Project 360: An intervention to address victim-police engagement in repeat domestic violence cases

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Policy report

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Disclaimer

Ethical approval

Procedures for the evaluation of Project 360 have received approval from the University of Leicester Ethics Committee under the following reference codes: mk332-5e3e; jm464-d28b; jm464-6fe8; jm464-6eb3; jm464-2301; 713-jm464-economics; 2926-jm464-economics.

Contents

Executive summary

This executive summary contains the main findings from the evaluation of Project 360.

Project 360 is a secondary responder programme in the Leicestershire Police Force area, in which *engagement workers*, with an expertise in assisting victims of domestic violence, work from within the police force. Following a reported domestic incident, the engagement worker contacts the victims via telephone within 24 hours and acts as a mediator between the police and local domestic violence support services. Engagement workers provide information about existing local services, help victims to make statements with police and provide victims with assistance and referrals to access services. Rapid phone contact is often followed up by face-to-face visits between engagement workers and victims to provide further assistance.

The integration of *engagement workers* within the police force is a key feature of Project 360. This is important for three reasons:

- **Rapid response**: New incidents are reported daily and this information is shared with engagement workers. The intervention aims at contacting victims within 24 hours of a police callout.

- **Enhanced information**: Engagement workers have access to all information previously recorded by police with respect to victims and perpetrators. This allows engagement workers to better assess the risk associated with specific victims and perpetrators and to design a bespoke intervention.

- **Embedding of services with police**: Victims may believe the police are better able to assist them than other non-police support agencies, giving extra authority to the engagement workers.

1,015 cases, over a six-month period, have been covered by the Project 360 trial. The random allocation of cases to treatment and control groups ensures that through the quantitative analysis, the programme's *causal effects* are estimated. For the evaluation of the programme, we have collected data from police database administrative sources and from a victim survey covering 214 victims (110 from the treatment group and 104 from the control group).

The main findings of the evaluation are summarised below. The term 'initial incident' refers to the police callout that leads to the addition of a case to the subject pool.

- **The intervention led to an increase in victim satisfaction with police services.** Victims in the treatment group were 43% less likely to report being dissatisfied with the police handling of their case than victims in the control group.

- **The intervention led to a significant increase in willingness to report future incidents.** The treatment group was 42% more likely than the control group to say that their willingness to report a future incident had increased.

- **The intervention resulted in victims being more likely to take actions to change their situation.** Relative to the control group, victims in the treatment group were significantly more likely to report having visited their general practitioner, were more likely to have accessed a domestic violence support service and were 34% less likely to be currently in contact with the perpetrator.

- **The intervention was associated with greater victim stress in the short run.** Relative to just before the initial incident, victims in the treatment group were 34% less likely to report improved *stress levels* and 48% more likely to report worsening *stress levels* than victims in the control group. Victims in the treatment group were also more likely to report a worsening of their quality of *sleep* and have poorer outcomes for *life control* and *mental health*. These findings are consistent with the increased willingness of victims to take actions to change their situation. Separating from an abusive partner or making other major life changes were expected to be stressful.

- **The intervention was associated with improved family life and quality of life overall.** Despite the findings in relation to stress, measures of *quality of family life* and *quality of life overall* both significantly improved for the treatment group relative to the control group. Victims in the treatment group were 26% more likely than victims in the control group to report quality of life improvements.

- **The intervention led to an unexpected decrease in the provision of witness statements to police by victims.** Victims in the treatment group were 21% less likely to provide a witness statement than victims in the control group. Consistent with this being

attributable to the intervention, the decline was found only among victims who provided statements after the initial police visit.

- **The intervention was associated with fewer statements being retracted by victims.** Of those who made a statement, victims in the treatment group were 27% less likely to retract than victims in the control group. Further, statements in the treatment group are more likely to be associate with an arrest than are statements in the control group.

- **The intervention was not associated with a notable change in repeat offences over a one-year period.** There was no significant change in the number of instances of domestic violence recorded by police. However, we found weak evidence to suggest that the severity of future instances (as measured by risk assessment and arrests) was lower for the treatment group than for the control group.

These results suggest that the Project 360 intervention had a positive effect on a number of victim outcomes and on the victims' perceptions of police handling of their cases.

Based on the incremental costs incurred during the trial, we estimated a cost of £174 per victim engagement for the Project 360 intervention.

The authors of this report make five recommendations based on the analysis for the design and implementation of second-responder programmes based on Project 360.

Recommendation 1: A second responder programme, modelled around Project 360, should be rolled out as standard practice in police forces that would like to see improvements in the relationship between police and victims of domestic violence, particularly in cases categorised at standard and medium risk.

Recommendation 2: The implementation of the intervention should ensure that victims are provided with the immediate opportunity to make a witness statement to police. This may take the form of engagement workers establishing immediately after an incident whether victims would like to make a statement and assisting victims with making such statement in as short a time period as possible.

Recommendation 3: The intervention should be rolled out to repeat victims who have experienced fewer than three previous instances in a 365-day period. This would allow for police-victim relationships to be strengthened earlier in the cycle of domestic violence.

Recommendation 4: In cases in which children are involved, more focus should be placed on future implementations to work with schools. Working with schools provides a real opportunity for change. School administrators stated in interviews that they had a real need for more information and cooperation to identify and assist students who are exposed to domestic violence at home. The engagement workers, with access to information from police and local authorities, can provide this information in a secure and standardised framework to each of the schools' Designated Senior Person.

Recommendation 5: The intervention should be available anytime a household experiences domestic violence. The trial was only designed to estimate the impact of a single intervention. It is reasonable to expect that through continuous work with engagement workers, we may see a change in patterns of abuse and crime. Many of these households have a long history of abuse, and they may need multiple attempts of engagement over time provided through an intervention such as Project 360.

1. Project 360 background information

In the Leicestershire Police Force area (covering Leicester City, Leicestershire and the Rutland Council area) 17,396 domestic offences and incidents were reported during the one-year period beginning April 2013. Approximately 20% these reports to Leicestershire Police involved repeat victims. This means that about seven victims daily experienced three or more reported incidents of domestic violence over a 365-day period.

Domestic violence is estimated to have a direct cost to the UK public purse in excess of £5.7 billion every year and to account for 23% of public health expenditure (Walby, 2004, 2009). Beyond the direct cost of domestic violence due to police involvement, judicial procedures and health expenditure, there are difficult-to-quantify indirect costs, including emotional trauma and the long-term effect on children in these families.

Project 360 can be seen as a response to the HMIC report 'Everyone's business: Improving the police response to domestic abuse' (HMIC, 2014). The report states that there is a lack of expertise on the part of police in the UK when it comes to dealing with victims of domestic violence:

> Officers lacking the skills and knowledge necessary to engage confidently and competently with victims of domestic abuse. (pg. 7)

> Victims told HMIC that they did not always feel believed or that they were being taken seriously by the police. (pg. 9)

> A lack of understanding of many complex factors is, at least, in part responsible for the poor attitudes of police officers. (pg. 53)

The design, implementation and running of Project 360 are based on a collaboration between Leicestershire Police and the local authorities aimed at addressing these concerns by using secondary responders – *engagement workers* – with an expertise in assisting victims of domestic violence. The engagement worker acts as a mediator between the initial police visit and the available support services.

In addition to directly addressing the needs of repeat victims of domestic violence, Project 360 addresses wider concerns outlined in the HMIC report. First, although the intervention specifically targets repeat victims of domestic violence, the design of Project 360 does not preclude the use of the intervention more generally in all cases of domestic violence that are categorised as standard or medium risk. Second, the intervention includes a component specifically to support children in households which have experienced domestic violence, addressing another concern expressed in the original HMIC report.[1]

Researchers at the University of Leicester conducted the independent evaluation of Project 360, the results of which are reported here.

The assessment of the effectiveness of the Project 360 intervention, as in the case of any domestic violence study, is complicated by the inherent difficulty in determining what an 'improvement' in domestic violence looks like based on the data that is available. To illustrate this complexity, consider interpreting an observed increase in the reporting of domestic violence following an intervention.[2] This may be working through one of two opposing channels: the intervention leads to an increase in abuse – as suggested in Davis, Weisburd and Hamilton (2008) – or the intervention leads to an increase in empowerment and willingness to report abuse on the part of the victim – as suggested in Davis and Taylor (1997). Clearly, knowing which of these channels underlies such a result is important.

To address this, we utilise data from multiple sources. The first came from a victim survey designed for the purpose of the Project 360 evaluation. This survey provides victim-reported information reflecting the change since the initial police visit in safety and well-being and attitudes towards the police. We also use administrative information from Leicestershire Police, from which we collect data on the demographic characteristics of victims and perpetrators, the provision of statements to police by victims and repeat police visits over a one-year period following the initial incident. These quantitative data are supplemented with information from interviews with engagement workers and schools.

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[1] According to the HMIC, a separate inspection on child protection by HMIC has since being published. https://www.justiceinspectorates.gov.uk/hmic/wp-content/uploads/in-harms-way.pdf
[2] As was found in previous randomised-control studies (Davis and Taylor, 1997; Davis, Weisburd and Hamilton, 2008).

