences (66%), mental health services were directly engaged. The baseline model, therefore, estimated that mental health services were directly engaged (66% correct classification). Analyses revealed that the inclusion of the four predictors did not produce a significant improvement in the ability of the LR model to predict whether mental health services were directly engaged (outside of MHA apprehension data), compared to that of the baseline model ($-2LL = 128.59$, model $\chi^2 = 7.26$, *n.s.*). Nagelkerke's (1991) R_N^2 was calculated as .09, and Cox and Snell's (1989) R^2 was calculated as .07. The model revealed no significant situational characteristic predictors of whether mental health services were directly engaged (outside of MHA apprehension data). These findings do not support the hypothesis that the

presence of violence and weapons would be statistically inversely related to community mental health service engagement. For a detailed list of all *OR* values, refer to Table 6.

Table 6

Logistic Regression Analysis of MH Service Engagement (as a Function of Situation Variables)

	β (SE)	Lower	Odds Ratio	Upper
Constant	1.21*(0.61)			
PMI Initiator of Police				
Contact	10.22 (0.56)	0.22	0.80	2.17
Substances	0.21 (0.46)	0.44	1.23	2.90
Age of PMI	-0.02 (0.01)	0.96	0.98	1.00
Support on Scene	0.50 (0.45)	1.61	1.65	1.69

Note. $R_N^2 = .09$ (Nagelkerke). $R^2 = .07$ (Cox & Snell). Model $\chi^2 = 7.26$, $*p < .05$. $**p < .01$. $***p < .001$.

Chapter 5: Description of PMI Profile and Situation Characteristics

PMI Profile

A description of the typical characteristics of PMI that encounter police is notably absent in research that explores police-PMI interactions. However, this information is vital to understanding the needs of this vulnerable population and would provide an evidence base for improving police-PMI interactions. The current study examined the demographic characteristics of the PMI that police encountered during primarily mental health-related calls for service, and findings will now be discussed.

Demographics

The total dataset in this study contained $N = 400$ mental health-related calls to the police, but since some individuals had repeat occurrences during that time, the sample of unique PMI in this study was $n = 272$. In the field of forensic psychology and criminology, many individual characteristics are known to mediate criminality in PMI, including demographic characteristics such as age and gender (Arboleda-Florez, 2010). In the current study, the mean age of the PMI who encountered police was 37 years ($SD = 18.87$), which is consistent with the population characteristics of the city where the study took place. Notably though, a large portion of the PMI encountering police were aged 16 years or younger (15.6% of the sample), with many PMI under the age of 10 years. While this number is consistent with the proportion of youth in Canada that are suffering from serious mental health issues (15%, according to Canadian Mental Health Association, 2015), this means that a large proportion of youth in the city where this study took place are coming into contact with the law at an early age because of their mental health issues. This is cause for worry, as the criminalization process (e.g., stigma,

lack of mental health treatment) that begins with police contact is problematic for adults with mental health issues, but can be even more detrimental for youth who are at such a critical age in their development (Canadian Mental Health Association, 2015). In an extensive review of the mental health training that Canadian police officers receive, Cotton and Coleman (2010) concluded that the training that officers receive regarding PMI is inadequate in terms of the amount of training they receive, the topics covered, and the format in which they receive their training. Improperly trained officers encountering PMI who are youth might further exacerbate mental health symptoms with an inappropriate response. Results from this study therefore indicate a pressing need for better police training with respect to youth who have mental health issues so that police can apply the most appropriate response to these delicate situations and avoid inadvertently exacerbating any mental health symptoms. These results also indicate the need for a proactive strategy to address youth mental illness both on the part of the community in this study to reduce the need for police presence (for instance, more mental health programming in schools), and on the part of the police service who are clearly dealing with a high number of youth with mental health issues.

The unique population of PMI in this study were evenly split amongst male and female. The majority of the PMI in the sample were identified by police as Caucasian (86.8%, $n = 191$). These findings support the hypotheses made that demographic characteristics of the PMI in this study would mirror the demographic characteristics of the city within which the sample was drawn. However, the second most common ethnicity identified by police was Aboriginal (9.1%, $n = 20$), which is quite high even for the city in which the study took place (the city is located next to a large First Nations

Reserve, however Aboriginals account for just 3-4% of the city's population, which is consistent with the proportion of Aboriginal people in Canada). This means that approximately 1 in 10 PMI that the police are encountering in a mental health-related call for service are a marginalized population (Aboriginal), and who are thusly known to be at an elevated risk of criminalization (Cook & Roesch, 2011). It is known that Aboriginal populations tend to experience mental health issues at a higher rate (30%) than members of the general population (20%) (Health Canada, 2015) and have been grossly overrepresented in the criminal justice system (Cook & Roesch, 2011). Aboriginal individuals who are experiencing issues related to their mental health might have an increased difficulty receiving treatment for their symptoms due to either restricted access to treatment for those who have low socioeconomic status (according to Health Canada, 2015, Aboriginal populations tend to have lower socioeconomic status and education/employment rates than members of the general population), or due to cultural differences that make many community mental health treatment options inappropriate for this population. Restricted access to treatment for mental health issues might translate into the police being called to manage those who are experiencing a mental health crisis and have little options for treatment. It appears that, again, there is a need for more proactive community mental health treatment options for this population (to mitigate the risk of police involvement and potential for over-criminalization), and for a unique strategy for police who encounter PMI that are of Aboriginal descent (e.g., a partnership between police and Aboriginal mental health services) to avoid further marginalization of this already over-criminalized population.

RMS Flags

Most police services have a “flagging system” on their online record management system (RMS). At any time, police can “flag” individuals as having mental health issues, for example, and insert specific details about that individual under the flag. Once entered into the RMS, any flags (and corresponding details) associated with an individual are visible to the officer or civilian staff that queried that individual’s name in the service’s RMS system. Multiple flags can be applied to one individual.

In the current study, about half of the PMI in the sample had been flagged on the RMS as having some sort of mental health issue. This is a lower proportion than expected, considering the sample consisted of calls to police that were primarily mental health related and thus likely involving a PMI, and indicates possible inconsistencies in the application of RMS flags. It would be interesting to further explore the criteria for the application of mental health flags.

The most common mental health flag subtype was “mentally disordered”, which would indicate to an officer who queries that individual’s name in the RMS, that the individual has some type of (often unverified) mental disorder or illness. Other common mental health flag subtypes in the sample included “suicide risk” and “previous mental health apprehension made”, again all indicating to the officer that the individual that they are encountering is likely suffering from mental health issues.

While the flagging system can be very useful to police officers, and even to PMI who might benefit from a police officer being aware of their unique mental health needs, it also has the potential to stigmatize any PMI who encounters police. PMI have been inaccurately stigmatized by the media as being “out-of-control” and “dangerous”. This stigma is enduring and affects how PMI are treated by others (Alexander & Link, 2003),

including by the police. Results from a study of police-PMI interactions in Australia found that the presence of prerecorded information (such as a mental health flag) may influence an officer's assessment of – and subsequent response to – that individual (Godfredson et al., 2011). This has the potential to be problematic because police are trained to neutralize any threat present during encounters with civilians (Markowitz, 2011), and so if they perceive an individual to be a threat because of possible mental health issues (due solely to prerecorded information like a flag, and not to observed behavior), they may be more inclined to take action that would further (and quite unfairly) criminalize that individual. This again speaks to a need for police to be trained in appropriate responses to PMI so that any risk of unfair criminalization is mitigated and so that PMI can instead be directed toward treatment for their mental health issues.

