Police Contact with Suicidal Individuals: A Comparison of Self-Inflicted Suicidal Behaviour and Potential Police Provoked Shooting Incidents

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- Community policing involves regular contact with people who are experiencing mental illness; these contacts occur in a number of different contexts, but often include situations where the person is in psychiatric crisis.

- A significant component of psychiatric crisis calls involve police responding to people who are suicidal; in some of these encounters the person in crisis can attempt to provoke the police into using fatal force. These situations have been termed suicide-by-cop or police provoked shootings.

- Results arising from this study suggest that nearly 1 in 10 police encounters involve responding to a suicidal situation; 1 in 5 of these suicide-related encounters met criteria for a potential police provoked shooting.

- Both historical and incident level factors were found to differentiate self-inflicted suicide attempts from potential police provoked shootings. Findings suggest the need for police to adopt a clinically guided risk assessment approach when dealing with suicidal encounters.

ABSTRACT: *Due to the nature of community policing, police frequently find themselves coming into contact with people in psychiatric crisis; among these, calls to people who are suicidal are common. While many of those who attempt suicide do so through self-inflicted means, others have attempted to provoke police into using fatal force; these incidents have been referred to as suicide-by-cop or police provoked shootings. The study used a case linkage design to explore how commonly police report encountering a suicidal person and to consider what differentially characterised a self-inflicted suicide attempt from an attempted police provoked shooting. All incidents involving a person who was described by police as suicidal were extracted from a large random sample of incident fact sheets completed by police over the 2012-2013 fiscal year. Public mental health and prior police contact details of these individuals were also extracted from state-wide registries. Analyses revealed that two hundred and seventy-five (275; 8.9%) of the random sample of incidents involved police responding to suicidal individuals; 222 (80.7%) involved self-inflicted suicide attempts, and 53 (19.3%) were classified as potential police provoked shootings. A number of incident-level characteristics differentiated the self-inflicted suicidal group from the potential provoked shooting group. Multivariate analyses suggested that the likelihood of being a potential provoked shooting incident was 3.49 times higher if the individual was previously 'known' to either the public mental health system and/or the justice system. Collectively, these results suggest that police come into contact with suicidal individuals frequently. Self-inflicted and provoked police provoked incidents are characteristically different, both at historical and incident levels, suggesting the need for better information sharing between health and justice services, clinically guided risk assessment of known persons, and the need for more tailored approaches and resolution strategies.*

Key words: *Self-inflicted suicide, potential provoked police shooting, mental health, criminal history*

BACKGROUND

Suicide is a global public health concern estimated to affect more than one million people per year (De Gioannis & De Leo, 2012). Some 30 years ago, Linehan, Goodstein, Nielsen & Chiles (1983) stated that the increasing frequency of suicide presented a phenomenon that simply could not be ignored. That trend has continued, with the World Health Organisation (2014) reporting that the rate of suicide has increased by 60% over the last 45 years, and predicting that it would contribute to 2.4% of the global burden of disease by 2020. Although international research indicates a high prevalence of completed suicide, attempted suicide, self-harm and suicidal ideation are more common, with some studies estimating that non-fatal suicide attempts are as much as 20% more common than completed suicides (Bertolote et al., 2004; De Leo, Bertolote & Lester, 2002; Kessler et al., 2005). In the Australian context, a recent Australian Bureau of Statistics report (ABS, 2011) estimated that roughly six people per day die as a result of suicide; consequently it is ranked as the 14th leading cause of death and ranked in the top ten as a cause of death among males in Australia.

Risk Factors for Suicide

Suicidal behaviours can be influenced by a wide variety of genetic, biological, social, psychological, environmental and situational factors (Genovese & Wasserman, 2002). Major risk factors for suicide

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are consequently broad, and include gender, mental illness, previous suicide attempts and communication about suicide, physical illness, drug and alcohol abuse, domestic violence, lethality of means, acute distress and any sudden or major life stressors (e.g., loss of employment, relationship breakup or separation) (Large & Nielssen, 2010; WHO, 2010; WHO, 2014).

The literature has suggested that between 1 and 5% of suicidal individuals engage in what has been termed 'complex suicides' where two or more methods are applied either simultaneously or one after the other during the course of a suicidal episode (Racette & Sauvageau, 2007; Toro & Pollak, 2009). The ingestion of drugs combined with hanging or suffocation, and use of a firearm combined with drowning or hanging have been reported as the most common of these complex suicide methods (Racette & Savageau, 2007; Toro & Pollak, 2009); the male to female ratio of these has been reported to be somewhere between 1.8:1 and 18:1 (Bolnert & Pollak, 2003).