Figure 1: Leicestershire Police Force Area

A number of studies have looked at interventions in domestic violence. These include the research on projects such as Project CARA[3] in the UK. Unlike CARA, Project 360 is an intervention directed at victims of domestic violence that is similar to the interventions analysed in Casey, Berkman, Stover, Gill, Durso and Marans (2007); Stovers, Berkman, Desai and Marans (2010); Davis and Taylor (1997) and Davis, Weisburd and Hamilton (2007). Of these, only the interventions in Davis and Taylor (1997) and Davis, Weisburd and Hamilton (2007) were, like Project 360, implemented as randomised-control trials. The lack of

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[3] CARA is a perpetrator-focused intervention run by the Hampshire Constabulary.

randomisation in the remaining studies means that results can only, at best, be suggestive of a programme effect. Because Project 360 is a randomised-control trial, we estimate unbiased causal effects of the programme on the selected outcomes (Holland, 1986).

The evaluation of Project 360 significantly contributes to the evidence base over and above the randomised studies of Davis and Taylor (1997) and Davis, Weisburd and Hamilton (2007):

- *The design of the Project 360 intervention is fundamentally different* to previously studied interventions. A key characteristic of Project 360 is the embedding of engagement workers within the police force. This links experts in victim support (i.e. the engagement workers) with information about cases, victims and perpetrators as the cases are reported, and this information is readily available to the engagement workers. This ensures that victims can be provided with timely and relevant assistance in accessing follow-up support.

- *The Project 360 intervention does not involve perpetrators.* Previously studied interventions involved contact with both the victim and the perpetrator. In some cases, this appears to have exacerbated tensions in the household, possibly leading to more violence.

- *A wide range of outcomes is evaluated.* Previous studies focused on repeat police call-outs, which have an ambiguous interpretation. In addition to repeat police call-outs, we report results from victim follow-up surveys and detailed results for statement provision.

- *This is the first randomised-control study of this kind in the UK*. It also constitutes one of the largest randomised-control studies ever conducted on crime.

2. Experimental design and evaluation

The Project 360 intervention is implemented as a randomised-control trial (RCT). The strength of the RCT design for policy evaluation is that, unlike interventions that are allocated based on voluntary subject participation or need (as determined by a third party), randomisation ensures that whether an individual receives access to the intervention is uncorrelated with the characteristics of individuals that may confound the effects of the programme.[4] The

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[4] For more details on the use of randomisation in evaluation studies, see Manski (2007), Angrist (2006), Holland (1986) and Imbens and Wooldridge (2009).

treatment effects reported here, therefore, can be interpreted as causal effects of the Project 360 intervention.

Random assignment of the intervention

When Leicestershire Police are called out to a domestic incident, they record the incident and details of the household on a *Domestic Incident and Vulnerable Child Working Sheet*. The information from this working sheet is recorded in a domestic incident report in the Leicestershire Police database and assigned a case number. An automated workbook, designed by University of Leicester researchers and the Leicestershire Police IT services team, searched through the recorded incidents and recovered all domestic cases. The following conditions were applied:

1. The victim of the current incidence had shown up in at least two other reports and fewer than six other reports in the prior 365 days.
2. The victim is identified as *standard* or *medium* risk from the DASH assessment.
3. The victim had not shown up in the Project 360 subject pool previously (as either a treatment or control group constituent).

The workbook was automatically updated every 24 hours and randomly allocated (with a 50% probability) cases meeting the above criteria into either the *treatment group* or the *control group*. The Project 360 engagement team received case details and victim contact information for all cases in the treatment group but did not receive information for cases in the control group. The incident leading to a case being allocated to either group in the subject pool is referred to throughout this document as the *initial incident*.

Current procedure

The current police procedure for domestic violence call-outs is provided to victims assigned to both the treatment group and the control group. The current procedure for victims identified as medium and standard risk (according to the DASH assessment)[5] is to provide the victim with contact information for Leicester, Leicestershire or Rutland domestic violence

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[5] DASH stands for domestic abuse, stalking and harassment. This is a standardised risk assessment tool, comprising 27 questions, brought into use across UK police services in 2009. Assessments are classified into three risk levels: Standard (1), Medium (2) and High (3).

victim services. If a victim is identified as high risk, the officer will typically make a referral to the Domestic Abuse Support Team (DAST). DAST is an integrated team of support workers within Leicestershire police.

The intervention

The Project 360 intervention is offered to all subjects in the treatment group. The main points of the intervention are summarised here. A flow diagram describing the complete intervention is presented in Appendix 2.

Each morning, engagement workers are allocated their new cases. They start by reviewing the police report and the Domestic Incident and Vulnerable Children Working Sheet for each case. Further information can be gathered on the history or reported incidents and other crimes for the victim and the perpetrator from police databases. After an initial investigation, the engagement worker contacts the victims by telephone. The project aims to make first contact within 24 hours of the incident.

Once initial contact has been made, the engagement worker will offer to provide further assistance to the victim. Further assistance can take the form of:

- Assisting the victim if they wish to make a statement to police
- Informing the victim of their legal options and the support services available
- Providing referrals to any support services which the victim would like to access
- Helping to construct a 'planned escape' if the victim wishes to leave the perpetrator.

The intervention lasts approximately one week (this can vary according to victim needs).

If a child is in the household, the engagement worker will contact the Designated Senior Person at the child's school (most commonly the child safeguarding officer or head teacher). The school is informed that a domestic disturbance has taken place, but is not provided with specific details regarding the incident.

3. Interviews with engagement workers

Face-to-face interviews were conducted with the Project 360 engagement workers. The primary purpose of these interviews was to gather information with respect to how the intervention was implemented, the impact of the programme on victims as perceived by the

engagement workers, the benefits of the programme relative to existing services as perceived by the workers, and any potential changes that would allow engagement workers to more effectively assist victims.

Benefits of the intervention over existing services

Engagement workers discussed their belief that the Project 360 intervention provides an effective way of assisting victims of domestic violence over and above existing services. They cited a novel feature of the programme: the full integration of a victim-targeted secondary response with police services. Three channels through which integration of services may be important were identified:

- **Enhanced information**: an engagement worker has access to all information previously recorded by police with respect to victims and perpetrators through a number of police databases. This ensures that workers can assess the risk involved in visiting a victim before they proceed. As one worker stated: 'In previous [DV] work I was trying to do my job completely blind.'

- **Rapid response**: the team receives information on new cases updated daily. No referrals from a third party are needed and the engagement workers can take the initiative in making initial contact. This ensures that workers are aware of new cases and can begin the intervention within 24 hours of the initial report being made.

- **Services embedded with police**: Engagement workers believe that the affiliation with the police force makes victims more responsive and willing to listen relative to their previous experience working with non-police victim support agencies.

Engagement workers felt that the programme also allowed them to deliver emotional support to victims shortly after an incident occurred.

Project 360 engagement workers assist and coordinate access to services for victims as well as ensure that they are taken care of while they wait for access to be provided.

4. Interviews with schools

Face-to-face interviews were conducted with a Designated Senior Person (DSP) in eight different key stage 2 (KS2) schools across Leicester and Leicestershire. The schools chosen for interview were large KS2 schools in areas with relatively high numbers of police call-outs for

domestic incidents. All interviewed DSPs reported being aware of pupils who had experienced domestic violence in the current school year.

The primary purpose of these interviews was to gather information on how schools might make use of the information provided by Project 360 and what other services would be useful in supporting schools in their child protection role.

The role of schools in domestic violence support

All DSPs stated that the school played an important role in supporting children who have experienced domestic violence. All schools interviewed had policies and formal procedures in place, meeting the criteria set out by city and county councils. However, many DSPs reported uncertainty about general strategies for assisting children who experience domestic violence. Vague terms, such as 'offering pastoral care' are used to describe the support that will be given to children but few have tangible strategies. Almost all DSPs described the actual interventions that would be used to offer support as being on a case-by-case basis.

Schools and interaction with domestic violence support services

When asked about what additional services outside agencies could offer to assist schools with providing support to children, three services gaps were identified. These gaps were identified by all DSPs. 1) Lack of information prevents schools from identifying pupils from households in which, due to domestic violence, police or other services are currently involved. 2) In cases where schools have informed an outside agency, such as social services or police, there was a lack of consistency in follow-up information on the status of the affected pupils. 3) Schools felt they lacked a consistent, named, contact person whom they could contact for information or guidance or report an incident of concern in cases where a pupil was thought to be exposed to domestic violence at home.

The school interviews suggest that there is a real opportunity for the Project 360 engagement worker to assist schools in supporting pupils who have experienced domestic violence.

5. Characteristics of the sample

Key features of the cases in the Project 360 subject pool are summarised here. Detailed tables are reported in Appendix 1. The main points from this section are summarised in the caption below.

> *Caption 1: Sample characteristics*
>
> - The final sample consists of 1,015 cases; 510 treatment and 505 control ones.
> - The survey response rates (21.6% for the treatment and 20.6% for the control) do not significantly differ between treatment and control groups.
> - Observed characteristics do not significantly differ between treatment and control groups. This is consistent with the successful randomisation of the allocation of cases between the two groups.