Another issue with the flagging system is the potential for “dangerous” flags (e.g., “violent or assaultive”) to be applied inappropriately and disproportionately to PMI. Researchers from London, Ontario, found that 20% of PMI had been flagged by police as “violent” but had never been involved with police in any type of violent offense; in contrast, this study found that only 2% of the general population were flagged as “violent” without being involved in an actual violent encounter with police (Hartford et al., 2005). Further, the study by Harford et al. (2005) found that PMI were over 100 times more likely to have a “violent” flag applied to them than non-PMI. In the current study, 15.8% of PMI in the sample had been given a flag of “violent or assaultive”; however, this study did not include data on non-PMI and so there was no way to compare this rate with the general population. Previous research has established that there is indeed a link between mental illness and violence; a meta-analysis by Douglas and

colleagues (2009) found that psychosis increased the odds for violent behaviour by approximately 50%, but that this effect was mediated by many other factors (such as age and marital status). Regardless of the potential of PMI to act violently, applying a “violent” flag to PMI has, as previously mentioned, the potential to increase the odds of the PMI being criminalized during their encounter with police. Further, police who are expecting a PMI to act violently might approach the encounter in a more militaristic style that might trigger or exacerbate mental health crisis symptoms, potentially causing the PMI to act more violently than they would have if the police approached the situation differently. Once again this speaks to a need for police to be properly trained in approaching situations with mental health elements in such a way that does not exacerbate and crisis symptoms.

Previous Police Contact

It has been established that PMI encounter police more frequently than non-PMI (Hartford et al., 2005). Another Canadian study found that PMI have on average 2-5 times more contacts with police than non-PMI, and that re-involvement with police happened sooner for PMI than non-PMI (Hartford et al., 2005). Results from this study also show that PMI who encounter police do so multiple times. Many of the PMI in this study had multiple police interactions during the 6-month timeframe of the sample. Further, the PMI in this study had an average of 11 total occurrences with police during the 9-year period that the Service’s current RMS has been in place. One individual in the sample had a total of 162 previous police encounters, and that is just with this particular service.

High re-involvement rates for PMI who encounter police are problematic for many reasons, and demonstrate that the system is ineffective for all parties involved. First and foremost, this indicates that PMI who encounter police are not receiving long-term solutions for their crises, and are at a high risk of further contact with police. An encounter with police in and of itself puts any individual at risk of being criminalized (Arboleda-Florez, 2010). Moreover, research has shown that when an officer encounters an individual with previous charges or convictions of a crime, they are more likely to make a criminal apprehension and charge that individual with further criminal behavior (Godfredson et al., 2011). Therefore, PMI who have multiple previous police interventions associated with their name on RMS are at risk of further criminalization, regardless of their mental health needs.

High re-involvement rates for PMI who encounter police cause frustration for the initiators of police contact, who may be the ones re-initiating police contact for the same or similar reasons time after time. If they are victims of the PMI's behavior, they may feel frustrated that "justice was not served" (Charette et al., 2011). Or (and more likely), if they are simply reaching out to police in an attempt to gain control over the situation and to receive mental health care for their family member or friend they likely feel frustrated with the inadequate results of previous police encounters. Family members might also feel frightened of the PMI's behaviour and are attempting to receive support for themselves so that they do not become victims of the PMI.

Lastly, police officers that encounter the same PMI multiple times might feel their own frustration; if they previously attempted to provide the PMI with mental health services only to be called to another mental health crisis for the same individual, they

likely feel frustrated with the mental health care system for not providing effective and long-term care for the PMI. This would only compound the strain and frustration that officers feel from the high number of mental health-related calls for service they attend.

Whatever the situation, high re-involvement rates between PMI and police leaves all parties feeling frustrated, and places a significant strain on police resources. This indicates a systemic issue requiring immediate attention and response. Solutions for PMI in crisis need to be long-term so as to reduce the need for police to be called back to the scene multiple times.

Situation Profile

Understanding the typical situation characteristics of the encounters between police and PMI is important when designing training for police and programs/police aimed at improving police response to PMI. Further, it is known that situation characteristics often influence the outcome of any police encounter with a civilian (Schulenberg, 2007), but past research on typical situation characteristics during police-PMI encounters is minimal. The following is a discussion of the typical situational characteristics that were found to be present in the current study during the police-PMI interactions that were primarily mental health-related.

Prevalence of Mental Health Calls

Research suggests that the prevalence of mental health-related calls for service to police varies across Canada, with rates being reported as high as 30% of all calls in Vancouver, B.C. (Vancouver Police Department, 2013) to as low as 8% of all calls in

Belleville (Belleville Police Service, 2007). However, even if we accept the lower rate of mental health calls reported in Belleville as indicative of the national average, we know that this still presents a significant strain on police as any call to police involving PMI presents a significant and considerably higher cost to police resources than non-PMI calls (Hartford et al., 2005).

Researchers advance that variations in the prevalence of mental health related calls for service (and variations in other characteristics related to these calls) might not be due solely to actual fluctuations in these numbers across regions, but due to inconsistencies in the recording of police data (Cotton & Coleman, 2008). Other researchers suggest that variations could be due to a lack of training related to mental health and a subsequent inability for some officers to identify certain mental health symptoms that are present during an occurrence, thus leaving the term “mental health” out of any records of the occurrence (Charette, et al., 2011). Either way, researchers in this area tend to agree that their estimates of the prevalence of mental health related calls to police are conservative, and this is also true of the current study.

The police service in the current study provided the data for the study by extracting variables from all calls to service in a 6-month period that the Service had classified as mental health related on their RMS system. The total number of calls in the dataset was 400, which accounts for approximately 2% of all calls for service made to that particular police service during the 6-month time frame. This prevalence rate is much lower than any other research has reported in Canada, which leads to the assumption that this is an extremely conservative estimate of prevalence, and that there are quite a few mental-health related calls for service missing from the dataset.

Other reasons for the low prevalence of mental health related calls for the current study/service are likely similar to those noted by other researchers (i.e., police data reporting and collection inconsistencies). As Markowitz (2011) notes, police often “see troublesome situations through the lens of their role as ‘law enforcers’”, and thus might be less likely to classify severe criminal incidents as mental-health related. For example, the Service in the current study has a system of sorting occurrences into categories/departments based on the primary classification of the occurrence. Examples of categories are “domestic violence”, “homicide”, “vice”, “theft”, etc., and “mental health” (which is where the data in the current study came from). Because most police view occurrences primarily in terms of the crime that was committed, there are likely to be a number of occurrences that were indeed mental health related but that did not receive a mental health classification because the crime committed in the occurrence had “trumped” the mental health classification.

However, even in the face of missing occurrences, the data and subsequent results of the current study still contribute to the understanding of police-PMI interactions. For one, the sample size of $N = 400$ occurrences is fairly large (larger than most other samples in this field of research), and thus results can be interpreted quite reliably. Second, while this research may be missing data on mental health occurrences that have strong criminal elements (and likely that result in a criminal charge), the data that has been captured (primarily mental health occurrences with less of a criminal element) are equally important and necessary to learn about as they identify the role of police in mental health-related calls for service that are not part of the traditional “police as responders to crime” purview. While many other studies focus on occurrences that

result in a formal intervention, this study fills a gap in research by focusing more on mental health occurrences that are less likely to result in a criminal charge being laid. These non-criminal occurrences present an opportunity for police to connect PMI with community mental health resources and prevent further criminalization (i.e., further calls for police assistance). It is these occurrences that might be the most suitable targets for collaborations between police and mental health care workers, and therefore necessary to analyze to provide an evidence-base for new programs and policy around police-PMI interventions.

Time & Location of Occurrence

Results from this study found that the majority of police-PMI occurrences took place during the second half of the day (between noon and midnight). Over half of all occurrences in the dataset took place at a residential dwelling, usually the home of the PMI. This is consistent with the hypothesis that the majority of calls for service to police involving PMI would take place at a private residence. Along with the finding that the most common initiator of police contact was a family member of the PMI, the finding that the majority of occurrences took place at a private residence supports the notion that families are frustrated by the lack of mental health treatment options available to them and contact police in an attempt to obtain mental health services.

