

# Predicting Domestic Homicide and Serious Violence in Leicestershire with Intelligence Records of Suicidal Ideation or Self-Harm Warnings: a Retrospective Analysis

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## Abstract

*Research Question* Does prior information retained in police intelligence records about an offender's suicidal tendencies help to predict a future domestic homicide or attempted homicide?

*Data* Records on 158,379 arrestees in 1997–2015 were examined for suicidal or self-harm warnings by date of entry and compared to 620 offenders identified in cases of domestic homicides or serious violence over the same time period.

*Methods* The percentage of offenders in domestic homicide and serious violence cases who were known to have reported suicidal ideation prior to those crimes was compared to the overall percentage of arrested persons who had such reports.

*Findings* Of the total 620 deadly violence offenders, 125 had a marker for suicide or self-harm, of which 35 (5.6%) were posted prior to the deadly domestic violence. Of the 80 homicide cases (excluding grievous bodily harm), 7 had suicide or self-harm markers prior to the homicidal offence, for a rate of 8.75%. These rates compare to an overall marker rate among the 158,379 arrestees in the time period studied, of whom 7,241 were identified as holding a warning marker at the point of data collection for this study in 2016, which equated to only 5% of the group, of which an estimated 38% would have occurred prior to a crime (2,752 cases), or 1.7% of the 158,379. By that metric, it is three times more likely that offenders charged with an act of deadly domestic violence had prior suicidal warning markers than offenders not charged with

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such crimes ( $5.6/1.7 = 3.3$ ), and 5.2 times more likely for homicide offenders to have a prior marker than for all arrestees.

**Conclusions** Police intelligence system markers for suicide or self-harm can provide valuable information for building more accurate prediction models for domestic homicide and serious assaults.

**Keywords** Domestic homicide · Prediction · DASH · Suicide threats · Self-harm

## Introduction

Over the past decade, UK police organisations have relied on the Domestic Abuse, Stalking and Harassment (DASH) risk assessment tool to predict high-harm cases based upon prior domestic abuse incidents. A growing body of empirical evidence suggests that the DASH risk assessment tool is greatly inaccurate. This new research has also discovered evidence of predictors that could provide alternatives to the DASH risk assessment.

Recent research (Thornton 2011, 2017; Bridger 2015, 2017; Chalkley 2015, 2017) suggests that one warning marker of serious domestic abuse may be suicidal ideation or threats of self-harm by an offender. From his review of national data on domestic intimate partner homicide, for example, Bridger (2015, 2017) identified suicidal ideation in 38.6% of offenders, and 40% of all male offenders. Crucially, these facts were not necessarily known by police prior to the murders, but they were known to someone: family, medical professionals or others who may not have been legally allowed to share the information unless and until a murder occurred.

Thornton (2017) and Chalkley (2017) found elevated, but much lower rates of suicide and self-harm markers than Bridger (2015, 2017) in the Police National Computer (PNC) records on offenders in a broader range of serious violence. While their studies include all domestic homicides in a multi-year period in their police areas, the majority of the offenders they included had tried but failed to kill someone in a domestic relationship to them. These samples were too small for drawing distinctions between completed and attempted murders, but they opened a very important line of research for predicting and preventing domestic homicide.

The present study builds methodologically on these recent findings in two ways. First, it offers far *larger sample sizes* over a much longer time period, for both deadly violence ( $N = 620$ ) and the denominator of arrestees for non-deadly crimes (158,379). Second, it *distinguishes prior suicidal markers* from suicidal behaviour that occurred after a deadly attack on someone in domestic relationship. That is possible in this study because the intelligence system identifies the date on which police records showed the first indication of self-harm or suicidal ideation. In contrast to the PNC markers used by Thornton (2011, 2017) and Chalkley (2015, 2017), the local Crime Information System (CIS) in Leicestershire offered ready access to the dates needed to identify cases in which the marker was available prior to the act of deadly domestic violence.

The key innovation in this study of serious domestic abuse and homicide offenders in Leicestershire is therefore the system for recording when offenders held a suicidal or self-harm warning marker, which was in place from 1997 to 2015. A suicidal or self-harm warning marker was attributed to an offender by police practitioners either from

an encounter whilst at an incident or when the offender was arrested and entered custody. The information was wholly subjective, based upon the disclosure of the offender or the nature of the incident. It also depended on the diligence of the officer in recording the information accurately. Each marker provided warnings to others who might encounter the person about when the completed or threatened suicidal or self-harm incident had occurred and a brief narrative on the circumstances. From our interrogation of the CIS software system, data on 620 serious domestic offenders was extracted to reveal 125 offenders who specifically held suicidal or self-harm warning markers. In addition, records of all of the other people in the database were examined to see which non-deadly offenders also had suicidal or self-harm measures.