Sample size

The final sample consists of 1,015 cases corresponding to unique victims (see Table 1), with 510 cases allocated to the treatment group and 505 cases allocated to the control group.

The Victim Survey covers 110 victims from the treatment group and 104 victims from the control group, corresponding to response rates of 21.6% and 20.6%. The difference between the response rates for the two groups is not statistically significant, meaning that the treatment group was not more likely to respond to the survey than the control group.

In Figure 2a and Figure 2b, we present the number of cases in the study on a per capita basis (per 10,000 people) throughout Leicestershire and Rutland and the city of Leicester. Figure 2a reveals considerable variation in the number of cases per capita, with districts in the north of the county having between 7.7 and 8.1 cases per capita, and districts in the south having between 5.1 and 6.0 cases per capita. The city of Leicester and Rutland reveal a number of cases per capita that are far above and far below the average over the Leicestershire Police Force Area.
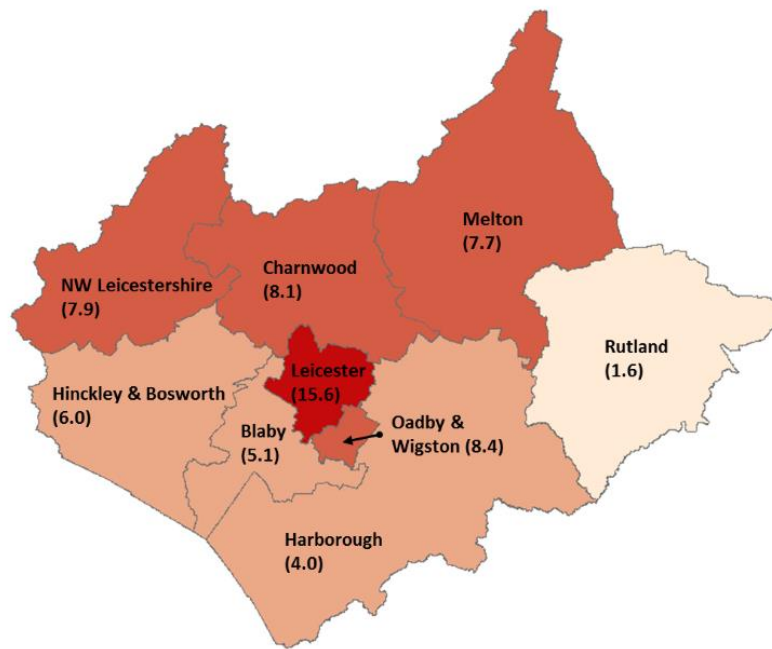
Figure 2a: Study cases per in study 10,000 households, Leicestershire County
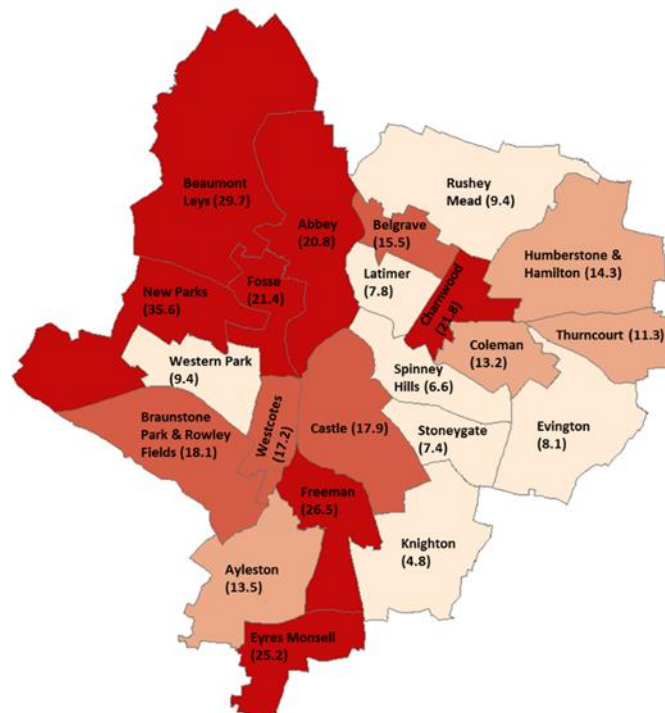
Figure 2b: Study cases per in study 10,000 households, Leicester City

Note: The study cases reflect all cases over a six-month period for which the victim has been present in three to six previous cases in the previous 365-day period.

Notably, the number of cases per capita in Leicester city is almost twice as high as the next highest district. When looking at the ward level within the city of Leicester (Figure 2b), there also is considerable variation. The highest number per capita in New Parks, at 35.6, is more than seven times the lowest number per capita in Knighton, at 4.8.

Summary statistics describing the average characteristics of the treatment and control group are also analysed (see Table 3). In addition to providing information about the make-up of these cases, these summary statistics allow us to test whether the randomisation of treatment was successful. If the randomisation was not implemented correctly, we expect that there may be differences in observable predetermined characteristics between the treatment and the control group.

Victim, perpetrator and household characteristics

Victims are disproportionately likely to be female and perpetrators disproportionally likely to be male. 87% of victims and 14% of perpetrators are female in the treatment and control groups. The average age is 34 for victims and 33 for perpetrators. The vast majority of both victims and perpetrators report themselves to be white. We find that victims have reported ethnicities for white, Asian and black of 82.2% (83.3%), 11.0% (9.7%) and 6.8% (6.9%) in the treatment group (control group) respectively. These ethnicity percentages are similar for perpetrators, and are consistent with population counts reported by the Office for National Statistics for the Leicester, Leicestershire and Rutland population. Based on the 2011 census white, Asian and black ethnicities make up 83.1%, 12.5% and 1.7% of the Leicester, Leicestershire and Rutland population.[6]

58.6% and 57.0% of households in the treatment and control group have children. The average number of children in households with children is 1.92 and 1.98 for the treatment group and the control group respectively.

The average number of police callouts in the previous 365 days (not including the most recent) is 2.3 for victims in both the treatment and control groups, and the average DASH[7] assessment

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[6] The census values are taken from reference table KS201UK, available at
http://www.ons.gov.uk/ons/datasets-and-tables/index.html?pageSize=50&sortBy=none&sortDirection=none&newquery=population+ethnicity
[7] DASH assessments are captured by a 1-3 scoring system: 1 is standard risk level, 2 is medium risk level and 3 is high risk level.

is 1.28 for both the treatment and control groups. This suggests that the average risk level facing victims in each of these groups is very similar.

In the majority of reported cases, the perpetrator and victim have a close relationship. In 76% and 80% of cases, for the treatment group and the control group, the victim and the perpetrator are either current partners or ex-partners. In another 22% and 20% of cases, the victim and perpetrator are either siblings or a parent and child. Fewer than 3% of cases in each group involve non-family or non-intimate abuse.

Consistent with expectations, in the majority of cases, the reported differences in characteristics between the treatment and control group are not statistically significant.[8] However, there are a few differences between the treatment group and the control group that are worth noting. We find that perpetrators in the treatment group are less likely to be unemployed and have, on average, one fewer registered case than perpetrators in the control. We also find that victims and perpetrators are slightly more likely to be living together in the control group than in the treatment group. However, the remaining characteristics suggest that treatment and control groups are indeed very similar. For example, police call-outs and the DASH assessments are almost identical between groups, suggesting that there is not a significant difference in the severity of domestic violence within the average household between groups. We, therefore, feel comfortable in concluding that any differences we see in post-treatment outcomes between groups should reflect the treatment itself, rather than a spurious correlation attributable to differences in household or victim characteristics.

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[8] Statistical significance is evaluated at a 95% confidence level.

Engagement in the treatment group

Caption 2: Engagement according to characteristics

- 71% of contacted victims engaged with the Project 360 intervention.
- Cases in which the victim is female and the perpetrator is male are significantly more likely to engage than different victim-perpetrator sex combinations.
- Engagement is significantly higher in households where both the victim and perpetrator are employed relative to households where one or both are unemployed.
- Victims with a reported *Asian* ethnicity have significantly higher engagement rates than victims with *white* or *other* reported ethnicity.
- Engagement rates are significantly higher for victims in households with children than for victims in households without children.

We define a victim as having *engaged* with the Project 360 intervention if they had been contacted by a Project 360 engagement worker and they accepted some form of assistance. This assistance ranges from providing advice via a one-time phone conversation to a face-to-face meeting to construct an escape plan. While an effort was made to deliver the intervention to all victims assigned to the treatment group, just under 49% of treatment group victims had not engaged with Project 360. Of the victims that had not engaged, 57% were contacted by an engagement worker by phone, but were not interested in phone-based assistance or a face-to-face meeting. 43% were not contacted, as engagement workers were unable to make contact with victims given the information that was available. Among all victims whom the engagement worker was able to contact, the engagement rate was 72%.

In Table 4, we document the *engagement rates* for victims in the treatment group, stratified according to the different characteristics of the victim and the perpetrator, as well as characteristics of the household. Female victims have higher engagement rates than male victims. Engagement is highest, at 54.3%, when the victim is female and the perpetrator is male, and lowest, at 29.7, for male victims and female perpetrators. While engagement rates are not significantly different across different ages, young victim/perpetrator cases have notably a lower engagement rate, at 30.4%, than do older victim/perpetrator pairings, which have engagement rates greater than 50%.