The second most common location for police-PMI occurrences to take place was some type of public outdoor space (9.9%), like a street or park. This finding is again similar to the study conducted in Montreal, QC, where Charette et al. (2011) found outdoor public places to be the second most common setting for police-PMI occurrences. It is likely that police are often called to these outdoor locations by concerned citizens

who have witnessed a PMI displaying bizarre behavior. However, public places can be problematic spaces for police-PMI occurrences to take place, as police have less ability to secure the scene when outdoors, creating a higher risk to both the PMI and the members of the public (Short et al., 2014).

The third most common location for police-PMI interactions to take place was a school (6.8%), which includes primary, secondary, and post-secondary institutions. This is consistent with the high prevalence of youth PMI in the dataset; often a teacher/principal/guidance counselor call police when a student displayed behavior indicative of a mental health crisis. Again, this indicates a need for more proactive mental health strategies in school, and perhaps a partnership between education services and mental health services so that school staff can directly access mental health services for students without involving police.

Findings from the current study are consistent with the Montreal study which found that half of police-PMI interventions took place in a private residence, with the second most common location being outdoors (32%) (Charette et al., 2011). The Montreal study did not have “schools” as an option for a location category; instead the third most common location for police-PMI interactions to take place was a mental health care location (5.9%). These results are comparative to the categories of “medical service other than hospital”, “hospital”, and “community service” in the current study, which, when combined as one location, accounted for 9.5% of the police-PMI occurrences. In addition, the current study found that mental health service providers, when combined, were the initiators of police-PMI contact in 36.8% of the occurrences. While most of the new proactive police-mental health service partnerships, such as COAST in Hamilton,

ON, present the partnership as necessary for police who benefit from a mental health care worker present during occurrences with PMI, results from the current study and from Charette et al. (2011) indicate that mental health care facilities often require police assistance and would also benefit from a partnership with police.

Initiator of Police Contact

As previously stated, the most common initiator of police-PMI contact in the current study was a family member or friend (usually a family member) of the PMI, indicating an attempt on the part of the initiator to receive mental health treatment for the PMI in their life via the police. This finding is consistent with those from other Canadian studies on police-PMI interactions (Charette et al., 2011). Further, this study found that a large portion of PMI themselves are the ones to initiate police contact. This suggests that police have become a de facto last resort for individuals looking to connect with mental health treatment for themselves or their loved ones, and has led to police as being commonly referred to as gate-keepers to the mental health system (Short et al., 2014). It seems as though many individuals are encountering barriers, such as long wait-times (during which the PMI's symptoms can escalate to a crisis), when attempting to access mental health services themselves, thus leading them to attempt to access these services through police, who under the MHA of Ontario have the ability to immediately connect PMI with a hospital mental health physician.

This study found that another common initiator of police-PMI contact was the local ambulance service (initiated police-PMI contact in 16.9% of occurrences). Previous literature suggests that emergency medical technician (EMT) services often call police to the scene when dealing with PMI out of concern that the PMI will cause harm to

themselves or others (Short et al., 2014), and findings from the current study corroborate this premise. This suggests another important partnership that occurs is between police and local emergency services.

Occurrence Type at Dispatch

Each time the police are called to service, the police dispatcher classifies the type of call, giving the officer who responds an idea of the situation they are about to encounter. Dispatch classifications include (but are not limited to) “Attempt Suicide”, “Property Damage”, and “Compassionate Check”. These results should be interpreted with caution, as there are known inconsistencies in the application of classification codes; for example, an incident relating to suicide could be classified as “attempt suicide”, “mentally ill”, “overdose”, and so on.

The most common dispatch classification of mental health-related occurrences in this study was “Mentally Ill” (19.1%), indicating to police that they are about to encounter a PMI. The second most common dispatch classification in this sample was “Request for Assistance/Assist Other Services” (18.73%), where another service, such as EMT services, would request police presence. The third most common dispatch classification in this study was “Attempt Suicide” (17.3%). Note that this finding does not mean that only 17.3% of calls involved suicidal behavior on the part of the PMI, as attempted suicides could also be classified as “Mentally Ill” or “Overdose”, etc.

While this information is of course important, and likely unavoidable, early dispatch classifications present many of the same issues associated with flagging. Access to pre-recorded information can influence the way an officer responds to a situation (Godfredson, et al., 2011). When an officer learns that they are responding to an

occurrence classified by dispatchers as “mentally ill”, while it has the potential to prepare the officer for response, the stereotype that PMI are dangerous might bias the way an officer responds.

Support on Scene for PMI

This study monitored whether there was a supportive figure on scene that was able to advocate for the PMI during their interactions with police. Results of the study found that some type of support (usually a family member) was on scene to advocate on behalf of the PMI during their interactions with police in 47.6% of occurrences. Unfortunately, this means that in 52.4% of occurrence, there was no advocate for the PMI present. PMI who are in crisis are often unable to communicate their own needs to police (Arboleda-Florez, 2010) and would benefit from having a supportive figure on scene to mediate police contact.

Substances

It is well known that there is a high comorbidity between substance abuse and mental illness (Rush, Urbanoski, Bassani, Castel, & Wild, 2010). Further, it is known that PMI who experience substance abuse disorders are more likely to engage in violent offences than PMI who do not experience substance disorders, and are at a higher risk of being criminalized as a result (Arboleda-Florez, 2010). As such, it is important to understand how often substances are present during police-PMI interactions, so that strategies aimed at improving the effectiveness of police-PMI interactions can be evidence-based.

Previous researchers have investigated the prevalence of substances being present during police-PMI interactions. In London, ON, it was found that PMI were 2-5 times

more likely to be involved in a substance-related occurrence with police than non-PMI (Hartford et al., 2005). Another Canadian study found that substances were present during 23.9% of police-PMI interactions (Charette et al., 2011), and a study out of Australia found that police mentioned substance intoxication in 25% of occurrences with PMI that resulted in a mental health transfer (similar to a Mental Health Act apprehension in Ontario) (Short et al., 2014).

Results of the current study report even higher rates of substances being present during police-PMI interactions. Almost half (47.9%) of occurrences mentioned substances at some point in the report. It is possible that the reason the rate of substances reported in the current study is markedly higher than in previous research is because the current study included the mention of any substance in a police report, including prescription medication that was being taken as prescribed, rather than just substances taken illicitly. It is also possible that the city in which the current study took place has higher rates of substance abuse, as it has a lower average income than the national average. Several neighborhoods in this city had a lower income cut off (LICO) 2-3 times that of the national average (The Corporation of the City, 2009). It is known that lower income neighborhoods are associated with higher rates of substances abuse (World Health Organization, 2015). Therefore it is possible that the city in which the current study took place had overall higher rates of substance abuse than cities in which similar studies took place. It is also possible that the current study's methodology was more inclusive of substance related data; any time a substance (whether illegal or not, whether taken excessively or not) was mentioned in a police report, the variable was captured. Therefore this study coded the mere presence of substances, rather than noted

intoxication of the PMI by police.

In addition to reporting the prevalence of substances being present during police-PMI interactions, the current study also reported the type of substance that was noted by police. Results suggest that the most common type of substance reported during police-PMI interactions was prescription medication that was not being taken as prescribed (reported in 17.7% of occurrences). This could indicate a broad range of scenarios from the PMI having abruptly stopped their medication to the PMI overdosing on prescription medication; either way, this suggests that prescription medication not being taken as prescribed contributes to the criminalization of PMI.

The second most common type of substance to be noted as present during police-PMI interactions in the current study was alcohol (noted in 15.4% of occurrences). Prescription medication that was taken as prescribed was noted during 14.4% of police-PMI occurrences. The presence of non-prescription drugs (e.g. marijuana and cocaine) was found to be very low in the current study.