One of the most robust risk factors for suicide has been found to be mental illness, with diagnoses including anxiety disorders, major depressive disorder, bipolar disorder, substance abuse disorders, eating disorders, schizophrenia, and personality disorders commonly being reported among suicidal samples (Conner et al., 2001; Joiner et al., 1999). Other, more specific, factors associated with mental illness have also been documented to be associated with increased suicidal ideation and behaviours including; aggression, depression, anxiety and hopelessness, while the association with impulsivity has most recently been determined through a robust meta-analysis to be 'significant but small in magnitude' (Anestis et al., 2014). Another robust predictor of suicide is having a history of previous attempts of suicide (Van Orden, Merrill, & Joiner, 2005). The lethality of the method of suicide is also highly correlated with suicide attempts, and considered one of two main factors (alongside an assessment of individual's suicidal intent) focused upon with the clinical assessment of suicidal behaviours (Brown et al., 2004; Silverman et al., 2007).

Furthermore, some studies suggest that substance abuse, in particular alcohol abuse, is only second to depression as an antecedent to suicide (Pompili, 2010; Sher, 2006; WHO, 2014; Yaldizli, 2010). De Gionannis and De Leo (2012) estimate that the lifetime risk of suicide among alcohol abusers is 3%, controlling for varying reporting methods across studies. Most recently, Anestis Joiner, Hanson, & Gutierrez (2014) caution that the frequency of alcohol consumption just prior to death may in fact be less common than previously reported.

One of the main criticisms of research in this area relates to the methodological limitations of garnering information from family, friends, witnesses and professionals related to the individual as it is argued that this does not always provide the full/true picture of what ultimately or cumulatively led to the suicide. Added to this, the debate around nomenclature for what constitutes suicidal behaviour has clouded research and clinical activity and continues to be the focus of much international debate (Heilbron et al., 2010; O'Carroll et al., 1996). Silverman and colleagues (2007) conducted an extensive review in a bid to clarify the existing nomenclature surrounding the various suicide-related terms (such as 'suicide related communications', 'self-harm' and 'non-fatal self-harm', 'suicide attempts' and 'suicidal intent'). They argued that the current use of the nomenclature within research, clinical practice and generally in the wider community was often confusing, with many overlapping definitions, and negative or derogatory terminology, thereby adding to possible negative connotations still associated with suicidal behaviour. Perhaps one of the most widely accepted operational definitions of suicide has been provided by the World Health Organisation (2010), who defined suicide as "an act deliberately initiated and performed by a person in the full knowledge or expectation of its fatal outcome".

Police Involvement with Suicide

Police officers are often the first responders to individuals in crisis; inherent in this situation is a risk assessment to determine whether the individual is at risk of harm to themselves or others, along with whether there is any illegal activity going on that may warrant arrest. As such, police have often been referred to as 'street corner psychiatrists' (Teplin & Pruett, 1992) as, essentially, they are put in the somewhat unenviable position of determining the correct (or best) path into the health or criminal justice system (Lanb et al., 2002; Sced, 2006). This has been a longstanding concern for police, who are often ill-equipped to make such decisions in an informed manner (Godfredson, Ogloff, Thomas, & Luebbers, 2010). Given that police report as much as 20% of their time is spent dealing with people in mental health crisis (Godfredson, Thomas, Ogloff, & Luebbers, 2011), this is a significant ongoing problem for frontline police.

Police Provoked Shootings

Although the term 'suicide' suggests 'killing one's self", a form of suicide that has garnered some attention over the years is "suicide by cop". The term relates to incidents where an individual behaves in a threatening manner towards the police or threatens to hurt bystanders with a lethal weapon, in order to force an escalated situation where the police are forced to use their firearms in self-defence or to protect civilians; thus completing the suicide for the individual (Gerberth, 1993). The individual involved is thought to have intent to die, and rather than choosing self-inflicted means, choosing to provoke the police to shoot them knowing that the police force carry firearms and are obliged to use lethal force in life-threatening situations (Chappell, 2010). This phenomenon has been previously explored under several labels over the years but will be referred to here as "police provoked shooting" (PPS), keeping in line with recent Australian research (McLeod, Thomas & Kesic, 2014). Of note, global reports suggest that between 10% and 46% of fatal police shootings can be attributed to police being provoked by the perpetrator (Dewey et al., 2013; McLeod et al., 2014).

Several classifications of provoked shooting incidents have been proposed, each with a slightly different focus. Lord (2000; 2012) focused on specific elements related to individuals verbalising their desire for police officers to kill them, gesturing with weapons in a threatening manner including running at officers, or pointing/throwing weapons at officers or hostages. By contrast, Hutson and colleagues (1998) used criteria that had inter-related factors that attributed suicidal intent via consideration of communication of suicidal intent and suicidal gestures by the suspect/perpetrator. In addition, Homant and Kennedy (2000) suggested a more detailed consideration of a 'behavioural chain of events' that led up to the incident, and proposed that encounters be considered as either direct confrontations, disturbed interventions, or criminal interventions.