There is a significant difference in engagement according to victim and perpetrator employment status. Unemployment, of either the victim or the perpetrator, is associated with lower engagement. The highest engagement rates, at 59.5%, are seen when both victim and perpetrator are employed and the lowest, at 39.8%, are when both the victim and perpetrator are unemployed.

In terms of ethnicity, we find the highest engagement rates for victims classified broadly as *Asian,*[9] at 71.4%. Rates for victims recorded as *white* or *other* were roughly consistent with the overall engagement rate of 50%. We find virtually no difference in engagement for intimate versus non-intimate cases.[10] There is a non-trivial difference in the size of the engagement rate between households in which the victim and perpetrator live together (53.4%) and those in which they do not (47.4%). However, we do not find that these two rates are statistically different. Finally, victims in a household with children (54.6% engagement) are more likely to engage than victims in a childless household (46.7% engagement).

6. Results from the victim survey

As part of the analysis, a victim follow-up survey was designed to solicit information from victims in both the treatment group and the control group. The survey was administered by the Leicestershire Police Service Improvement Department approximately one month after the initial incident (results reported in Tables 5, 6 and 7). The survey is designed to cover three different types of outcomes: the victim's perceived well-being, the actions the victim has taken since the initial incident and the satisfaction with the handling of the initial incident by the police. The main findings from the victim survey are summarised in Caption 3.

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[9] Asian here largely refers to ethnic identity arising from eastern Asian countries. When we look at a more detailed measure of self-declared ethnicity we find that of those recorded as *Asian,* 67% report their ethnicity as Indian, 9% report Pakistani and 1% report Bangladeshi. Of the remaining. 21% report another Asian origin and 2% declined to report.

[10] Non-intimate cases refer to domestic abuse incidents with household family members other than intimate partners.

Survey design and implementation

The Victim Survey was designed by the research team at the University of Leicester and Leicestershire Police specifically for the evaluation of Project 360. It was conducted by the

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Caption 3: Victim survey results

The victim follow-up survey was conducted one month after the initial police callout. It was designed for Project 360 and implemented by Leicestershire Police. The results suggest:

- **Police satisfaction increases for victims receiving the intervention.** 43% fewer victims in the treatment group report being dissatisfied with the police handling of the case associated with the initial incident.

- **Victims receiving the intervention are more likely to report future incidents.** The treatment group is 42% more likely than the control group to indicate their willingness to report a future incident has increased.

- **Victims receiving the intervention are more likely to take actions to change their situation.** Relative to the control group, victims in the treatment group are significantly more likely to have visited their general practitioner or the accident and emergency services, are more likely to have accessed a domestic violence support service since and are 34% less likely to be in current contact with the perpetrator.

- **The intervention is associated with greater victim stress in the short run.** Relative to just before the initial incident, victims in the treatment group are 34% less likely to report improved *stress levels* and 48% more likely to report worsening *stress levels*, than victims in the control group. Victims in the treatment group are also more likely to report a worsening of *sleep* and have poorer outcomes for *life control*.

- **The intervention is associated with improved family life and quality of life overall.** Despite the findings for stress, the measures of *quality of family life* and *quality of life overall* improved for the treatment group relative to the control group. Victims in the treatment group are 26% more likely to report quality of life improvements.

Leicestershire Police Service Improvement Department, which has extensive experience in collecting data from victim satisfaction surveys. The survey was implemented with the safety of victims being of the utmost priority when establishing contact and completing the survey over the phone. Only victims who supplied police officers with a safe telephone number were contacted. Upon contact, the interviewer asked for the name of the person answering the phone. If a person other than the victim answered the telephone, the interviewer would say that they are calling to conduct a survey and would try again later, without identifying themselves as police staff. If the victim answered the phone, interviewers asked if there was any possibility that this call could be overheard by the person who caused the harm; in such a case, they would arrange for the survey to be completed at another time. Before starting the survey, interviewers would first establish the precise location of the interviewee. In case the call was interrupted for any reason, a police response car would be sent to this location to establish whether the interviewee was safe.

Results of the survey

The results of the survey are reported in Tables 5, 6 and 7 in the Appendix. Each table documents the average responses for the treatment group, the average responses for the control group and the difference between the two. Questions that refer to an improvement or a worsening are framed relative to before the initial incident. The *Difference* column reports the difference in response averages between the treatment group and the control group, with the corresponding t-statistic reported in parentheses.[11] Asterisks are used to indicate that outcomes for the treatment group and the outcomes for the control group are statistically different.

Police satisfaction

This set of questions relates to the victims' satisfaction of the interaction with police involved in their case (Table 5). The results here are quite pronounced. Overall, a high proportion of victims reported being satisfied with police handling of their case (more than 70% in both the treatment and control group). However, satisfaction with police handling of the case is 6.7 percentage points higher (not statistically significant), and dissatisfaction is 8.9 percentage

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[11] The t-statistic corresponds to the null hypothesis that there is no difference between average responses for the treatment and the control groups.

points lower for victims in the treatment group than for victims in the control group. This is equivalent to a 43% decline in dissatisfaction compared to the mean in the control group. While we find an improvement related to the police handling of the initial incident, this effect does not seem to translate into an overall improvement in the general opinion of police for the treatment group relative to the control group. Victims were also asked whether there was a change in willingness to report future incidents to the police as a result of policing handling of the most recent incident. Relative to 'no change', a victim in the treatment group is 15.0 percentage points more likely to report an increase and 5.2 percentage points less likely to report a decrease in willingness to report than victims in the control group. The coefficient on the increase corresponds to a 42% increase in willingness to report future incidents to police.

These results point to a clear improvement in the victim's perception of how police handle their case. They further suggest a sizable improvement in the revealed willingness of victims to report future incidents. Because the majority of domestic abuse incidents are undetected and unreported to police, changes in the willingness to report incidents are essential to improving the police response to victims of domestic violence. As the random assignment of treatment happens only after the initial police callout, any observed difference in police satisfaction or willingness to report future incidents can be attributed to the interaction with the engagement worker.

Actions taken

The second set of questions broadly describes actions taken by the victim in response to a domestic incidence (see Table 6). Victims in the treatment group are 19.9 percentage points less likely to report being in current contact with the perpetrator than are victims in the control group. This constitutes a 34% reduction relative to the mean of the control group in the number of victims who are in contact with the perpetrator roughly one month after the incident.

The intervention also appears to have influenced victim willingness to seek help from other support services. Victims in the treatment group are 12.1 percentage points more likely to report having visited their general practitioner, a 42% difference compared to the mean of the control group, and 5 percentage points more likely to report having visited their accidents and emergency as result of the incident than victims in the control group (the latter is not a

statistically significant difference). Although we find no difference in victim reporting of confidence in accessing services, victims in the treatment group are 8.7 percentage points more likely to report having accessed at least one domestic support service than victims in the control group. This suggests that the support provided by Project 360 assisted victims in accessing existing services, in particular, visiting their GP. The results also seem to suggest that the improvements reported in taking actions for the treatment group are not due to victims not being aware of or not knowing how to access services, as we do not find any difference in the reported confidence to access services.

Self-reported well-being

The last set of questions broadly refers to self-reported perceived well-being (see Table 7). The results suggest that one month following the initial incident, victim safety, family life and quality of life overall are more likely to have increased for the treatment group relative to the control group (although, only quality of life overall is statistically significant). That victims in the treatment group are 12.7 percentage points less likely to report that their family life has worsened since the incident is consistent with the results in the previous section with respect to perpetrator contact; corresponding to a 62% improvement. Respondents in the treatment group are also 10.1 percentage points more likely to say that their quality of life overall has improved than a respondent in the control group.

Despite these encouraging results for quality of family life and overall quality of life, we also find that life control, stress level, quality of sleep and mental health worsened for the treatment group relative to the control group (only the stress level is statistically significant). A respondent in the treatment group is 17.1 percentage points less likely to say their stress levels have improved than a respondent in the control group, which corresponds to a 34% difference compared to the mean of the control group. These differences in reported stress levels shortly after an incident across the two groups are consistent with victims engaging with their history of domestic abuse and their increased levels of engagement with a number of specialist services. Although these results seem at first contradictory, given the victims higher propensity to engage in breaking away from a repeat perpetrator in the treatment group, it is possible that victims receiving treatment simultaneously report improvements in quality of life, family life and their personal safety, and increased stress levels.

7. Results from administrative data

Collection of administrative data

We collected administrative data from Leicestershire Police between November 2014 and November 2015. This data collection comprised searching in the CIS (Crime Information System) database for specific crime numbers, reading the full file for that specific case and recording relevant variables in a database. The data was collected in three stages.

In the initial data collection stage, we gathered the following information:

- Socio-demographic data about the victims, perpetrators and the children in the household.
- Data related to the domestic incident (date, classification)

In the second stage, we augmented the existing data by collecting the following information:

- Data related to the domestic incident (action taken by police, DASH risk assessment)
- History of police incidents for victims and perpetrators
- For those who received treatment, details about their engagement in the programme

In the third stage, we collected the following information:

- Whether the victim was involved in a police incident 3, 6 and 12 months after the initial report was filed, the nature of the incident(s), the identity of the repeat perpetrator, the action taken by the police and the DASH risk assessment for each recorded incident.