There is a known comorbidity between substance abuse and mental health issues and that intoxication can make a PMI more prone to violent or criminal behaviour (Rush et al., 2010). High rates of substances noted in the current study indicate an urgent need for citizens to receive treatment for their substances abuse issues. Since prescription medication not taken as prescribed and alcohol were the two most common substances noted in the study, and these substances are commonly related to suicidal ideation/behaviour (and suicide was a common theme in the current study, as further discussed in the next section) PMI need treatment for substance abuse issues not only to reduce their contact with police but to prevent self-harm.

Violence

Violence associated with mental illness is a complex issue. People who experience mental illness are more likely to be both victims and perpetrators of violence (Choe, Teplin, & Abram, 2008). One Canadian study found that PMI were twice as likely to be involved in some type of violent occurrence than non-PMI (Hartford et al., 2005). What is often misunderstood is the fact that PMI are more often the victims of violence than the perpetrators (Canadian Mental Health Association, 2015). Unfortunately, the media tends to focus more on PMI being perpetrators of violence than victims, which contributes to problematic stereotypes such the misconception that all PMI are dangerous.

The current study measured the rate at which police-PMI occurrences contained an element of violence. Violent subtypes included violence (or threats of violence) by the PMI toward themselves, violence (or threats of violence) by the PMI toward others, violence (or threats of violence) by others toward the PMI, and police noting the PMI to be displaying “aggressive behavior”. Results from the current study found that some type of violent behavior was present during 32.6% of police-PMI interactions. Weapons were noted (though not necessarily used) during 15.8% of police-PMI interactions. Note that a weapon could include any object with the potential to cause harm that the police felt need to note in their police report.

The most common type of violence to be noted during these interactions was violence (or threats of violence) by the PMI toward themselves (i.e., suicidal behavior or ideation), and was noted in 21.1% of occurrences in the sample (with actual violence occurring more often than threats of violence). This finding is congruent with an

Australian study (Wilson-Bates, 2008) that found that one third of all mental health transfers were in response to suicidal behavior. This indicates that suicide is a significant problem in the community in which the current study took place (and likely in others as well), and suggests that strategies for suicide prevention and response should continue to be implemented in the community and by the police.

The current study found that violence (or threats of violence) by the PMI toward others was noted in 10.3% of occurrences (with threats of violence occurring more often than actual violence). While this was reported more often than violence toward the PMI by others (which was noted in only 0.8% of occurrences), this conflicts with previous research that states PMI are more likely to be the victims of violence than the perpetrator. However, it is known that violence toward PMI often goes unreported (Alexander & Link, 2003), and this could be a reason for the low level of violence toward the PMI by others found in the current study. It would be beneficial for future research to further investigate the prevalence of violence toward PMI, and whether police are attending this type of call for service.

Chapter 6: The Typical Outcomes of Police Calls for Service that are Primarily Mental Health-Related

In Canada, police have been given a considerable amount of decision-making power during interactions with citizens. In many interactions, police can decide between invoking a formal disposition or resolving the situation informally. In the case of occurrences with PMI, formal actions can include making an arrest, laying charges, or apprehending the individual under the MHA, whereas informal resolutions include less regulated actions such as involving community mental health agencies, or taking no action at all.

Mental Health Act Apprehensions & Involuntary Hospital Admissions (Form 1s)

While the informal engagement of community mental health services is considered the optimal outcome of police-PMI interactions (as it does not further criminalize the PMI, and it prevents further mental health crises/police contact from occurring), it is not the most common outcome – nor is it always the most appropriate. All police services in Canada have the authority to formally apprehend a PMI who is experiencing a mental health crisis, regardless of whether or not a crime has been committed. In Ontario, the Mental Health Act (MHA) gives police the authority to apprehend any individual that they perceive as a danger to themselves or others, and whom they perceive to need immediate psychiatric care, and transport that individual to the nearest psychiatric facility (Mental Health Act, RSO 1990, c. M.7), which is usually a hospital.

MHA apprehensions tend to be a fairly common outcome of police-PMI interactions. Indeed, the current study found that the most common outcome of mental

health-related calls to police was an apprehension under the MHA (54.8% of occurrences in the sample resulted in a MHA apprehension). The Toronto Police Service reported that, in 2011, MHA apprehensions occurred during 45% of police-PMI interactions (MCIT Report, 2013), and a study out of Montreal, QC, found that PMI were formally referred to a hospital in 36% of police-PMI occurrences (Charette et al., 2011). Some situations surely warrant this type of formal intervention (e.g., the PMI is perceived as a danger to themselves or others, yet is refusing community mental health treatment). Yet MHA apprehensions can be quite stigmatizing and traumatic for the PMI in crisis, who as a result of the apprehension is placed in restraints and taken to the nearest psychiatric facility, typically emergency department of a hospital, where they are closely monitored by two uniformed police officers until they are seen by hospital staff. While it may be traumatic and stigmatizing for the PMI in crisis, the goal of a MHA apprehension is to divert PMI from the justice system and into mental health treatment (Arboleda-Florez, 2010).

As discussed, there are many factors that influence a police officer's decision-making process (Schulenberg, 2012), such as individual officer characteristics as well as characteristics of the situation they encounter. In the case of a MHA apprehension these factors may go beyond whether the individual experiencing a mental health crisis is a danger to themselves or others. For example, several research studies have found that the perceived time a particular outcome will take influences the officer's choice of how to resolve a situation with PMI (Charette et al., 2011; Short et al., 2014). While the dataset in the current study did not contain descriptions of officer characteristics or the length of

time an officer perceives a particular outcome to take, the dataset did contain numerous characteristic variables of the PMI and situation involved in each police-PMI interaction.

Logistic regression analyses performed in the current study found that the presence of substances, the presence of violence (toward the self and others), and the PMI being the initiator of police contact significantly predicted whether or not a MHA apprehension was made during police-PMI occurrences. While the presence of substances and violence was found to increase the likelihood of a MHA apprehension (consistent with previous research), the PMI being the initiator of police contact made a MHA apprehension 73.6% less likely. Recall that the PMI being the initiator of police contact was also negatively correlated with the informal engagement of community mental health services. These findings are significant as they suggest that a PMI who initiates police contact, likely out of an attempt to access mental health services, is not receiving any mental health services as a result of their contact with police.

Another factor known to influence a police officer's decision of whether or not to make a MHA apprehension is the perceived time such an apprehension will take (Charette et al., 2011). This variable was not included in the current study (since the police RMS did not allow for an accurate account of this variable), but previous research suggests that the longer an officer expects to wait with the PMI before they are seen by hospital staff, the less likely they are to make a MHA apprehension (Charette et al., 2011). Unfortunately, due to hospital ERs having long wait times in general, the reality is that officers do spend a large amount of time in hospital waiting rooms with PMI before they are seen by a physician. One Canadian study found that PMI tend to wait even longer in hospital waiting rooms than non-PMI (Atzema, et al., 2012).

Police are further aggravated when they experience long wait times only to have the PMI they apprehended dismissed by a physician (Godfredson et al., 2011). Police who apprehend an individual under the MHA have made the distinction that the individual being apprehended requires an immediate psychological assessment (Mental Health Act, RSO 1990, c. M.7). However, police are also aware that a MHA apprehension does not necessarily mean that the PMI will receive any treatment for their symptoms. An officer's role in acquiring this assistance is limited to bringing the PMI to the hospital. Once there, it is up to hospital staff to decide whether the PMI is admitted and placed under a mandatory 72-hour psychiatric assessment (Form 1), or whether the individual is released from hospital (and subsequently police) custody (Mental Health Act, RSO 1990, c. M. 7).

As mentioned, the current study found that police made MHA apprehensions during 54.8% of occurrences with PMI. However, out of all MHA apprehensions made, only 59.2% resulted in the PMI being placed under a Form 1. The remaining 40.8% of time the PMI was released from hospital and police care. This demonstrates a significant discrepancy between police and hospital criteria: perhaps police are over-estimating the need for immediate psychological assessment for PMI, or hospitals are under-estimating it. It is also possible that, while formal criteria under the MHA is similar for both police apprehensions and hospital admissions, differing informal criteria is at play (i.e., limited hospital bed capacity). Regardless, the low rate of hospital admissions for PMI apprehended under the MHA is problematic, as research suggests it is the individuals that are released quickly from the hospital that are likely to end up once again in police custody a short time later (Markowitz, 2011).