## Research Questions

The two specific research questions for this study are as follows:

1. To what degree does a police intelligence warning of an offender's threatened or actual suicidal or self-harming behaviour increase the likelihood that the person will commit a crime of domestic murder, manslaughter, attempted murder or grievous bodily harm with intent?
2. What proportion of cases with a current marker of threatened or actual suicidal or self-harming behaviour is based on information that was available prior to the offender committing an act of deadly violence?

## Data and Methods

For the purposes of this study, serious domestic offences will be categorised as murder, attempted murder, manslaughter and grievous bodily harm (GBH) with intent. These have been chosen as they represent the most serious violent offences and because this provides continuity with previous longitudinal research into domestic abuse, using police data (Thornton 2011, 2017; Chalkley 2015, 2017).

**Definitions** Domestic abuse is defined by the Home Office as 'any incident or pattern of incidents of controlling, coercive, threatening behaviour, violence or abuse between those aged 16 or over who are, or have been, intimate partners, or family members, regardless of gender or sexuality' (Domestic violence and abuse 2016, p.1). When considering suicidal ideation, both 'self-harm' and 'suicidal' warning markers were included in the study to indicate that an offender had suicidal tendencies. This is partly due to their comparative nature, but also to the subjective nature of the recording of such by a practitioner. Whilst one officer may have recorded an offender as displaying suicidal tendencies due to visible self-harm injuries, another may have recorded a self-harm marker only. Including both markers in the study ensured that an offender with suicidal ideation is not excluded due to an inaccurate assessment by a practitioner. This also provides continuity with other research using police data which has included both suicidal and self-harm markers.

**Crime and Intelligence System (CIS)** In order to answer the research questions, analysis was required of the Crime and Intelligence (CIS) computer system which was used by Leicestershire police during the study period. This provided information on the number of offenders who committed serious domestic abuse and the number of those who held suicidal markers. From this data set, it was possible to identify the characteristics of the offenders such as gender, ethnicity, age range, substance abuse and mental illness. It was also possible to identify whether the suicidal marker was attributed before, at the time or after the deadly domestic abuse offence was committed.

Interrogation of CIS was also required to identify the total number of offenders during the study period and the number of those who held suicidal markers. From this, it was possible to establish a benchmark of suicidal ideation among the total offender population. In order to be able to draw comparisons with wider society, the rate of suicidal ideation in the general society should be established but there are real difficulties in doing so. Medical data would undoubtedly provide a good insight into the number of people who profess suicidal ideation, but the difficulties in obtaining these data are substantial.

Between 1997 and 2015, Leicestershire Police used the CIS software system which recorded crime, intelligence reports, victims and offender reports. It was a nationally used standalone system which was not connected to any other databases such as the Police National Computer (PNC) or the custody system. To record a crime, practitioners entered comprehensive detail of the offence type, location, reporting person, victim and offender. The system was designed so it was not possible to complete a report if key information was missing, such as whether the offence was related to domestic violence. When offenders were created they were assigned a unique ‘nominal’ record number, which could be used for identification and to link pieces of intelligence or other reports to them. Within the nominal record would be ‘warning markers’ which would inform the user of whether the nominal had any such as: suicidal, self-harm, violent, drugs, escaper or weapons.

Intelligence logs could be entered by any users and were linked to ‘nominals’ by intelligence analysts. If, for example, an officer attended an incident where a nominal had attempted to commit suicide, they could enter an intelligence log onto the system which was then linked to the offender’s nominal record and a suicidal warning marker created. The fact that an analyst reviewed every intelligence report and then associated it to a nominal record added an element of rigour to the process and helped to assure its accuracy. Although CIS was not linked to PNC, any warning markers updated on PNC were transferred over to CIS. For example, if an offender entered a custody suite and displayed suicidal tendencies then the custody record would be updated by the custody sergeant and an alert sent to PNC. In turn, the PNC bureau would update the warning markers on the national CIS.