This administrative data was collected from two main sources, CIS and GENIE.[12] Additionally information was also taken from the detailed reports filled out by police engagement workers. The 3, 6 and 12 month police incidents were recorded from GENIE and Niche (a police records management system that replaced CIS at the end of April 2015). Data collection was done by the evaluation team and research assistants hired for this task.

Data collection and data merging were conducted based on the unique crime reference numbers originating from our random sample. After the data collection was completed, the

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[12] The GENIE system was replace by Niche in April 2015.

dataset was anonymised and this number was replaced by a unique ID given by the primary researcher.

Victim statements

Caption 4: Victim statements and repeat offences

- **The Project 360 intervention led to a decrease in the number of witness statements made by victims to police.** Victims in the treatment group were 21% less likely to provide a witness statement than were victims in the control group. Consistent with this being attributable to the intervention, the decline is due to differences in statement making after the initial police visit.

- **The intervention was associated with fewer statements retracted by victims.** Of those who made a statement, victims in the treatment group were 27% less likely to retract than victims in the control group.

- **The intervention was not associated with a notable change in repeat incidences of domestic violence recorded over a one-year period.** There was no significant change in the number of instances of domestic violence recorded by police. However, we found weak evidence to suggest that the severity of future incidents (as measured by risk assessment and arrests) was lower for the treatment group than for the control

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Here, we examine the effect that the Project 360 intervention had on the propensity for victims to provide a witness statement to police. Statements are an important step in the process of victim engagement with the justice process. To illustrate this, we summarise actions taken by the police according to victim statement provision (see Table 8 in the Appendix). In cases in which a statement was not provided, only 8.1% resulted in an arrest (3.5% for *arrest and charge* and 4.6% for *arrest and no charge* combined). This compares to a 69.2% arrest rate for cases where a statement is made at the initial police visit and a 46.5% arrest rate for cases where a statement is made after the initial police visit. Caution should be taken in inferring too much about the causal nature of statements on arrests from these numbers. It is possible statements are made in more serious incidences, which are always more likely to result in an arrest. However, this table suggests that victim statements play an important role in the police taking action against the perpetrator.
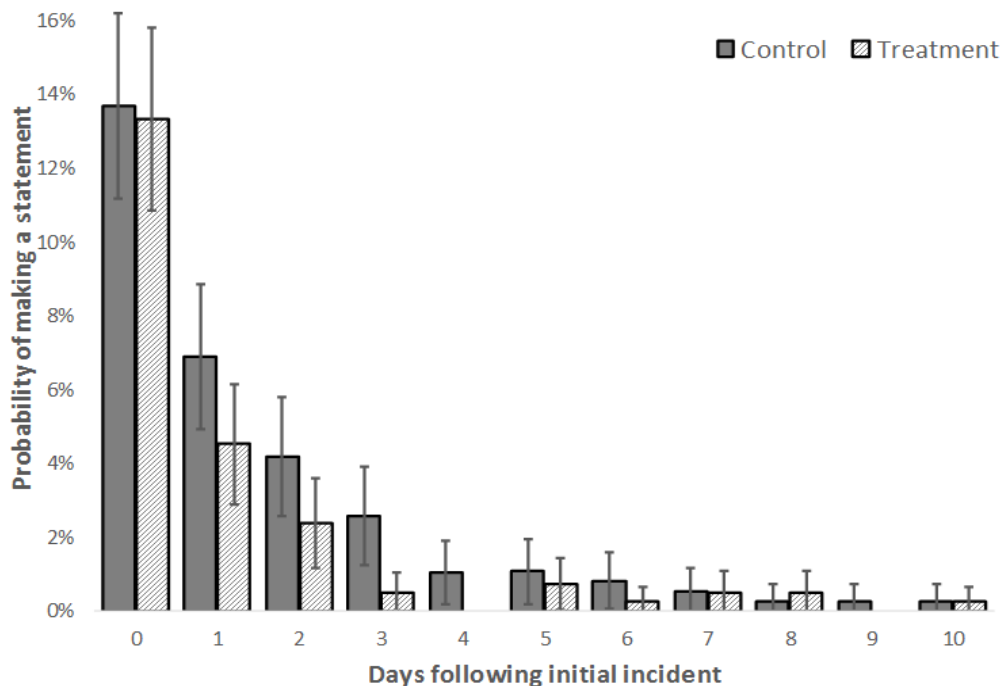
Figure 3: Probability of making a witness statement by days since the initial incident.

Notes: Bars reflect 95% confidence interval. Probability is conditional on having not made a statement on any previous day since the initial incident. Day 0 denotes the initial police callout.

The key findings for the impact of Project 360 on statement provision are reported in Table 9. We find that the treatment group is 6.2 percentage points less likely than the control group to provide a victim statement. This effect is statically significant and represents a 23% decrease compared to the mean over both groups. Considering that 49% of those in the treatment group did not engage with the intervention, this corresponds to a 12.1 percentage point decrease in statement provision among those who engaged.[13]

The difference in statement provision between the treatment and control groups is attributable to victims who make statements after the initial police visit, rather than those

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[13] This can be calculated as a *local average treatment effect* using an instrumental variables estimator. See Angrist (2006) for details.

made during the initial police visit. Just under half of all statements are made during the initial callout. There is no significant difference between the treatment group and control group for the proportion of victims who make statements during the initial police callout, as illustrated in Figure 1. However, victims in the treatment group are 6.8 percentage points less likely to make a statement in the days following the initial police callout.

We find evidence that the intervention led to differences in the overall effectiveness of statements that are made. Statement retraction is 5.2 percentage points lower in the treatment than in the control group. Further, for statements made, arrest rates are 10.8 percentage points higher in the treatment group than the control group. This corresponds to a 17% increase in arrests for statements. These results suggest that the intervention may have led to a more effective use of the statement process.

We gain an additional insight by looking at statements according to the level of engagement for the treatment group. In the fourth, fifth and sixth rows of Table 9, we report statements made by the treatment group for those who do not engage (14.9%), those who engage by phone only (39.8%) and those who engage in face-to-face meetings (24.2%). We again caution against attributing differences in statements to the level of engagement, as these may reflect differences in the underlying cases that we cannot control for. However, it is interesting that those with a seemingly lower level of engagement (i.e. over the phone) also have the highest level of statement provision. Victims who have face-to-face meetings with engagement workers are about 38% less likely to make statements than victims who engage by phone only.

Repeat offences

Finally, changes in repeat police incidents for the treatment and control group are examined. The number of repeat police callouts by victim name is tracked over a 12-month period, with the quarterly number of incidents recorded. Detailed results are reported in tables 10 and 11.

Over the 12-month period following the intervention, more than 60% of all victims experienced at least one repeat police callout for domestic violence. This translates to an average of 1.6 (control) and 1.8 (treatment) reported domestic incidence per victim. Although the treatment group has more reported incidents, the difference between treatment and control is relatively small and not statistically different from zero. Similarly, the proportion of

households which experienced at least one domestic incident over the 12-month period differs between the two groups by 0.6 percentage points: 61.2% for control and 61.8% for treatment.

The intervention did not appear to result in a meaningful change in the recorded number of domestic incidences. However, it is still possible that the intervention had an impact on future instances. The complication in estimating this effect is that the intervention may work in two opposing directions: first, by decreasing actual violence in the household (leading to a smaller number of recorded cases) and, second, by increasing victim willingness to report (leading to a higher number of recorded cases). It is possible that these two effects cancel each other out, resulting in the same number of reported incidents. If this is happening, we may see a decrease in the severity of the instances reported to police (as violence has declined, but victims are more willing to report less severe violence) and possibly more frequent reporting of incidences other than domestic violence. We examine this possibility by looking at non-domestic instances (see Table 10), DASH assessments and arrests in domestic instances (see Table 11).

Over the 12-month period, 37.8% more non-domestic incidents are reported in the treatment group than the control group. While the difference is small in terms of the number of incidents, it is statistically significant. This appears to be largely attributable to a 3.7 percentage point increase in the reporting of incidents categorised as 'theft and damages' within the first month of the Project 360 intervention. It is unlikely that the Project 360 intervention had a direct impact on the number of non-domestic incidents. Therefore, this result can be interpreted as consistent with the results from the survey that suggest that victims in the treatment group are more likely to report future incidents.

An increase in victim willingness to report may lead to less severe incidents being reported than were previously unreported. An attempt was made to compare the severity of domestic incidents by looking at the number of risk factors marked as affirmative on the DASH assessment form by responding officers[14] and by looking at the proportion of incidents in

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[14] Note that this is opposed to the 3-point scale for level of risk. Looking at the number of affirmative responses provides a finer measure by which differences can be measured.

which an arrest was made. This is reported for each from the first to the sixth[15] callout following the initial incident. Overall, we find that DASH assessments involve 0.4 fewer affirmative DASH risk factors for the treatment group relative to the control. This represents a 6.8% decrease in the number of 'affirmative' categories in the DASH assessment. Although this difference is non-trivial in magnitude, it is not statistically different from zero. A similar pattern is seen in the proportion of arrests made in future incidents. While the proportion for the treatment group is consistently lower than that of the control group, most differences are not statistically distinguishable from zero.