A paucity of mental health care funding has resulted in pressure for hospitals to adopt the practice of discharging patients as quickly as possible (Markowitz, 2011). Thus, PMI who have been taken to the hospital by police may be quickly released after acute symptoms have subsided. Further, due to increasing hospital wait times, PMI taken to the hospital under the MHA might no longer be in crisis by the time they see a physician, and are thusly dismissed (their symptoms may have temporary subsided naturally, or due to chemical sedation from a hospital staff member).

Unfortunately, it is possible that the PMI who was released will eventually re-enter a state of crisis, and again police will be summoned, perpetuating a “revolving-door phenomenon” (Markowitz, 2011). A recent Ontario report on police involvement with PMI found that police officers and ER nurses alike perceived returning recently discharged PMI patients to the hospital to be a common part of their job (Iacubucci, 2014). This phenomenon is likely contributing to the large number of repeat occurrences that PMI have with police. The result is that police and health care resources are both being drained, but moreover, PMI are not accessing proper treatment for their symptoms and are at risk of experiencing crises in the future and being further criminalized.

Informal Police-PMI Contact & the Engagement of Community Mental Health Services

Police often employ discretion when they encounter PMI (Cotton & Coleman, 2010). They are often called to situations where their assistance is needed because a PMI is acting bizarrely or displaying symptoms of a mental health crisis, and it is these instances where formal resolutions, like an arrest, may not be appropriate. Depending on

the situation, the most effective resolution might be for police to de-escalate the situation and attempt to connect the PMI with community mental health resources.

The decision-making processes that police engage in (such as whether to use discretion or not) are influenced by a complex myriad of characteristics beyond whether or not a crime has occurred (Schulenberg, 2012). Other influential factors include individual police characteristics (e.g., officer age and length of time with the service), characteristics of the PMI (e.g., their age and ethnicity), characteristics of the situation at hand (such as whether a crime has been committed), and the availability of different options to police (e.g. whether or not they are required to make a MHA apprehension) (Schulenberg, 2012). For example, research suggests that the accessibility of community mental health services impacts whether or not police resolve the situation by attempting to connect the PMI with these services (Godfredson et al., 2011).

The current study found that a large proportion of police-PMI occurrences in the sample were resolved informally (32.3%). However, not all of these informal resolutions resulted in community mental health services being engaged. In fact, out of all informal resolutions, this study found that community mental health services were engaged 62.8% of the time. A similar study in Montreal, QC, found higher rates of informal dispositions during police-PMI occurrences (54%), but found lower rates of community mental health service engagement (11.7% of informal resolutions resulted in community mental health service engagement). In the Montreal study, community mental health care referrals were the least frequent outcome of police-PMI contact (Charette et al., 2011). Perhaps in a metropolis such as Montreal, access to community mental health care is even more

difficult and time consuming than in the current study. Regardless, results from the current study highlight the importance of mental health resources

Informal dispositions are important because they are the least criminalizing and stigmatizing outcome for PMI (Charette et al., 2011). Informal contact between police and PMI also has the potential to prevent future criminalization and stigmatization for PMI; if the outcome of the informal disposition is that mental health services are engaged, a PMI's mental health symptoms might be treated before they manifest into a mental health crisis and/or criminal behaviour (Arboleda-Florez, 2010).

While informal dispositions may sound appealing, they do not always result in mental health services being engaged for the PMI. As previously mentioned, there are many factors that influence police decision-making processes (Schulenberg, 2012), and greater accessibility of community mental health services has been known to increase the likelihood that police will attempt to informally connect PMI to these services (Godfredson et al., 2011). However, studies have shown that informal resolutions that do not result in the PMI accessing mental health services can contribute to the high prevalence of repeat calls to police for the same individual (Charette et al., 2011). PMI who are displaying mental health symptoms that warrant police involvement, but who are not connected with mental health services as a result might experience similar or worse symptoms at a later date, which will lead to further police contact in the future. This only compounds the frustration felt by the initiator of police contact, who may perceive that police have not adequately dealt with the situation (Charette et al., 2011). On the other hand, police officers often feel frustrated that they have to act as front-line mental health workers, a premise that many officers feel is not a part of their job description (Short et

al., 2014). Police are also frustrated by the lack of community mental health service options available, and one study found that 38% of police felt that if these options were more available to PMI they (the police) might not be dealing with such a high proportion of calls to service that involve PMI (Cotton, 2004).

It is this premise that has been known to increase the likelihood that police will use their discretion to arrest a PMI for a minor infraction (that they might have not arrested a non-PMI for) when mental health services are unavailable, rather than leave the PMI at the scene (Cotton & Coleman, 2010). It seems, then, that not only have police become “de facto mental health workers” (Short et al., 2014), but that the justice system has also become the “de facto mental health system”. Unfortunately, and for many reasons, the justice system is not an adequate replacement for mental health services (Cook & Roesch, 2012).

The current study investigated the frequency with which police engaged community mental health services as a means to informally resolve an occurrence with PMI. Results were that community mental health services were engaged during 62.8% of informal resolutions. Further, this study investigated which PMI and situation characteristics were correlated with this outcome, and found that the presence of substances (specifically prescription medication not being taken as prescribed), violence toward the self, and the presence of an individual advocating on behalf of the PMI were all positively correlated with the engagement of community mental health services during informal dispositions. A mental health flag of “medical”, the PMI being the initiator of police contact, and the age of the PMI were all negatively correlated with the engagement of community mental health services during informal dispositions.

While it is understood that correlation does not imply causation, it is logical to suggest that the relation between an advocate on scene for the PMI and the engagement of community mental health services indicates that the PMI having someone to advocate on their behalf might increase the chances that police engage community mental health services. Perhaps the presence of an advocate assists the police with determining which mental health services are needed (and also which services the PMI has already been connected with). However, the fact that the police are more likely to engage community mental health services when an advocate for the PMI is present is concerning, given that during half of police-PMI occurrences in this study the PMI had no one on scene to advocate on their behalf.

PMI face many barriers to receiving treatment for their symptoms (e.g., long wait times), and that if PMI had better access to treatment the number of calls to service for police involving PMI might decrease. In the current study, the PMI were the ones to initiate police contact during 12.5% of occurrences, and during none of these occurrences did the PMI indicate they were calling police because they had been the victim of a crime, which corroborates the premise that when PMI are contacting police they are doing so in an attempt to receive assistance for their mental health issues. However the negative correlation between the PMI being the initiator of police contact and the engagement of community mental health services further exemplifies the need for PMI to have someone present to advocate on their behalf, or at the very least indicates a need for police to further explore (and attempt to resolve) the reasons why PMI might be initiating police contact in the first place.

Results from the current study corroborate past literature that suggests a need for more collaboration between police and mental health services (Kisely et al., 2010). Mental health and police organizations currently operate – for the most part – autonomously, which is a noted barrier for successful collaboration between the two (Cotton & Coleman, 2010). The “silo effect” (Green, 1997) that occurs when police and health services operate under different ideologies, criteria, policies, and budget constraints, is therefore not conducive to resolving the high rates of PMI who encounter the law. Organizations that co-exist in the social service environment (such as police and mental health agencies) therefore need to work collaboratively in order to effectively address social problems, such as the delivery of mental health services to PMI. Hospitals need the assistance of police to manage unruly PMI and to apprehend PMI in crisis that will not voluntarily seek treatment, and police need hospitals to provide long-term solutions for PMI whom they have apprehended under the MHA, and to provide these solutions with less delay than at present. As Lamb and colleagues (2002) note, “neither the mental health system nor the law enforcement system can manage mental health crises in the community effectively without help from the other.” (p. 1270). This suggests that police services and mental health services need to collaborate to align their ideology, policies, and resources. However, a potential barrier to collaboration is legislation that governs police and hospital response to PMI (such as the MHA) and that might have conflicting criteria for police apprehensions versus hospital admissions.