**Limitations of CIS** Although there are flaws in every system, the information contained within CIS should have been fairly accurate for a number of reasons. Firstly, the software itself was very user friendly and practitioners were encouraged to record warning markers for the protection of themselves and colleagues. Secondly, custody sergeants were rigorous in the recording of risk especially when related to suicidal/self-harm threats, to protect against criticism if there was a

death in custody. Furthermore, the reports in CIS were subject to Home Office Counting Rules (HOCR) and National Crime Recording Standards (NCRS) which improved accuracy through regular audit.

Data was extracted from CIS in three main categories: serious domestic violence (DV) offenders with suicidal/self-harm markers, serious DV offenders (without markers) and all other offenders (regardless of offence) with suicidal or self-harm markers over the study period. In addition, an unsuccessful attempt was made to obtain similar data from the National Health Service, as described by Button (2017).

A major obstacle for the study was the decision to switch off CIS completely and transfer all the data from it onto a read-only piece of software called *Phoenix* in June 2016. This effectively meant that all data required for this study had to be extracted from CIS in a very short space of time, as large data searches could not be done on *Phoenix*. When further information was required, it had to be extracted manually from individual records in *Phoenix*.

A large proportion of suicidal warning markers would be attributed to offenders when they were arrested and entered police custody. There is a statutory requirement under Code C of the Police and Criminal Evidence Act (PACE) for custody officers and staff to record all identified risks in the custody record of a detainee. This is done in accordance with the checklist for assessing detainees ([Appendix A](#)) which asks whether a detainee has harmed themselves or done so on a previous occasion (College of Policing 2016). If a detainee states that they have, then the custody officer would seek to obtain further information to establish whether it was a suicide attempt or a self-harm episode. They would then select the most appropriate warning marker which would be automatically sent to the PNC bureau, who would update the marker on both PNC and CIS. This is, however, subjective based upon the opinion of the custody officer and information provided by the detainee. There were, no doubt, a number of detainees who had self-harmed or attempted suicide, but refused to disclose this information whilst in custody due to hostility or embarrassment. It is less probable that a custody officer would fail to record a suicidal or self-harm warning, as if a detainee harmed themselves or died in custody and this information was not recorded then they could expect to face disciplinary procedures. With a ‘Sword of Damocles’ hanging over them, this improved data accuracy and reliability at least in what they had been told by the detainee.

Another issue with data accuracy in relation to the suicidal and self-harm warning markers was the environment in which the offender was being asked the questions. The fact that they had been treated as an offender may mean that it was a hostile situation for them in which they may feel that they are being judged and are unwilling to provide information.

Another potential issue with the data was the fact that some offenders used false names when they interacted with police. If it was identified that an offender had used a false name, then a duplicate *alias* record was created so that in the future officers would be aware the offender had used this false name. This may not have been identified until an offender was in custody and has had their fingerprints taken. It was found during the study that some offenders had been linked to a serious offence by their alias name and not their correct name. When this was discovered, then the extracted record was amended to reflect the correct name and so the offender record could be checked for a self-harm or suicidal marker.

In some cases, an offender was identified, but there was insufficient evidence to charge them, or the Crown Prosecution Service (CPS) had refused to charge them (due to an uncooperative victim or other factors). In this scenario, the perpetrator's status on the crime report would be amended from offender to suspect, in order to comply with HO counting rules. This would occur in cases even when it was clear that the perpetrator was responsible for the assault and this was especially prevalent in domestic abuse cases where the victim was unwilling to support a criminal prosecution against the perpetrator. There were 88 GBH with intent, two attempted murder and one murder offence included in the study which fulfilled these criteria. They have been included because although the perpetrator did not satisfy the charging standards, it did not mean that they had not committed the offence. Any cases which had been identified as a false report or a wrongly identified offender were removed from the study. Likewise, any cases which occurred outside of the Leicestershire police area, were incorrectly recorded or were identified as duplicates were removed.