In spite of the variability in quality and methodological rigour in the extant literature, there have been some common characteristics found across these studies. The available evidence suggests that generally PPS individuals are male, middle aged, have had previous contact with police as suspects or offenders, and had a prominent psychiatric history, often including a history of substance abuse and at least one previous suicide attempt (McLeod et al., 2014; Homant & Kennedy, 2000; Hutson et al., 1998; Lindsay & Lester, 2004; Lord, 2014; Mohandie & Meloy, 2000). Across these studies, 40-63% of individuals have been reported to have met criteria for at least one mental illness, with chronic depression, bipolar disorder, and schizophrenia being the most common diagnoses reported (Gerberth, 1993; Lord, 2000; Mohandie, Meloy, & Collins, 2009). Additionally 36-56% of individuals have been found to be alcohol-intoxicated at the time they provoked the police to shoot, with estimated rates increasing to between 52% and 76% when other illicit drugs were considered (Lord, 2000; 2014).

Some common proximal factors that are seen as possible antecedents include substance intoxication, recent interpersonal loss or conflict, previous incarceration, being in a hostage/barricade situation and involvement in a domestic dispute (Kesic, Thomas, & Ogloff, 2012). International research has identified several key behavioural components observed at the time of the provoked shooting incident, including verbally communicating their desire for police to shoot them, possessing a (potentially) deadly weapon, advancing on police or citizens with weapons, and refusing to adhere to police demands (Best et al., 2004; Hutson et al., 1998; Lindsay & Lester, 2004).

A notable study by Kesic, Thomas and Ogloff (2012) reported an exploratory study using Coroner's reports between 1982-2007 for evidence of potential PPS incidents in Victoria, Australia. Their findings echoed previous studies; over a third of fatal shootings met criteria for PPS, decedents were generally male, in their mid-thirties, with both criminal and mental health histories, with the majority being armed with weapons and threatening the police. A more recent study by McLeod, Thomas and Kesic (2014) further explored the phenomenon by focusing on the prevalence of potential PPS incidents where the necessary 'ingredients' for a PPS were evident but a non-fatal outcome was achieved; they reported that Victorian police encountered potential PPS incidents between two and three times a week.

While these studies have provided important insights into the police-mental health crisis interface, especially in the Australian context, our knowledge remains limited. Given the time police spend responding to individuals in mental health crisis, it remains critically important to further elucidate the potential differences between those who choose self-inflicted means of suicide from those who choose the police, both to help inform police approach and engagement strategies and associated training and support needs.

Aims and Hypotheses

Against this background, the aims of the study were to: 1) provide an estimated prevalence of the current nature of contact between individuals who are suicidal and the police; 2) characterise the sample including demographic information, prior contact information (mental health and criminal history), and incident related variables (including intoxication, domestic violence etc.); and 3) compare the individuals who use self-inflicted methods of suicide against those who use attempt PPS. While the study was primarily exploratory in nature, it was hypothesized that: (1) people engaging in potential PPS will be more likely to have official histories of contact with health and justice services, and (2) that there will be differences in the presence of communications and gestures of suicidal intent between those who attempt self-inflicted suicide and those who attempt to provoke police into fatally shooting them.

METHOD

Databases

The current study design involved linking contact-based data from three databases: The Victoria Police Incident Fact Sheet database (IFS), the Victoria Police Law Enforcement Assistance Programme (LEAP), and the Victorian Psychiatric Case Register (VPCR).

The IFS was the source database. It contains reports made by police officers that they consider to be of relevance or concern to police command. IFS reports include a number of categorical descriptors pertaining the incident in question and a free text narrative which outlines the details of the incident, what led to it and if and how it was resolved. Incidents reported are broad and reflect the diverse nature of community policing. They include, but are not limited to, robbery, homicide, indecent behaviour, pursuits, arson

attacks, sieges, and disorderly behaviour. In some cases the suspects/perpetrators are identifiable (e.g., if they are arrested on scene or shortly thereafter, or if they are known offenders captured on CCTV) and so their details are recorded alongside the IFS entry, in many other incidents (e.g., burglaries or robberies) there is no identifiable offender. IFS incidents are completed in hard copy by officers upon return to the station and submitted for transcribing and entry onto an electronic IFS database.

The LEAP database records details of all contacts between police and members of the public as alleged or confirmed offenders, victims of crime, witnesses of crime and people in need of assistance. It has been in operation since October 1993 and is managed separately to the IFS database. All individuals on the LEAP database are assigned a unique Master Name Index (MNI) to link all contact-related data, both formal and informal, with police and the court system.