Chapter 7: Limitations and Conclusion

This purpose of this study was to contribute to the limited understanding of the profile of PMI who encounter police and the situational characteristics of these occurrences, as well as contribute to the existing literature on the typical outcomes of these occurrences. An understanding of these characteristics would provide an evidence base for the improvement of police response to PMI (such as officer training and collaboration with mental health services). Limitations of the current study will now be discussed.

The most apparent limitation in the current study is associated with the organization of police records. The service in the current study categorizes all occurrences on their online RMS according to the primary classification of each occurrence. Data from the current study was obtained by collecting information on all occurrences that took place over a six-month period that the Service had classified as primarily mental health-related. Thus, the dataset is unique in that it provides insight into occurrences that are primarily characterized by a PMI, yet the data is limited in that it cannot generalize to all police-PMI occurrences (as there are likely a large portion of police-PMI occurrences with a primarily criminal element not included in the dataset). Future research could replicate this study using a broader scope for the inclusion of police-PMI occurrences. For instance, it would be interesting to compare police calls for service that are primarily classified as mental health related, and police calls for service that involve PMI but are classified in terms of the crime that took place, and see if findings are similar in terms of PMI profile, situation, and outcome characteristics.

The current study examined typical profile characteristics of PMI who come into contact with police during primarily mental health-related calls, as well as typical characteristics of these occurrences. Research suggests that PMI who encounter police do so multiple times (Hartford et al., 2005) and findings from the current study corroborate this premise. The PMI in the sample had an average of 20 previous occurrences with police spanning the past decade. This indicates a pressing need for police services to investigate more long-term solutions for their encounters with PMI, as high occurrence frequency not only stigmatizes and criminalizes PMI but places a significant strain on police officers and their departmental resources.

A large proportion of PMI in this study were youth under the age of 16, which is a vulnerable age for anyone to be encountering police, let alone youth with mental health issues. It is unfortunate that so many PMI are becoming involved with the law at such a young age. This indicates a need in the community to enact proactive strategies to deal with youth PMI who become so out of control, or need mental health services so desperately, so that long-term solutions can be found before police presence is warranted.

This study also found that 1 in 10 of the PMI that police are encountering in primarily mental health-related calls to service are Aboriginal. Aboriginal people are at an increased risk of criminalization in Canada (Cook & Roesch, 2011), a risk that is only compounded when mental health issues are involved. Aboriginal PMI may also have a unique set of needs due to differences in cultural and socioeconomic status; it seems necessary that police create a specific strategy for encounters with Aboriginal PMI, such as a partnership with Aboriginal mental health services.

This study examined typical situational characteristics of police that encounter PMI during primarily mental health-related calls. As expected, this study found that substances (especially prescription medication not taken as prescribed and alcohol) were noted during a large proportion of occurrences. This study also found that violence was a factor in a large proportion of occurrences, yet this violence was often exhibited by the PMI toward themselves. Further, this study found that police are often called to private residences by family members of PMI to deal with a PMI who is in crises. Together these findings suggest that a large proportion of PMI are displaying suicidal behaviour – which is often triggered/exacerbated/carried out by substance abuse (Arboleda-Florez, 2010), and family members of PMI are calling police in an attempt to de-escalate the situation. This supports the notion that many police officers feel as though they have become “front-line mental health workers” (McLean & Marshall, 2010). Again, this suggests a need for PMI and their families to be connected with long-term mental health resources in their communities. Further, knowledge of the PMI-profile and situational characteristics described above would inform and provide an evidence base for police initiatives such as officer training and collaborations with mental health services.

This study further examined typical outcomes of police occurrences that are classified as primarily related to mental health. It was found that formal resolutions (especially MHA apprehensions) occurred much more frequently than informal resolutions (such as connecting the PMI and/or their family with community mental health resources other than the hospital). The presence of substances and suicidal behaviour, and a supportive person on scene advocating for the PMI, all increased the likelihood that community mental health services would be engaged during informal

police resolutions with PMI. This study also found that the presence of substances and violence increased the likelihood of a MHA apprehension, but that the PMI was less likely to be apprehended under the MHA if they were the one to call police to the scene. This is problematic, since in over half of the occurrences in the sample, the PMI had no one on scene to advocate on their behalf and were likely calling police themselves to obtain help for a mental health crises, yet the PMI initiating police contact and not having support on scene was found to decrease the chances that police would engage with any type of mental health service (formally or informally) for the PMI.

Of all the occurrences that resulted in MHA apprehensions, only half resulted in the PMI being admitted to the hospital by a physician. The remainder of the time the PMI was – after a typically long and potentially stigmatizing wait - dismissed from both hospital and police care. It seems that timing might be an issue here; PMI who are in crises and are deemed by police as in immediate need of hospitalization often wait for hours with police in hospital waiting rooms before seeing a doctor (Markowitz, 2011). Symptoms of the PMI's mental health crises may naturally (or through the use of chemical sedation) subside during that period and so they are no longer in crises by the time they are seen by a physician and thus no longer meet criteria for involuntary hospital admission. It seems that hospitals and police services are operating under conflicting criteria and there is an immediate need for collaboration between these two services. Research has indicated that the revolving door effect (frequent but short-term police and hospital contact for PMI) only increases the risks of criminalization for PMI, thusly preventing treatment for their mental health symptoms, and places an unnecessary strain on all parties involved. Further examination of the ideological and practical tensions that

exists between police service and mental health sectors (such as conflicting policies) and would be worthy of study and would further inform collaborative projects between the sectors.

Appendix A

Description of Variables

	VARIABLE	DEFINITION OF VARIABLE
	Entry Number	Sequence of occurrence entry
Demographic Variables	Primary Code	Code given to name of PMI
	Year of Birth	Birth year of PMI
	Age	Age of PMI at time of occurrence
	Gender	Gender of PMI
	Recorded Ethnicity	Ethnicity of the PMI as noted by police
	MH Flag(s)	Any RMS system mental health flags associated with name
	Other Flag(s)	Any other RMS system flags associated with name
	Total Occurrences	Total amount of occurrences found with name (excluding traffic stops and street checks)
Situational Variables	Sub-Code	Code given to occurrence number
	Occurrence Flag of Mental Health	Has the occurrence been found under the "Pride - Mental Health" section of the NICHE system?
	Date	Date of initial occurrence
	Time of Day	Time of initial occurrence (6am-12pm = morning, 12pm-6pm = afternoon, 6pm-12pm=evening, 12pm-6am=night)
	Location	Location of initial occurrence (1 st 3 digits of postal code)
	Type of Location	i.e., Business, Residential, etc.
	Dispatch Type	RMS dispatch type entered
	Occurrence Type	RMS occurrence type entered
	Position of PLMI	Noted involvement of PLMI (i.e., "Accused", etc.)
	Complainant (if not PLMI)	Who initiated contact with the police?
	Substances Involved	Was the PMI noted to be using substances at the time?
	Weapons Involved	Was the PMI found to be carrying/using a weapon?
	Violence Exhibited by PLMI	Did the PMI exhibit any violent behaviour?
	Breach of Conditions	Was the PMI found to be in breach of any conditions?
	MH Symptoms Recorded	Any noted mental health-related symptoms
	Support on Scene for PLMI	Any noted supportive individuals for the PMI on scene
	Number of Officers on Scene	Total number of "current officers" associated with occurrence
Duration of Officer Involvement	Approximate time officers spent to resolve the incident (calculated from the first and last time noted in police report)	
Outcome Variables	Officer Response	The general way in which the incident was resolved
	Formed Under Mental Health Act	Was the PMI formed?
	Apprehension	Was the PMI apprehended?
	Arrest	Was the PMI arrested?
	Charge	Was the PMI charged?
	MH Services Engaged	Mental health services engaged by Police
	Notes	Any other pertinent information