## Findings

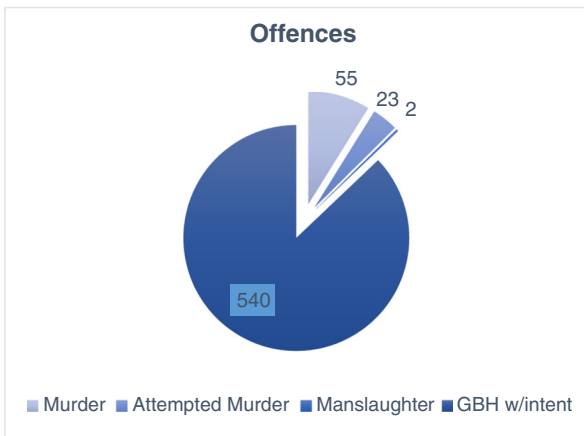
In the study period of 1997–2015, there were 620 domestic-related murder, attempted murder, manslaughter or GBH with intent offenders included in the study (Fig. 1). The majority of offences were identified as GBH with intent with 540 offences (87%), along with 55 domestic-related murders<sup>1</sup> (9%), 23 attempted murders (3%) and two manslaughter offences (0.3%). Of the cohort of 620 offenders, 125 (20%) were identified as having either a suicidal, self-harm warning marker or both. Of the group of 125 suicidal serious domestic offenders, 94 (75%) were male, 31 (25%) were female. Their other demographic characteristics are described in Button (2017). Out of all the serious domestic offenders who held relevant markers, 36.8% held a suicidal marker, 34.4% held a self-harm marker and 27.2% held markers for both.

Of the group of 125 serious offenders with suicidal or self-harm markers, 28% (35) had been attributed a marker before, 16% had been attributed at the time and 54% after the event. In 1.6% cases, it was unknown when the marker was attributed (Fig.2). A total of 13.6% offenders had been attributed more than one marker at different points in time for different offences; when this was the case, the earliest marker was used. In 7.2% of cases, offenders were attributed a marker both before and either at the time or after the offence was committed.

By dividing the 35 offenders with suicidal markers *prior* to their act of deadly domestic violence by the total of 620 offenders said to have committed such acts, we obtain a rate of 5.6% with prior warnings. Unfortunately, we cannot compare that directly to the other 158,379 offenders, for whom there was no measure of the time frame in which the warnings were posted.

Of the 158,379 offenders, 7241 were identified as holding either a self-harm or suicidal warning marker (or both) at the point of data collection for this study in 2016, which equated to only 5% of the group. That estimate of 5% is not comparable to the

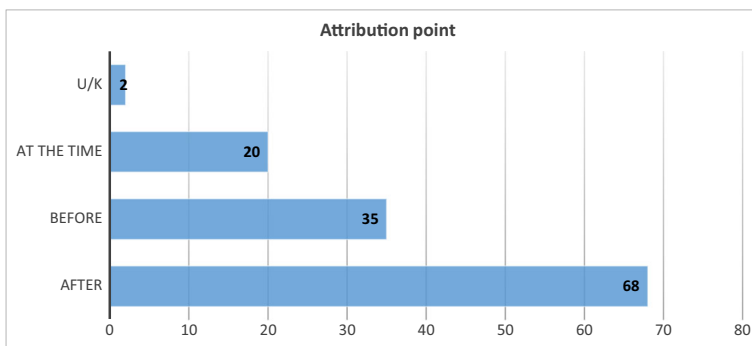
<sup>1</sup> The total 'murder' offences include the offence of 'Murder under 1 year old'.



**Fig. 1** Serious domestic abuse offences recorded in the study period

5.6% prior rate for the deadly violence offenders, because the latter excludes any information entered after the deadly violence occurred. But since 62% of the markers for the deadly violence offenders occurred at or after that deadly offence, a rough estimate can apply the same ratio to the 7241 other offenders. That is, reducing that number by 62% equals 2752 cases, which would be 1.7% of the 158,379. By that metric, it is three times more likely that offenders charged with an act of deadly domestic violence had prior suicidal warning markers than offenders not charged with such crimes ( $5.6/1.7 = 3.3$ ).

If the offence of GBH with intent is excluded, there were 80 domestic homicide offenders identified in the study period of which 23 (29%) held suicidal markers. Out of the 23 with markers, 7 of them were entered prior to the homicide, or 8.75% of 80. Using the estimated general rate of 1.7% of the 158,379 with prior markers of suicide, this compares to the 8.75% rate for domestic homicide offenders in a 5 to 1 ratio. That is, it was five times more likely that a domestic homicide offender had a prior warning marker for suicide than the rate for all other arrestees in the time period.