The VPCR database is managed by the Victorian Department of Health and has been in existence in some form since the early 1960s. It records all service-level contact information individuals have with the public mental health system across the State of Victoria, Australia (e.g., appointments with hospitals, inpatient services and community services, diagnoses and dates of admission/discharge etc.). It does not capture contacts people have with primary care providers (e.g., General Practitioners) or private practitioners (e.g., private psychologist/psychotherapists) (Short, Thomas, Mullen et al., 2010).

Procedure for Data Linkage

A 20% random sample of all IFS reports made between July 1st, 2012 and June 30th, 2013 (total sample=15,230 IFS reports) were extracted which resulted in an initial sample of 3088 unique IFS reports. Based on these 3088 incidents, 663 suspects/offenders were identifiable.

A master list with unique identifiers (full name, date of birth and gender) was created for these 663 individuals, with each individual also being assigned a unique study ID by a sworn police officer. This master list was then linked with both LEAP and VPCR databases using deterministic and probabilistic matching algorithms to establish whether the individuals had prior contacts with the police or public mental health services. Deterministic matches included only instances where all details (full name, date of birth and gender matched); probabilistic matches included matches on an agreed percentage of the master list information as well as minor deviations (e.g., John David Smith, DOB 01/12/1970 compared to John David Smith, DOB 12/01/1970) and Boolean searches to cater for pseudonyms which can be quite common in psychiatric samples. Searches on the VPCR were completed separately by dedicated data analysts at the Victorian Department of Health; the purpose of the search was not divulged to the data analysts to maintain confidentiality. Where matches were found on LEAP and VPCR, all relevant contact level data were extracted (e.g., offence history, dates of contact and mental health diagnoses). The data file was then de-identified by police and Department of Health personnel separately and returned to the researchers who merged the three de-identified datasets according to the unique study ID. The final dataset therefore comprised the 3088 IFS narratives, along with police and public mental health contact histories for those who were identified as having had prior contact histories through the matching process.

The study design and data linkage procedures were approved by the Human Research Ethics Committees of Victoria Police and the host institution. Of note, the method is tried and tested, has led to results of clinical, policy and academic significance (Kesic et al., 2013; McLeod et al., 2014; Short et al., 2010) and followed contemporary Australian guidelines regarding use of data banks for the purposes of epidemiological research.

Procedure for Data Coding

All 3088 IFS incidents were initially screened for potential inclusion; an inclusive strategy was adopted. Potential cases were identified as suicidal if they included any evidence of verbal and/or gestural indicators of suicidal intent within the IFS written narrative. Gestures included overt gestures (i.e. stabbing one's self or slashing wrists), as well as putting oneself in life threatening situations (i.e. standing on the edge of a balcony). Both attempted suicide and completed suicides were considered.

Suicide Method and Intent Coding

The final eligible sample comprised 275 suicidal-related incidents. Each was subsequently coded according to the International Classifications of Disease- tenth revision (WHO, 1992) categories of self-harm to classify the means of attempted/completed suicide.

Suicidal intent and behaviour was further classified based on Silverman and colleagues' (2007) classification. This included No Gesture or Communication, Communication Only, Minor Gesture Only, Major Gesture Only, Minor Gesture and Communication, and, Major Gesture and Communication. Communication referred to any incident of verbal communication of intent e.g. "I'm going to do it, I'll kill myself" and included suicide notes; Minor Gestures referred to gestures that did not cause or would be likely to cause serious harm e.g. scratching one's wrist; whereas Major Gestures referred to gestures that did or were likely to cause harm e.g. slashing wrists or attempting to hang oneself. Incidents were further classified as 'disturbed interventions' (where subjects used the nature of police contact to attempt suicide-by-police), 'criminal interventions' (where the subject has committed an offence was facing arrest) or 'planned interventions' (where the subject initiated an attack on police) as set out by Homant and Kennedy (2000).

Potential Police Provoked Shooting Coding

Based on a proportion of the 275 cases being identified as a potential police provoked shooting, the full sample was further characterised based on an adaption of an established criteria (Hutson et al., 1998), including: (i) verbal communication of suicidal intent; (ii) gestures of suicidal intent (including gun grabs); (iii) evidence that the person stated that they wanted the police to shoot them; (iv) possession of a deadly (or what looked like) a deadly weapon; and (v) evidence that the person deliberately escalated the encounter in order to provoke police into shooting them. In accordance with recommendations from McKenzie (2006), clinical judgment was used on the basis of all available information about the incident. Incidents were coded as either self-inflicted suicides (SIS) or potential police provoked shooting (PPS). Procedurally, both authors screened all potential PPS incidents independently then discussed each incident to reach a consensus opinion.