References

- Alexander, L. A., & Link, B. G. (2003). The impact of contact on stigmatizing attitudes toward people with mental illness. *Journal of Mental Health, 12*(3), 271-289.
- An Act to amend the Criminal Code and the National Defence Act (mental disorder), Revised Statutes of Canada (2014, c. C-14). Retrieved from the Parliament of Canada website: <http://www.parl.gc.ca/LegisInfo/BillDetails.aspx>
- Arboleda-Florez, J. (2010). Mental illness among offenders. In J. Cairney & D. L. Streiner (Eds.), *Mental Disorder in Canada: An epidemiological perspective* (331-356). Toronto, ON: University of Toronto Press Incorporated
- Atzema, C. L., Schull, M. J., Kurdyak, P., Menezes, N. M., Wilton, A. S., Vermeulen, M. J., & Austin, P. C. (2012). Wait times in the emergency department for patients with mental illness. *Canadian Medical Association Journal, 184*(18), 969-976.
- Belleville Police Service (2007). Police interactions with emotionally disturbed/mentally ill people: A comprehensive analysis and review. Belleville, Ontario.
- Borum, R., Deane, M. W., Steadman, H. J., & Morrissey, J. (1998). Police perspectives on responding to mentally ill people in crisis: Perceptions of program effectiveness. *Behavioral Sciences and the Law, 16*, 393-405.
- Canadian Association of Chiefs of Police (2013). Media release: Canadian Association of Chiefs of Police (CACCP) engage in candid discussion on policing the mentally ill. Retrieved from <http://www.cacp.ca/index/news>
- Canadian Association of Social Workers (2014). Mental health community committed to repairing damage caused by Bill C-14, Not Criminally Responsible Reform Act.

Retrieved from <http://www.casw-acts.ca/en/mental-health-community-committed-repairing-damage-caused-bill-c-14-not-criminally-responsible>

Canadian Mental Health Association (2015). Violence and mental health: Unpacking a complex issue. Retrieved from: http://ontario.cmha.ca/public_policy/violence-and-mental-health-unpacking-a-complex-issue/

Canadian Mental Health Association (2015). Mental health. Retrieved from <https://www.cmha.ca/mental-health/>

Canadian Broadcasting Corporation (2008, August 6). Timeline to the Greyhound bus killing. *CBC News Canada*. Retrieved from <http://www.cbc.ca/news/canada/timeline-to-the-greyhound-bus-killing>

Carrington, P. J., & Schulenberg, J. L. (2003). Police discretion with young offenders

Centre for Addiction and Mental Health (1999). *Schizophrenia: A guide for people with schizophrenia and their families*. Retrieved from http://www.camh.ca/en/hospital/health_information/a_z_mental_health_and_addiction_information/schizophrenia/Pages/Schizophrenia.aspx

Centre for Addiction and Mental Health (2010). Addiction: An information guide.

Retrieved from:

http://www.camh.ca/en/hospital/health_information/a_z_mental_health_and_addiction_information/drug-use-addiction/Pages/addiction.aspx

Centre for Addiction and Mental Health (2015). Statistics on mental illness and addictions. Retrieved from

http://www.camh.ca/en/hospital/about_camh/newsroom/for_reporters/Pages/addictionmentalhealthstatistics.aspx

- Chaimowitz, G. (2011). The criminalization of people with mental illness. *Canadian Journal of Psychiatry, 57*(2), 1-6.
- Chaimowitz, G. (February 21, 2014). Keynote Address at the Strengthening Recovery Across the Lifespan: Using practical Knowledge and Skill – St. Leonard’s Community Services 4th Annual Addictions and Mental Health Forum, Wilfrid Laurier University, Brantford, Ontario.
- Charette, Y., Crocker, A., & Billette, I. (2011). The judicious judicial dispositions juggle: Characteristics of police interactions involving people with mental illness. *Canadian Journal of Psychiatry, 56*(11), 677-685.
- Choe, J. Y., Teplin, L. A., & Abram, K. M. (2008). Perpetration of violence, violent victimization, and severe mental illness: Balancing public health concerns. *Psychiatric Services, 59*(2), 153-164.
- [City] (2009). [City] profile. Retrieved from [city’s webpage].
- [City] (2011). Homelessness: A community needs assessment on homelessness issues. Retrieved from: [city’s webpage].
- [City] Police Service (2015). [City] Police Service Sworn Recruiting. Retrieved from [organization's webpage].
- Cohen, J. (1988). *Statistical power analysis for the behaviour sciences*. (2nd ed.) Hillside, NJ: Erlbaum.
- Cook, R. D. (1977). Detection of influential observation in linear regression. *Technometrics, 19*(1), 15-19.

- Cook, A. N. & Roesch, R. (2011). "Touch on crime" reforms: What psychology has to say about recent and proposed justice policy in Canada. *Canadian Psychology*, 53(3), 217-225.
- Cook, A. N., & Roesch, R. (2012). "Tough on crime" reforms: What psychology has to say about the recent and proposed justice policy in Canada. *Canadian Psychology*, 53(3), 217-225.
- Cook, R. D. & Weisberg, S. (1982). *Residuals and influence in regression*. New York, NY: Chapman & Hall.
- Cotton, D. (2004). The attitudes of Canadian police officers toward the mentally ill. *International Journal of Law and Psychiatry*, 27(2004), 135-146.
- Cotton, D. & Coleman, T. (2008). *A study of police academy training and education for new police officers related to working with people with mental illness*. Prepared for the Mental Health Commission of Canada. Retrieved from:
https://www.mentalhealthcommission.ca/English/system/files/private/Law_Police_Academy_Training_Education_Mental_Illness_Study_ENG_0.pdf
- Cotton, D. & Coleman, T. (2010). Understanding mental illness: Review and recommendations for police education training in Canada. *Report for the Canadian Alliance on Mental Illness and Mental Health*. Retrieved from
<http://www.hsjcc.on.ca/Resource%20Library/Policing/Training%20Resources/Understanding%20Mental%20Illness%20-%20A%20Review%20and%20Recommendations%20for%20Police%20Education%20and%20Training%20in%20Canada%20-%202010.pdf>

- Cotton, D. & Coleman, T. (2010). Canadian police agencies and their interactions with persons with a mental illness: A systems approach. *Police Practice and Research* 11(4), 301-314.
- Crichton, N. (2001). Wald test. *Journal of Clinical Nursing*, 10, 774.
- Douglas, K. S., Hart, S. D., & Guy, L. S. (2009) Psychosis as a risk factor for violence to others: A meta-analysis. *Psychological Bulletin*, 135(5), 679-706.
- Durbin, J. Lin, E. Zaslavska, N. (2010). Impact study final report. Health systems research and consulting unit, Centre for Addiction and Mental Health, Toronto, Ontario, Canada. Retrieved from: <http://eenet.ca/wp-content/uploads/2013/10/june-2010.pdf>
- Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). Thousand Oaks, CA: Sage.
- Fielding, N. G., & Fielding, J. L. (2008). Resistance and adaptation to criminal identity: Using secondary analysis to evaluate classic studies of crime and deviance. *Historical Social Research*, 33(3), 75-93.
- Flynn, S., Rodway, C., Appleby, L., & Shaw, J. (2014). Serious violence by people with mental illness: National Clinical Survey. *Journal of Interpersonal Violence*, 29(8), 1438-1458.
- Glaser, B. G. (1963). Retreading research materials: The use of secondary analysis by the independent researcher. *The American Behavioral Scientist*, 11-14.
- Godfredson, J. W., Thomas, S. D., Ogloff, J. R., & Leubbers, S. (2011). Police perceptions of their encounters with individuals experiencing mental illness: A Victorian survey. *Journal of Criminology*, 44(2), 180-195.