We interpret these results cautiously as suggesting that the severity of incidents in the treatment group is lower than that of the control group for callouts following the initial incident. This is consistent with the hypothesis that victims more engaged with the police are more willing to report crimes. This is also consistent with the findings earlier that victims in the treatment groups report being more satisfied with police handling their case and the increased propensity to report future incidents.

8. Discussion of results

Here, the key findings of the Project 360 evaluation are summarised and discussed.

Some broad findings are worth highlighting. First, 72% of victims contacted accept help from an engagement worker.[16] Considering that engagement workers cold-call the victims and that victims are often negatively viewed as being uncooperative or unwilling to support police action,[17] this is a notable take-up rate. Second, based on the survey results, victims receiving the intervention report a) higher overall satisfaction with police services, b) worsening stress, and c) better quality of life overall compared to victims who did not receive the intervention. Furthermore, victims who received the intervention are less likely to report being in contact with the perpetrator and more likely to report having visited their GP as a result of the incident. Victims in the treatment group state that their likelihood of reporting future incidents to police increased as a consequence of the intervention.

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[15] Sample sizes beyond the sixth police callout are too small for accurate estimates.
[16] 72% does not include victims with whom contact was not made.
[17] In their victim survey, the HMIC reports that in 56% of 600 reviewed cases, victims did not support police action (HMIC, 2014; p.52).

This final result is particularly important, as under-reporting is a serious concern for both police and domestic violence support agencies. As part of their report, HMIC conducted an online survey of victims of domestic violence and found that 46% of survey respondents had never reported domestic abuse to the police. Of these, 30% of survey respondents state that the reason is due to 'lack of trust or confidence in the police' (HMIC, 2014, p.31). The preliminary findings suggest that the service provided by an engagement worker may significantly improve this outcome.

The survey finding that stress increases for the treatment group is not surprising if one considers that some victims who receive the intervention will take steps to separate from an abusive partner or make other major life changes.

It is important to be cautious about the interpretation of the survey results. In particular, we need to consider the possibility that the intervention may influence survey responses without influencing the latent outcome. For example, a victim in the treatment group may feel like they are letting down the engagement worker if they truthfully report they are still in contact with the perpetrator. A victim in the control group does not have this specific incentive to mis-report their perpetrator contact. If this is the case, we would incorrectly conclude that the intervention leads to victims breaking contact with the perpetrator. However, it should be noted that several measures in the surveying process have been taken to minimise the potential for such a bias. In particular, the survey was conducted by a specialised survey team of the police, and the evaluation team communicated that the survey results would be used for exclusively for research purposes.

One of the objectives of the Project 360 intervention was to make statement provision easier for victims. The finding that the intervention leads to a decline in the provision of witness statements made by victims was, therefore, unexpected. This highlights the benefit of the randomised-control design, as this result would not have been observed without an experimental analysis. It also highlights some of the complexities in assisting victims of domestic violence. There are two plausible explanations for why the intervention resulted in a decrease in the number of statements. The first is that during the initial phone contact, some victims schedule a face-to-face visit with engagement workers. These face-to-face visits often take place several days after the phone call (as shown in Table 2 in the Appendix).

Victims may put off making a statement until the face-to-face meeting (during which engagement workers can assist them). However, the passage of time between the initial phone call and the meeting may reduce their willingness to make a statement. This decline over time in statement making is reflected in Figure 3. The second explanation is that the bespoke nature of the intervention allows victims to substitute between making statements and other actions, such as leaving the perpetrator or seeking help from support services. If this is the case, then making other actions easier for the victim will also make them less likely to make statements. That we see a decrease in statement retractions and an increase in statement-arrest rates, suggests that statements are being made more effectively.

9. The cost of Project 360

Here, we provide a brief overview of the incremental spending associated with Project 360, derived from the six-month period between November 2014 and April 2015, and calculate the per-engaged victim cost. The primary incremental cost from the implementation of Project 360 arises from the labour involved. This comprises three full-time engagement workers, at a total cost of £35,217, and a part-time supervisor and programme coordinator, at a total cost of £7,333. An estimated £2,550 was spent on car hire, fuel and parking. Finally, £200 was spent on security upgrades for victims. The total estimated incremental cost over the six-month period for Project 360 was £45,300.[18]

Over this period, the three engagement workers were assigned 510 cases, which works out at 4.3 cases per working day, or just over one case per worker. From these cases, contact was successfully made with 402 victims, 260 of whom engaged with the intervention. Based on this, we can work out the Project 360 cost of £174 per victim engagement. This cost may be expected to come down over time as engagement workers and supervisors learn new and more efficient processes for delivery of the service.

10. Final conclusions and recommendations

These results of this study present an opportunity for second responder programmes modelled around Project 360 to address concerns outlined in the 2014 HMIC report. It also

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[18] It should be noted that this number does not include costs associated with incremental office resources, including desk space, telephones and computers for the Project 360 workers.

sheds light on some areas in which the programme can be improved in future implementations. Here we provide an overview of the recommendation that follow from the results of this study.

Recommendation 1: A second responder programme, modelled around Project 360, should be rolled out as standard practice in police forces that would like to see improvements in the relationship between police and victims of domestic violence, particularly in cases categorised at standard and medium risk.

Recommendation 2: The implementation of the intervention should ensure that victims are provided with the immediate opportunity to make a witness statement to police. This may take the form of engagement workers establishing immediately after an incident whether victims would like to make a statement and assisting victims with making such statement in as short a time period as possible.

Recommendation 3: The intervention should be rolled out to repeat victims who have experienced fewer than three previous instances in a 365-day period. This would allow for police-victim relationships to be strengthened earlier in the cycle of domestic violence.

Recommendation 4: In cases in which children are involved, more focus should be placed on future implementations to work with schools. Working with schools provides a real opportunity for change. School administrators stated in interviews that they had a real need for more information and cooperation to identify and assist students who are exposed to domestic violence at home. The engagement workers, with access to information from police and local authorities, can provide this information in a secure and standardised framework to each of the schools' Designated Senior Person.

Recommendation 5: The intervention should be available anytime a household experiences domestic violence. The trial was only designed to estimate the impact of a single intervention. It is reasonable to expect that through continuous work with engagement workers, we may see a change in patterns of abuse and crime. Many of these households have a long history of abuse, and they may need multiple attempts of engagement over time provided through an intervention such as Project 360.

Bibliography

Angrist, J. 2006. "Instrumental variable methods in experimental criminological research: what, why and how" *Journal of Experimental Criminology*, 2, 23-44.

Casey, R.L., Berkman, M., Stover, C.S., Gill, K., Durso, S., Marans, S., 2007. "Preliminary results of a police-advocate home-visit intervention project for victims of domestic violence", *Journal of Psychological Trauma*, 6, 39–49.

Davis, R.C., D., Taylor, B., 1997. "A proactive response to family violence: The results of a randomized experiment", *Criminology*, 35, 307–333.

Davis, R.C. Weisburd, D., Hamilton, E.E., 2007. "Preventing repeat incidents of family violence: A randomized field test of a second responder programme in Redlands, CA", *Journal of Experimental Criminology*, 6, 397–418.

Davis, R.C. Weisburd, D., Taylor, B., 2008. "Effects of second responder programs on repeat incidents of domestic violence: A systematic review", Campbell Collaboration.

HMIC (Her Majesty's Inspectorate of Constabulary) 2014. "Everyone's business: Improving the police response to domestic abuse"

Holland, P., 1986. "Statistics and causal inference", *Journal of the American Statistical Association*, 81, 945–960.

Imbens, G.W., Wooldridge, J.M., 2009. "Recent developments in the econometrics of programme evaluation". *Journal of Economic Literature*, 47, 5–86.

Manski, C., 2007. *Identification for Prediction and Decision,* Harvard University Press, Cambridge MA.

Stover, C.S., Berkman, M., Desai, R., Marans, S., 2010. "The efficacy of a police-advocacy intervention for victims of domestic violence: 12-month follow-up data". *Violence Against Women*, 16(4), 410–425.

Walby, S., 2004. *The Cost of Domestic Violence*. Women and Equality Unit (DTI).

Walby, S., 2009. "The cost of domestic violence: Up-date 2009" working paper available at http://www.lancs.ac.uk/fass/sociology/profiles/34/

Appendix 1. Tables

Table 1: Sample size by month and treatment group

	Treatment		Control	
	Total	Surveyed	Total	Surveyed
November	107	20	112	15
December	127	20	89	14
January	90	22	100	20
February	61	17	70	22
March	77	22	77	22
April	48	9	57	11
Total	**510**	**110**	**505**	**104**
Percent surveyed	21.6%		20.6%	

Difference in percent surveyed between treatment and control group (0.97 percentage points) not statistically different than 0 at a 90% significance level. November count includes a small number of cases from the end of October.