Criminal History and Mental Health History Coding

Criminal offences were coded according to the 16 divisions set out in the Australian and New Zealand Standard Offence Classification (ANZSOC) codes for criminal charges (ABS, 2007). These were grouped into three categories: (1) offences against people (Divisions 1-6); (2) offences against property (Divisions 6-9, & 12); and (3) offences against organisations, government and community (Divisions 10, 11, & 13-16), as recommended in the classification guidelines.

Diagnostic data obtained via the VPCR database was coded using the International Statistical Classification of Diseases and Related Health Problems (WHO, 1992) according to standard category diagnoses.

Approach to Analysis

Simple descriptive statistics were used to characterise the sample, and the distributions of continuous data were checked for normality and kurtosis. It was noted that the age variable was missing for the majority of the sample, due to it not being able to be calculated through the data linkage processes, so the variable was not considered beyond basic descriptives. Continuous variables where compared using independent t-tests (or non-parametric equivalents where data were skewed), while categorical variables were cross-tabulated and Chi Squared tests of Association were reported, substituting Fishers Exact Test statistic where cell values fell below n = 5. Odds Ratios and associated 95% confidence intervals were then calculated. Multivariate logistic regression was used to control for potential confounding and effect modification between variables of interest, and the Area Under the Curve (AUC) of the Receiver Operating Characteristic (ROC) was plotted to estimate the accuracy of the resultant model, using standard cut-offs. Finally, the Hosmer-Lemeshow test was calculated to assess the robustness of the multivariate model. Data were analysed using SPSS (version 21.0) and STATA (version 12.0).

RESULTS

Characteristics of the Suicidal Sample

Two hundred and seventy-five (11.3%) of the random sample of 3088 IFS reports were identified as involving a person who was exhibiting suicidal characteristics (verbalising suicidal intent or gestural indicators). The 'suicidal sample' comprised 82 (29.81%) females and 191 males (69.45%) (with gender data not able to be coded for two incidents due to a lack of specificity within the IFS narratives). Information regarding age was available for only a subset of this group (n = 39), and indicated an average age of 37.38 years (range = 14.62-74.98 years; SD = 16.39) with no significant differences between the females and males (M = 34.21; SD = 17.91 vs. M = 38.97; SD = 15.69, $t = 0.85$, $p = 0.40$).

The methods of suicide attempt most commonly employed by the sample were hanging and strangulation, followed by stabbing or cutting. Twenty-eight (12.4%) of the sample utilised several attempts of suicide in the course of the one incident. Of note, within the 'several methods', 11(39%) individuals acted aggressively or directly confronted police about wanting to die as a final means of attempting suicide (Table 1).

Self-Inflicted Suicides (SIS) versus potential Police Provoked Shootings (PPS)

The majority, (222, 80.7%) of the suicidal incidents involved situations where the person attempted and/or completed self-inflicted suicide, however, 53 (19.3%) incidents were classified as potential police provoked suicides. Of note, none of the police provoked incidents resulted in a fatality. A Mann-Whitney U test indicated that there were no statistically significant differences between potential PPS and SIS incidents according to the age (U = 158.00, $p = 0.76$), or gender ($\chi^2 = 3.569$, $p = 0.06$) of the perpetrator. When extrapolated to gain a yearly estimate of suicides attended to by the police; it was estimated that roughly 26 cases involving suicidal individuals are attended by police per week, and that 5 incidents per week involved situations where the police encountered a potential PPS incident.

Incident Level Characteristics

Incidents were significantly more likely to be potential PPS if the incident was siege related ($\chi^2 = 54.58$, $p<0.0001$), intoxicated ($\chi^2 = 4.93$, $p = 0.03$), and a domestic dispute ($\chi^2 = 6.30$, $p = 0.01$). The potential PPS group were also more likely to use a high-level lethality (e.g. firearms) method to attempt suicide ($\chi^2 = 6.60$, $p =$

Table 1.
Methods of Suicide used by Individuals, Attempted or Successful

Methods	Total Sample (n = 275)	Men (n = 191)	Women (n = 82)
Drugs/Alcohol	20 (7.3%)	9 (4.7%)	10 (12.2%)
Poisoning with Gas	16 (5.8%)	15 (7.9%)	1 (1.2%)
Hanging/Strangulation	72 (26.2%)	53 (27.7%)	20 (24.4%)
Firearm	6 (2.2%)	6 (3.1%)	0
Drowning	2 (0.7%)	0	1 (1.2%)
Stabbing/Cutting	53 (19.3%)	41 (21.5%)	15 (18.3%)
Jumping height	10 (3.6%)	8 (4.2%)	3 (3.7%)
Use of explosives	3 (1.1%)	3 (1.6%)	1 (1.2%)
Use of moving vehicles	12 (4.4%)	4 (2.1%)	7 (8.5%)
Use of Police	13 (4.7%)	12 (6.3%)	3 (3.7%)
Other	8 (2.9%)	5 (2.6%)	3 (3.7%)
Several Methods	34 (12.4%)	19 (9.9%)	9 (11.0%)
Unknown Methods	26 (9.5%)	16 (8.4%)	9 (11.0%)

0.01), and significantly more likely to grab at a police officer's gun during an incident ($p = 0.005$) (Table 2).