- Goding, L. & Edwards, K. (2002). Evidence-based practice. *Nurse Researcher*, 9(4), 45-57.
- Hakim, C. (1982). Secondary analysis and the relationship between official and academic social research. *Sociology* 16(1), 12-28.
- Haney, C. (2008). Counting casualties in the war on prisoners. *University of San Francisco Law Review* 43, 87-138.
- Hartford, K., Heslop, L., Stitt, L. & Hoch, J. S. (2005). Design of an algorithm to identify persons with mental illness in the police administrative database. *International Journal of Law and Psychiatry*, 28, 1 – 11.
- Head, B. W. (2008). Three lenses of evidence-based policy. *The Australian Journal of Public Administration*, 67(1), 1-11.
- Heaton, J. (1998). Secondary analysis of qualitative data: An overview. *Historical Social Research* 33(3), 33-45.
- Health Canada (2015). Mental health and wellness: First Nations and Inuit health. Retrieved from <http://www.hc-sc.gc.ca/fniah-spnia/promotion/mental/index-eng.php>
- Hoffman, R., Hirdes, J., Brown, G., Barbaree, H., & Curtin-Telegdi, N. (2013). A pilot study of the interRAI brief mental health screener: Final Report.
- Hoffman, R. & Putnam, L. (2000). Not just another call... Police response to people with mental illnesses in Ontario: A practical guide for the front line officer. Aylmer West, Ontario: Ontario Police College
- Iacobucci, F. (2014). Police encounters with people in crisis. Toronto: Toronto Police Service.

- Innes, H., Lewsey, J., Smith, D. J. (2015). Predictors of admission and readmission to hospital for major depression: A community cohort study of 52,990 individuals. *Journal of Affective Disorders* 183, 10-14.
- Kara, F. B. (2014). Police interactions with the mentally ill: The role of procedural justice. *Canadian Graduate Journal of Sociology and Criminology*, 3(1), 79-94.
- Kisely, S., Campbell, L. A., Peddle, S., Hare, S., Pyche, M., Spicer, D., & Moore, B. (2010). A controlled before-and-after evaluation of a mobile crisis partnership between mental health and police services in Nova Scotia. *Canadian Journal of Psychiatry*, 55(10), 662-668.
- Kupers, T. A. (2008). What to do with the survivors? Coping with the long-term effects of isolated confinement. *Criminal Justice and Behaviour* 35(8), 1005-1016.
- Lamb, H. R., Weinberger, L. E., & DeCuir Jr., W. J. (2002). The police and mental health. *Psychiatric Services* 53(10), 1266-1271.
- MacPhail, A., & Verdun-Jones, S. (2013). *Mental Illness and the Criminal Justice System*. Retrieved from cclr.law.ubc.ca/sites/icclr.law.ubc.ca
- Markowitz, F. E. (2011). Mental illness, crime, and violence: Risk, context, and social control. *Aggression and Violent Behavior*, 16, 36-44.
- Mayville, E., & Penn, D. L. (1998). Changing societal attitudes toward persons with severe mental illness. *Cognitive and Behavioral Practice*, 5, 241-253.
- Mclean, N., & Marshall, L. A. (2010). A front line police perspective of mental health issues and services. *Criminal Behaviour and Mental Health*, 20, 62-71.
- Mental Health Act, Revised Statutes of Canada (1990, c. M-7). Retrieved from <http://www.ontario.ca/laws/statute/90m07>

Mood Disorders Society of Canada (2009). *Quick Facts: Mental Illness and Addiction in Canada*. ON: MDS

Nagelkerke, N. J. D. (1998). A note on a general definition of the coefficient of determination. *Biometrika*, 78, 691-692.

Ontario Ministry of Health and Long-Term Care (1999). Making it happen: Implementation plan for mental health reform. Retrieved from <http://www.health.gov.on.ca/en/public/publications/mental/docs/MOH-imp.pdf>

Phelan, J. C., & Link, B. G. (2004). Fear of people with mental illness: the role of personal and impersonal contact and exposure to threat or harm. *Journal of Health and Social Behaviour*, 45(1), 68-80.

Prins, S. J. (2011). Does transinstitutionalization explain the overrepresentation of people with serious mental illness in the criminal justice system? *Community Mental Health* 47, 716-722.

Rush, B. R., Urbanoski, K., Bassani, D., Castel, S., & Wild, T. C. (2010). The epidemiology of co-occurring substance use and other mental disorders in Canada: prevalence, service use and unmet needs. In J. Cairney & D. Streiner (Eds.), *Mental Disorder in Canada: An Epidemiological Perspective*. Toronto: University of Toronto Press.

Sanders, C. B. & Henderson, S. (2013). Police 'empires' and information technologies: Uncovering material and organisational barriers to information sharing in Canadian police services. *Policing & Society*, 23(2), 243-260.

- Schulenberg, J. L. (2004). Analysing police decision-making: Assessing the application of a mixed-method/mixed-model research design. *International Journal of Social Research Methodology* 10(2), 99-119.
- Schulenberg, J. L. (2012). Systematic social observation of police decision-making: The process, logistics, and challenges in a Canadian context. *Qualitative Quantitative*, 48, 297-315.
- Sealy, P. A. (2012). The impact of the process of deinstitutionalization of mental health services in Canada: An increase in accessing of health professionals for mental health concerns. *Social Work in Public Health*, 27, 229-237.
- Shen, G. C. & Snowden, L. R. (2014). Institutionalization of deinstitutionalization: A cross-national analysis of mental health system reform. *International Journal of Mental Health Systems*, 8(47), 1-23.
- Short, T. B. R., MacDonald, C., Leubbers, S., Ogloff, J. R. P., & Thomas, S. D. M. (2014). The nature of police involvement in mental health transfers. *Police Practice and Research*, 15(4), 336-348.
- Southern Network of Specialized Care (January 2014). Conference: Managing through crisis. Brant Community, Brantford, Ontario.
- Statistics Canada (2011). Census subdivision of [city]. Retrieved from <https://www12.statcan.gc.ca/census-recensement/2011/as-sa/fogs-spg/Facts-csd-eng.cfm?LANG=Eng&GK=CSD&GC=3529006>
- Steadman, H., Mulvey, E., Monahan, J., Robbins, P., Appelbaum, P., Grisso, T., Roth, L., & Silver, E. (1998). Violence by people discharged from acute psychiatric inpatient

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

St. Leonard's Community Services (2015). About us. Retrieved from <https://www.st-leonards.com/>

Taylor, S. M., & Dear, M. J. (1981). Scaling community attitudes toward the mentally ill. *Schizophrenia Bulletin*, 7(2), 225-240.

The Corporation of the [City] (2009). [City] community profile. Retrieved from [city website].

Toronto Police (2013). Toronto Police response to emotionally disturbed persons. Retrieved from http://www.torontopolice.on.ca/community/tps_response_to_edp.pdf

Williams, M. E., Latta, J., & Conversano, P. (2008). Eliminating the wait for mental health services. *Journal of Behaviour Health Services & Research* 35(1), 107-114.

Wilson-Bates, F. (2008). Lost in transition: How a lack of capacity in the mental health system is failing Vancouver's mentally ill and draining police resources. Vancouver, British Columbia: Vancouver Police Department.

Witt, K., van Dorn, R., & Fazel, S. (2013). Risk factors for violence in psychosis: Systemic review and meta-regression analysis of 110 studies. *Risk Factors for Violence in Psychosis* 8(2), 1-15.

Woodview Mental Health and Autism Services (2015). About us. Retrieved from <http://woodview.ca/>

World Health Organization (2014). Global status report on alcohol and health. Retrieved from: http://apps.who.int/iris/bitstream/10665/112736/1/9789240692763_eng.pdf

Zinger, I. (2012). Conditional release and human rights in Canada: A commentary.

Canadian Journal of Criminology and Criminal Justice, 54(1), 117-135.