**Fig. 2** Point in time at which a suicidal or self-harm warning marker was attributed to a serious DA offender, in relation to the commission of the offence

## Conclusions

This study provides the most precise comparisons yet between the presence of early warnings of suicide or self-harm in a person's record and the likelihood of their committing an act of deadly domestic violence. By dating the entry of a suicidal behaviour warning, the study shows that such warnings are three times more likely to have been made prior to cases of any deadly violence than among offenders not charged with such crimes, and five times more likely for those charged specifically with murder, manslaughter or attempted homicide.

These comparisons are derived from a retrospective analysis, in which time at risk was not standardised. Neither false positive or false negative rates could be calculated with these data. Yet there remains a great capacity to do so in future research. For all of its limitations, for example, the DASH risk assessment data include information on suicidal threats taken from constables interviews with the victims. In any police agency where the answers to the suicide question have been coded, there is great potential for a prospective analysis of the difference in future harm against victims whose offenders do and do not have the victim describing them as suicidal. That research design could be implemented in several agencies, to insure replication of a pattern that does not vary across police agencies, at least in the UK.

One other recommendation would be to make improvements in the way that practitioners record suicidal ideation to improve the consistency of the data. This could involve better training for front-line officers as to the differences of self-harm and suicidal ideation and the introduction of a standardised screening process for custody staff to identify suicidal ideation. This could use a model such as the P4 screener that asks about suicidal ideation in greater detail through questions on past suicide attempts, whether a suicide plan has been considered by the offender, the probability of completing suicide and the preventative factors. This should not only enrich data on suicidal ideation in offenders, it should also provide a more comprehensive risk assessment for custody staff both whilst incarcerated and on release.

A further recommendation would be to make any identified suicidal ideation in an offender a mandatory reporting requirement in any Multi-agency Risk Assessment Conference (MARAC) process, commonly in operation with UK agencies. If a domestic violence case is deemed to be a high-risk case then a MARAC process is undertaken in which the offender and victim are discussed. But it may be the case that a MARAC conference may identify suicidal ideation in an offender from partner agencies that was unknown to the police.

Consideration could also be given to reviewing data across more than one police organisation or on a national level to assess the relationship between suicidal ideation in offenders and serious domestic abuse. Due to the improvements in data-sharing policies between police agencies and the standardised use of some software packages, this may be possible in the short-term future. In April 2015, Leicestershire adopted the Niche software system and joined with Lincolnshire, Nottinghamshire and Northamptonshire. Derbyshire Constabulary is due to join imminently. This allows practitioners in these organisations immediate access to local intelligence and crime reports and would allow researchers the opportunity to access standardised data across at least these five organisations.

Regardless of the next step in the research agenda, this confirmation of a substantial difference in suicidal ideation between serious domestic violence offenders and all



others is an important step forward. Now that the existence of prior warnings indicates a higher risk of serious violence, there is little justification in ignoring those statistical facts in favour of less evidence-based forms of risk assessment. Analysing suicide ideation is not yet the basis of a risk assessment tool. Yet it could be part of a larger process of using all data available to create more accurate predictions, and more effective prevention, of domestic homicide.

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## Appendix A

### College of Policing, Checklist: Assessing Detainees

Custody officers must ensure that the detainee is asked the following questions:

- How are you feeling in yourself now?
- Do you have any illness or injury?
- Are you experiencing any mental ill health or depression?
- Would you like to speak to the doctor/nurse/paramedic (as appropriate)?
- Have you seen a doctor or been to a hospital for this illness or injury?
- Are you taking or supposed to be taking any tablets or medication? If yes, what are they and what are they for?
- Are you in contact with any medical or support service? If yes, what is the name of your contact or support worker there?
- Do you have a card that tells you who to contact in a crisis?
- Have you ever tried to harm yourself? If yes, how often, how long ago, how did you harm yourself, have you sought help?

If the detainee answers yes to any of the above, they should be asked:

- What is the name of your GP and GP's surgery?
- Do you have a family member who is aware of your health problems?
- Is there anything I can do to help?

### Crime and Intelligence (CIS) Codings

Nationality –

E = English

Ethnic group

0—Unknown

- 1—White European
- 2—Dark European
- 3—African Carribean
- 4—Asian
- 5—Oriental
- 6—Arab
- 7—Other

#### Grading

- 1—Photo
- 2—Nominal/suspect
- 3—Area target
- 4—Force target

#### HO Codes

- 00101—Murder
- 00102—Murder under 1 yr
- 00501—GBH w/intent
- 00200—Attempted murder
- 00401—Manslaughter

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