The majority of both the SIS group and potential PPS group were categorised as disturbed interventions (60.4% vs. 73.6%; $\chi^2 = 3.27$, $p = 0.07$). The SIS group were proportionally more likely to be involved in criminal interventions (18.5% vs. 9.4%; $\chi^2 = 3.27$, $p = 0.11$), whereas the potential PPS group were significantly more likely to engage in direct confrontations (17.0% vs. 0%; FET = 0.000, $p = 0.002$). However as indicated in Table 2, although significant at a univariate level, some were not retained when potential confounders were considered.

Suicidal Intent

The SIS group were significantly less likely to display any gestures or communications ($p = 0.02$), or display minor gestures of suicidal intent ($\chi^2 = 7.34$, $p = 0.01$) whereas the odds of having displayed both high levels of suicidal gesture and communication were over 23 times higher for potential PPS than SIS ($\chi^2 = 71.30$, $p < 0.0001$) (Table 3).

Prior Contact Characteristics

Seventy-one individuals within the full suicidal sample (25.8%) had mental health descriptors (e.g. "prior diagnosis of depression") within the IFS narratives, however only 20 (7.3%) individuals were known within the public mental health system, with 18 (6.5%) individuals receiving ICD-10 diagnoses. Comparisons of the potential PPS and SIS groups revealed the odds of prior contact within the public mental health system ($\chi^2 = 9.18$, $p = 0.002$), and have an ICD-diagnosis ($\chi^2 = 7.84$, $p = 0.005$) were nearly four times higher for the potential PPS group. Within group comparisons indicated the most likely diagnoses within the SIS group were Substance Abuse Disorders (N = 8; 80%), and Mood Disorders (N = 7; 70%), however within the PPS group, Substance Abuse Disorders (N = 4; 50%) and Personality Disorders (N = 4; 50%) were most likely.

Twenty-four people (8.7%) within the total suicidal sample were previously known to the police; those in the potential PPS group were five times more likely to have prior criminal histories ($\chi^2 = 15.96$, $p < 0.0001$) compared to the SIS group (Table 4).

A Model Comparing SIS and Potential PPS Incidents

A multivariate logistic regression was computed to differentiate SIS and potential PPS incidents, using a composite variable 'known' to depict instances where the person had an officially recorded history with either police or public mental health services. The resultant model suggested that, statistically controlling for other variables in the model, the odds of being 'known' to police or mental health services was 3.49 times higher for potential PPS incidents as

compared to SIS cases. Or, similarly, the odds of the incident being a siege related incident were 9.97 times higher for potential PPS cases as compared to SIS cases (Table 5). The Hosmer-Lemeshow test for goodness-of-fit suggested that the statistical model was robust ($\chi^2 = 9.24$, $p = 0.16$). Similarly, a plot of the Area Under the Curve (AUC) of the Receiver Operating Characteristic (ROC) curve suggested that the model provided excellent discrimination between potential PPS incidents and SIS cases (AUC = 0.81, 95% CI [0.75, 0.88], p < 0.0001) (Table 5).

DISCUSSION

This study set out to explore the frequency that police are called out to incidents involving people who are suicidal, to characterise these individuals according to their mental health and criminal justice histories, and to ascertain if there were discernible differences between those individuals who sought to die by suicide as compared to those who attempt to provoke the police into fatally shooting them. The results suggest that police are called out to encounters involving a suicidal person roughly 26 times a week and that one in five of these involves a situation where the person attempts to provoke the police into fatally shooting them. There were a number of factors that differentiated people who chose self-inflicted means of suicide from those who attempted to provoke the police to fatally shoot them; these could be readily distinguished as either pre-existing factors or incident-level factors. These are now considered in turn.