Table 2. Timing of home visits by engagement workers

Days since initial callout	Number of visits	Proportion of visits
1	44	34.66
2	13	10.23
3	12	9.45
4 to 7	42	33.08
8 to 21	12	9.45
> 26	4	3.16
Total	127	100

Table 3: Summary statistics for treatment and control groups

A	Victim characteristics			B	Perpetrator characteristics				C	Household characteristics		
	(1)	(2)	(3)		(1)	(2)	(3)			(1)	(2)	(3)
	Treatment	*Control*	*Difference†*		*Treatment*	*Control*	*Difference†*			*Treatment*	*Control*	*Difference†*
Female (proportion)	0.888	0.857	0.031 (1.474)		0.139	0.138	0.001 (0.041)	Same victim and perpetrator (first recorded incident)		0.422	0.471	-0.049 (1.567)
Age	33.929	34.984	-1.055 (1.373)		33.028	33.392	-0.364 (0.489)	Intimate partner DV		0.737	0.772	-0.035 (1.296)
White (proportion)	0.844	0.835	0.008 (0.357)		0.803	0.819	-0.016 (0.612)	Parent/child DV		0.231	0.196	0.035 (1.373)
Unemployed (proportion)	0.535	0.511	0.024 (0.753)		0.440	0.520	-0.081 (2.164)**	Victim and perpetrator live together		0.532	0.593	-0.060 (1.907)*
Domestic cases (365 days)	2.330	2.259	0.071 (0.738)		2.226	2.248	-0.022 (0.176)	Children in the household		0.586	0.570	0.016 (0.517)
Registered domestic cases	11.720	10.721	0.999 (1.461)		11.891	10.727	1.163 (1.789)*	Number of children‡		1.923	1.983	-0.060 (0.734)
Risk assessment score	1.275	1.280	-0.005 (0.136)									

†*T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. **, * indicate difference is statistically significant at a 5%, 10% level of significance, respectively.*

Table 4: Engagement by characteristics (treatment group only)

	Sex	*Perpetrator*		
		Male	Female	
Victim	Male	44.8 (29)	29.6 (27)	
	Female	54.3 (405)	34.9 (43)	{0.009}***

	Age	*Perpetrator*			
		<25	25–39	40+	
Victim	<25	30.4 (46)	49.2 (61)	68.4 (19)	
	25–39	50.0 (38)	50.7 (146)	55.3 (47)	
	40+	61.5 (39)	55.0 (40)	50.0 (68)	{0.128}

	Employment	*Perpetrator*		
		Employed	Unemployed	
Victim	Employed	59.5 (116)	44.6 (47)	
	Unemployed	52.2 (90)	39.8 (113)	{0.022}**

Household characteristics

Ethnicity†

White Europe	49.4	(421)	
Asian	71.4	(49)	
Other	51.4	(35)	{0.014}***

Intimate partners (victim and perpetrator)

No	50.9	(118)	
Yes	50.3	(376)	{0.912}

Living together (victim and perpetrator)

No	47.4	(232)	
Yes	53.4	(264)	{0.183}

Children in the household

No	46.7	(210)	
Yes	54.6	(297)	{0.080}*

*Percent of treatment group in each category, which engaged with intervention reported. Number in parenthesis reflects the of treatment-group cases number in each categories. Number in braces reflects the p-value corresponding to a test of the hypothesis that engagement rate between characteristic groups is equal. ***, **, * indicate difference is statistically significant at a 1%, 5%, 10% level of significance, respectively.*

Table 5: Victim survey, selected questions for *police satisfaction*

	Treatment (n=110)		Control (n=104)		Difference		
Police satisfaction and engagement	Satisfied	Dissatisfied	Satisfied	Dissatisfied	Satisfied	Dissatisfied	
Satisfaction with police handling of case[†]	0.796	0.117	0.729	0.206	0.067 (1.140)	**-0.089*** (1.757)	↑
	Improved	Worsened	Improved	Worsened	Improved	Worsened	
My opinion of police has[‡]…	0.222	0.107	0.271	0.131	-0.049 (0.781)	-0.024 (0.536)	—
	Increased	Decreased	Increased	Decreased	Increased	Decreased	
My likelihood of reporting a future incident has[‡]…	0.505	0.097	0.355	0.150	**0.150**** (2.207)	-0.052 (1.152)	↑

T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. **, * indicate difference is statistically significant at a 5%, 10% level of significance, respectively.

 "Improved" or "worsened" is relative to before the incident that triggered selection into the study. Arrows indicate a net increase (↑) or decreases (↓) in outcome for treatment group relative to the control group.

Table 6: Victim survey, selected questions for *actions taken*

	Treatment (n=110)	Control (n=104)	Difference	
Actions taken	Affirmative	Affirmative		
Currently in contact with perpetrator	0.385	0.583	**-0.199*** (2.939)	↑
Visited GP as a result of incident	0.408	0.287	**0.121*** (1.849)	↑
Visited A&E as a result of incident	0.087	0.037	0.050 (1.500)	↑
Feel confident accessing services[†]	0.870	0.870	0.000 (0.000)	↓
Accessed one or more service[†]	0.687	0.600	0.087 (1.170)	↑

*T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. * indicates difference is statistically significant at a 10% level of significance. "Improved" or "worsened" is relative to before the incident that triggered selection into the study. Arrows indicate a net increase (↑) or decreases (↓) in outcome for treatment group relative to the control group.*

Table 7: Victim survey, selected questions for *perceived wellbeing*

Safety and wellbeing	Treatment (n=110)		Control (n=104)		Difference		
	Improved	Worsened	Improved	Worsened	Improved	Worsened	
Personal safety	0.590	0.086	0.523	0.055	0.068	0.031	↑
					(0.992)	(0.876)	
Life control	0.524	0.143	0.578	0.119	-0.054	0.024	↓
					(0.794)	(0.510)	
Stress level	0.333	0.286	0.505	0.193	**-0.171***	0.093	↓
					(2.564)	(1.599)	
Quality of sleep	0.267	0.276	0.303	0.183	-0.036	0.093	↓
					(0.582)	(1.616)	
Mental health	0.286	0.219	0.278	0.222	0.008	-0.003	↓
					(0.128)	(0.055)	
Family life	0.471	0.077	0.435	0.204	0.036	**-0.127***	↑
					(0.524)	(2.680)	
Quality of life overall	0.490	0.154	0.389	0.157	0.101	-0.004	↑
					(1.490)	(0.071)	

T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. *** indicates difference is statistically significant at a 1% level of significance. "Improved" or "worsened" is relative to before the incident that triggered selection into the study. Arrows indicate a net increase (↑) or decreases (↓) in outcome for treatment group relative to the control group.

Table 8: Actions taken by police and victim statement provision

	Victim statement provided? (%)		
	No	Yes: During initial callout	Yes: After initial callout
No further action by police	90.29	26.57	39.53
Arrest and charge	3.5	43.36	33.33
Arrest, no charge	4.58	25.87	13.18
Community resolution/PIN	1.61	4.2	13.95
Number of cases	742	143	129

Cells report percent of cases for which the respective action was taken by police for each victim statement type.

Table 9: Victim statement provision by treatment group

	Treatment	Control	Difference
Statement made (%)	23.7%	29.9%	-6.2% (2.224)**
Statement, at initial callout (%)	13.3%	13.7%	-0.4% (0.175)
Statement, after initial callout (%)	12.0%	18.8%	-6.8% (2.809)***
Statements retracted (%)	14.0%	19.2%	-5.2% (1.126)
Arrests for statements made (%)	74.4%	63.6%	10.8% (1.91)**
No engagement			
Statement made (%)	14.9%		
Engagement by phone			
Statement made (%)	39.8%		
Engagement face-to-face			
Statement made (%)	24.2%		

T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. ***, ** indicate difference is statistically significant at a 1%, 5% level of significance, respectively.

Table 10: Repeat police callouts by treatment group

		0–3 months	3–6 months	6–12 months	12 month period
Number of repeat incidents (domestic)	Control	0.588	0.382	0.596	1.566
	Treatment	0.645	0.424	0.688	1.757
	Difference	**0.057**	**0.041**	**0.092**	**0.191**
		(0.925)	(0.881)	(1.234)	(1.466)
At least one repeat incident (domestic)	Control	0.360	0.257	0.319	0.612
	Treatment	0.365	0.298	0.341	0.618
	Difference	**0.004**	**0.041**	**0.022**	**0.006**
		(0.142)	(1.424)	(0.757)	(0.189)
Number of repeat incidents (not domestic)	Control	0.121	0.105	0.218	0.444
	Treatment	0.192	0.127	0.292	0.612
	Difference	**0.071**	**0.023**	**0.074**	**0.168**
		(1.854)*	(0.572)	(1.632)	(1.998)**
At least one repeat incident (assault)	Control	0.093	0.053	0.109	0.234
	Treatment	0.112	0.065	0.141	0.259
	Difference	**0.019**	**0.011**	**0.032**	**0.025**
		(0.982)	(0.759)	(1.554)	(0.930)
At least one repeat incident (theft & damages)	Control	0.055	0.038	0.091	0.170
	Treatment	0.092	0.041	0.086	0.186
	Difference	**0.037**	**0.004**	**-0.005**	**0.016**
		(2.239)**	(0.291)	(0.270)	(0.664)
	N	1004	1004	1004	1004

T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0. **, * indicate difference is statistically significant at a 5%, 10% level of significance, respectively.