Pre-existing Factors and the Importance of 'Being Known'

These results suggest a proportion of individuals are known within the public mental health system, and/or within the criminal justice system. Using a statistical model to predict for incidents of potential PPS, the composite variable 'known' was a strong predictor, suggesting it is a strong statistical marker for distinguishing potential PPS from SIS incidents. The first hypothesis was therefore supported. These findings are consistent with robust research which has found that individuals who engage in potential or completed PPS are commonly known to the police and mental health services (Lindsay & Lester, 2004; Mohandie & Meloy, 2000). A possible explanation is that individuals who have histories of contact with police may hold negative views of police, and they may have acquired knowledge of how to escalate the situation in order to provoke the police into a more lethal response. The implication of this is a need for increased and improved collaboration between services to allow first responders to be equipped with as much knowledge about the person's history as possible. A number of jurisdictions have developed novel relationships between police and health services to address this vexing issue, for example the highly cited Crisis Intervention Team model (Watson & Fulambarker, 2012) where police and health services work in partnership alongside each other. While many studies report positive outcomes for both police and people who are in mental health crisis (Florence, Shepherd, Brennan, & Simon, 2011), a substantial limiting factor remains the common perception of the risks associated with the potential breaches of privacy surrounding sharing sensitive personal health and justice information (de Lusigana et al., 2014).

Incident-Level Factors Differentiating SIS and Potential PPS Situations

Results from the initial univariate analyses indicated that several incident level factors were significantly associated with potential PPS incidents. Consistent with previous literature (Kesic et al., 2012), intoxication, domestic disputes, high lethality of means, siege-related incidents and directly confronting the police were all significantly associated with potential PPS incidents. The multivariate model added additional support to these findings, with siege-related

Table 2.
Incident Level Characteristics

Variables	Total Sample (n = 275)	PPS Group (n = 53)	Self-Inflicted Group (n = 222)	OR (95% C.I)	p	ᵇAOR (95% C.I)	p
Siege Related	38 (13.8%)	24 (45.3%)	14 (6.3%)	12.30 (5.72-26.43)	<0.01	12.36 (5.69-26.71)	<0.0001
Intoxication	49 (17.8%)	15 (28.3%)	34 (15.3%)	2.18 (1.08-4.40)	0.03	2.00 (0.98-4.11)	0.06
Domestic Dispute	42 (15.3%)	14 (26.4%)	28 (12.6%)	2.49 (1.20-5.15)	0.01	2.23 (1.05-4.71)	0.04
Barricade	6 (2.2%)	3 (5.7%)	3 (1.4%)	4.38 (0.86-22.34)	0.08	3.74 (0.73-19.28)	0.11
Hostage	1 (0.4%)	1 (1.9%)	0	12.71 (0.51-316.55)	0.19	-	1.00
Police gun grab	6 (11.1%)	6 (11.1%)	0	60.90 (3.37-1099.54)	<0.01	-	1.00
High Lethality	138 (50.2%)	35 (66%)	103 (46.4%)	1.91 (1.01-3.59)	0.04	1.76 (0.93-3.33)	0.08
Direct Confrontation	9 (3.3%)	9 (17%)	0	95.00 (5.43-1662.20)	<0.01	-	0.999
Disturbed Intervention	173 (62.9%)	39 (73.6%)	134 (60.4%)	1.83 (0.94-3.57)	0.07	2.15 (1.08-4.92)	0.03
Criminal Intervention	46 (16.7%)	5 (9.4%)	41 (18.5%)	0.46 (0.17-1.23)	0.11	0.35 (0.12-1.02)	0.05

Table 3.
Suicidal Intent Communication

Adapted Silverman Classifications	PPS Group (n = 53)	Self-Inflicted Group (n = 222)	OR (95% C.I)	p
No Gesture or Communications	3 (5.7%)	42 (18.9%)	0.26 (0.08-0.87)	0.02
Only Communication	7 (13.2%)	16 (7.2%)	1.96 (0.76-5.04)	0.16
Only Minor Gesture	5 (9.4%)	60 (27%)	0.28 (0.11-0.74)	0.01
Only High Gesture	11 (20.8%)	69 (31.1%)	0.58 (0.28-1.20)	0.14
Minor Gesture and Communication	4 (7.5%)	28 (12.6%)	0.57 (0.19-1.69)	0.31
High Gesture and Communication	23 (43.4%)	7 (3.2%)	23.55 (9.31-59.58)	<0.01

Table 4.
Mental Health and Criminal History Characteristics

Prior Contact Variables	Total Sample (n = 275)	PPS Group (n = 53)	Self-Inflicted Group (n = 222)	OR (95% C.I)	p	AOR (95% C.I)	p
History of public mental health contact	20 (7.3%)	9 (17%)	11 (5%)	3.92 (1.53-10.03)	0.002	3.95 (0.23-1.06)	0.005
History of mental health contact (IFS narrative)	71 (25.8%)	9 (17%)	62 (27.9%)	0.53 (0.24-1.15)	0.10	0.57 (0.26-1.25)	0.16
ICD-10 Dx within public mental health	18 (6.5%)	8 (15.1%)	10 (4.5%)	3.77 (1.41-10.08)	0.005	3.71 (1.38-10.03)	0.01
Previous Suicide attempts	17 (6.2%)	2 (3.8%)	15 (6.8%)	0.54 (0.12-2.44)	0.54	0.59 (0.13-2.69)	0.49
Criminal History	24 (8.7%)	12 (22.2%)	12 (5.4%)	5.12 (2.15-12.19)	<0.0001	5.19 (2.16-12.48)	<0.0001

Table 5.
Results of the Multivariate Logistic Regression Model used to Predict PPPS Individuals

Variables Entered	AOR	95% C.I	p	Standard Errors (SE)
Known	3.48	1.16-10.45	0.03	0.56
Gender	0.52	0.22-1.23	0.14	0.44
Siege Incidents	9.97	4.47-22.23	<0.0001	0.41
Domestic Dispute	1.18	0.46-3.01	0.73	0.48
Disturbed Confrontations	1.42	0.56-3.56	0.46	0.47
Criminal Confrontations	0.55	0.13-2.25	0.41	0.72

incidents being almost ten times more likely to predict a potential PPS incident. In support of the second hypothesis, individuals involved in a potential PPS incident were found to exhibit more overt gestures and increase verbalisation of suicidal intent. Taken all together these findings are consistent to what Mohandie and Meloy (2010) referred to as a person's 'resolve' to die. A particular concern is when this resolve is combined with other police officer attributes (e.g., attitudes, degree of authoritarianism, and years of experience) and situational characteristics (e.g., proximity to bystanders). This potentially 'deadly mix' (Pinizzotto, Davis, & Miller, 2005) has been argued to contribute to the escalation of the situation and lead to a more coercive and potentially fatal response by police as a result.

Consistent with previous research (Racette & Sauvageau, 2007; Bohnert & Pollak, 2003), the present study identified a number of individuals who used complex methods of suicide, more than a third of which including attempting to provoke the police to shoot them. It has previously been argued that the mere presence of the police can serve to provide an additional means to attempt suicide (Lindsay & Lester, 2004). These results feed into the sometimes dynamic nature of police-citizen encounters as well as adding weight to the persons' resolve to die in certain situations. It was interesting, in this sense, that several of the incidents involved situations where the person in crisis attempted a gun grab from the police. There is

little documented on this in the literature, but it is suggested that these kind of situations are closely monitored as they represent a further significant risk for frontline responders and members of the community.

LIMITATIONS

These results need to be considered in light of several limitations. Data obtained through case-linkage procedures, although considered to be a robust methodology, carry a number of caveats. Firstly, the contact-based data available were not collected for the express purposes of research, therefore information available was limited both in breadth and depth and did not necessarily or routinely provide consistent data on a number of additional contextual factors (e.g. nationality, marital status, socio-economic status) that may have contributed to, or additionally helped to explain, the findings. Additionally, the IFS narratives varied in length and depth of information; some were detailed paragraphs describing antecedents and contextual information as well as incident level information, while others only included a couple of short sentences and thus much more limited detail. Similarly, as noted in the methodology, the VPCR database does not record mental health service related contacts within the private or primary care sector so it is likely to

underestimate more common (high prevalence) mental disorders (including mood disorders and substance abuse disorders), which are more commonly diagnosed, managed and treated outside of the public mental health system (Short et al., 2010). This is consistent with the finding that while in excess of a quarter of the sample had mental health-related descriptors in the police narrative of the incident, a much smaller proportion had an official history of public mental health contacts or had a mental disorder diagnosis recorded on the VPCR. As such, these results should be considered a lower prevalence estimate of mental illness across the sample.

Another limitation surrounds the manner in which suicidal intent, including suicidal gestures and communications, were measured. Debates within the current literature on suicide typology have highlighted the need for an international consensus on standardised nomenclature and acknowledged the difficulties associated with developing such a consensus). Delineating and measuring suicidal intent is also complicated in potential police provoked shooting studies. Without clear evidence of a 'wish to die', McKenzie (2006) suggested that the term 'indifference to life or death' could provide a better explanation in police provoked shootings. Understanding if and how this indifference to life and death may qualitatively differ from a clearer intent to suicide therefore remains an area of ongoing debate.

CONCLUSION

These study findings suggest that police are attending calls involving suicidal people on virtually a daily basis and as many as one in five of these involve situations where the person is trying to provoke police into shooting them. Call outs which escalate to potential provoked shooting incidents are more likely to involve people who are already known to the police and/or mental health services and to involve siege-related situations. These incidents are characteristically different, both at a historical and incident level. Interesting findings relating to the occurrence of complex suicide attempts and incidents of gun grabs in this sample warrant close monitoring by policing agencies as well as further research attention. These findings suggest that in order to further support suicide prevention strategies, there remains a need to overcome ongoing privacy concerns to allow for better information sharing between health and justice services, clinically guided risk assessment of known persons, and the need for a more tailored police approach and resolution strategy.

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