Table 11: Severity of repeat police callouts by treatment group

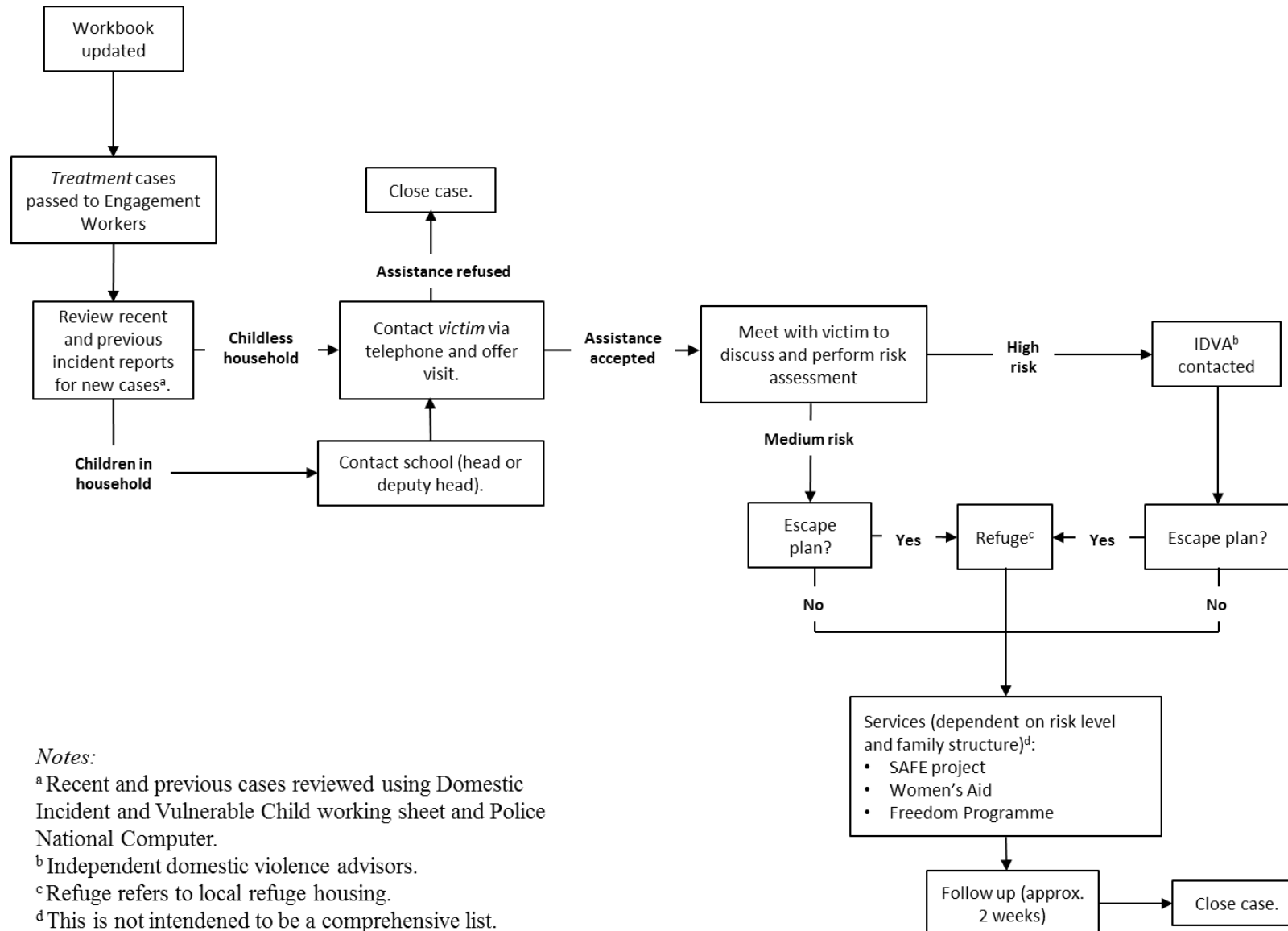|		Average overall	1st	2nd	3rd	4th	5th	6th
DASH assessment†	Control	6.039	5.671	6.412	6.671	8.452	8.231	7.952
	Treatment	5.629	5.034	6.348	7.248	6.492	7.513	7.767
	Difference	**-0.410**	**-0.637**	**-0.065**	**0.577**	**-1.960**	**-0.718**	**-0.186**
		(1.145)	(1.593)	(0.108)	(0.762)	(2.033)**	(0.546)	(0.130)
Arrest made‡	Control	0.457	0.276	0.246	0.275	0.368	0.357	0.296
	Treatment	0.426	0.259	0.230	0.315	0.241	0.333	0.361
	Difference	**-0.031**	**-0.017**	**-0.016**	**0.040**	**-0.127**	**-0.024**	**0.065**
		(0.794)	(0.481)	(0.380)	(0.676)	(1.682)*	(0.238)	(0.531)
	N	639	639	396	239	147	93	63

*T-statistics, reported in parenthesis, correspond to the hypothesis that difference between treatment and control is 0.   **, * indicate difference is statistically significant at a 5%, 10% level of significance, respectively.*

Appendix 2. Engagement worker intervention flow


```
┌──────────────┐
│   Workbook   │
│   updated    │
└──────┬───────┘
       │
       ▼
┌──────────────────┐              ┌──────────────┐
│ Treatment cases  │              │ Close case.  │
│ passed to        │              └──────▲───────┘
│ Engagement       │                     │
│ Workers          │            Assistance refused
└──────┬───────────┘
       │
       ▼
┌──────────────┐  Childless   ┌──────────────────┐  Assistance  ┌──────────────────┐  High  ┌──────────────┐
│ Review recent│  household   │ Contact victim   │  accepted    │ Meet with victim │  risk  │ IDVAᵇ        │
│ and previous ├─────────────▶│ via telephone    ├─────────────▶│ to discuss and   ├───────▶│ contacted    │
│ incident     │              │ and offer visit. │              │ perform risk     │        └──────────────┘
│ reports for  │              └────────▲─────────┘              │ assessment       │
│ new casesᵃ.  │                       │                        └────────┬─────────┘
└──────┬───────┘                       │                          Medium risk
       │ Children in          ┌────────┴─────────┐
       │ household            │ Contact school   │
       └─────────────────────▶│ (head or deputy  │
                              │ head).           │
                              └──────────────────┘
```

Services (dependent on risk level and family structure)ᵈ:
- SAFE project
- Women's Aid
- Freedom Programme

Escape plan? Yes → Refugeᶜ ← Yes Escape plan?

Follow up (approx. 2 weeks) → Close case.

Notes:

ᵃ Recent and previous cases reviewed using Domestic Incident and Vulnerable Child working sheet and Police National Computer.

ᵇ Independent domestic violence advisors.

ᶜ Refuge refers to local refuge housing.

ᵈ This is not intendened to be a comprehensive list.

Appendix 3. University of Leicester researchers

Martin Foureaux Koppensteiner and Jesse Matheson are lecturers in the Division of Economics, School of Business, the University of Leicester. They both have expertise in quantitative policy analysis. Réka Plugor is a research associate with the Division of Work and Employment, the School of Business, the University of Leicester.

Martin Foureaux Koppensteiner received his PhD in Economics from Queen Mary University of London, joining the University of Leicester in 2011. His research focuses on the impact evaluation of public policies. In the past, he has analysed incentives in education, the determinants of violence against women, the effect of household finance on poverty and welfare, and the effect of education on fertility. His current research interests include the determinants and consequences of crime, and the economic impact of disease. He has an interest and expertise in Brazil and has worked with the Ministry of Education, the Ministry of Public Security and the Ministry of Health in Brazil, and is a consultant for the Inter-American Development Bank. In 2016, Foureaux Koppensteiner was awarded a Future Research Leaders grant by the ESRC. He previously received grants from the Wellcome Trust, the British Academy, ESRC-DFID and the IDB.

Jesse Matheson received his PhD in economics from the University of Calgary, joining the University of Leicester in autumn 2011. Matheson's research spans consumer choice, addictive behaviours and household poverty, with a focus on quantifying the impact of public policy on these issues. His research is published in peer-reviewed journals in the fields of economics and public health. Matheson has experience producing and publishing research with highly sensitive data (in work with Statistics Canada) and disseminating complex research results to a broad audience (in work with the Canadian Institute for Advanced Research).

Réka Plugor has been with the University of Leicester since 2009 working in various research roles. She received her PhD in Labour Market Research from the University of Leicester in 2014. She has a broad range of research interests located mainly within the sociology of work, education and youth. She conducts research on these topics from both theoretical and applied perspectives using qualitative, quantitative or mixed methods. Plugor has experience in working with large and complex datasets as well as highly sensitive data from narrative and life history interviews. She has published her work in Hungarian, Romanian and English, in policy reports, books and peer-reviewed journals.

At the University of Leicester, Foureaux Koppensteiner and Matheson teach modules and workshops at the undergraduate and post-graduate level, and on quantitative methods for impact evaluations. They are co-directors of the *Health and Public Policy Evaluation Network*.

More information and contact details can be found at:

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