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# policy and practice

## Impacts from delivering a whole health response strategy to domestic violence and abuse: an evaluation from the UK

G.J. Melendez-Torres, [g.j.melendez-torres@exeter.ac.uk](mailto:g.j.melendez-torres@exeter.ac.uk)  
University of Exeter, UK

Bethan Pell, [pellb@cardiff.ac.uk](mailto:pellb@cardiff.ac.uk)  
Rhiannon E Evans, [evansre8@cardiff.ac.uk](mailto:evansre8@cardiff.ac.uk)  
Kelly Buckley, [buckleyk3@cardiff.ac.uk](mailto:buckleyk3@cardiff.ac.uk)  
Cardiff University, UK

Nanya Coles, [nanya.coles@safelives.org.uk](mailto:nanya.coles@safelives.org.uk)  
Emma Retter, [Emma.Retter@domesticabusecommissioner.independent.gov.uk](mailto:Emma.Retter@domesticabusecommissioner.independent.gov.uk)  
SafeLives, UK

Amanda Robinson, [RobinsonA@cardiff.ac.uk](mailto:RobinsonA@cardiff.ac.uk)  
Cardiff University, UK

In this brief report, we evaluate Health Pathfinder, a 'whole health response' to domestic violence and abuse (DVA) in the United Kingdom. We used two national datasets: monitoring data for high-risk cases, and a service-level database used to track the performance of DVA services across the UK. Drawing on a comparative interrupted time series analysis over 2018–2019, we considered the impact of implementation in each of the eight sites on rate of referral of high risk cases standardised by the number of adult women in each area, and on composition of victim-survivors seen by services. Implementation of Health Pathfinder was associated with a 10.9 per cent step change in the rate of high-risk referrals, and growth in subsequent quarters of 10.1 per cent. At the same time, implementation of Health Pathfinder was linked with a 33.6 per cent step change increase in the proportion of victim-survivors seen by services that were judged not to be at highest risk (that is, taking up services earlier). Our findings reflect both underlying system improvements across multiple stakeholders involved in Health Pathfinder as well as improved detection of DVA across a wider spectrum of risks, and provide additional evidence that multilevel interventions to improve DVA victim-survivors' experiences are effective.

**Keywords** domestic violence and abuse • evaluation • health systems • multilevel interventions • technical assistance

### Key messages

- Health Pathfinder was a whole health response to domestic violence and abuse, including interventions over multiple levels.

- Health Pathfinder was linked to a change in both the rate of identification of the highest-risk cases of domestic violence and abuse, and the likelihood that survivors would be judged as being of 'standard risk'.
- Together, these results indicate that Health Pathfinder successfully both increased general health system response to domestic violence and supported health systems to identify victim-survivors earlier in their experiences of abuse.

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## Introduction

Domestic violence and abuse (DVA) is among the most prevalent and most costly problems faced by health services (Oliver et al, 2019). As a gendered phenomenon, DVA creates major health inequities disproportionately experienced by women (Macdonald, 2021). Because of this, identifying and addressing DVA should be considered part of the core business of health services in all countries (WHO, 2013; NICE, 2014). In this brief report, we discuss findings from research into a multilevel 'whole health response' strategy to DVA, which was implemented in England to improve the experiences of victim-survivors. First, we briefly outline the UK context in terms of the organisation of healthcare and DVA services. We also highlight examples of recent health-based initiatives that have had positive impacts on DVA victim-survivors in the UK as further background to the current study.

The organisation and delivery of health services varies greatly, even among the 32 countries internationally offering free or universal healthcare. While most of these employ a government-regulated network of private companies, in some countries, such as the UK, government directly manages a national healthcare system. This can allow for a more consistent approach to delivering healthcare across local areas, common policies and procedures, and the possibility of better integration with other aspects of government business, such as responding to DVA. Nevertheless, it must be recognised that the UK's National Health Service (NHS) is a complex system made up of a wide range of organisations with different roles, responsibilities and specialities (for example, GP practices, dental practices, opticians, hospitals, mental health and social care services, district nursing, physiotherapy and speech and language therapy, ambulance services, and an increasing role for private services), which are organised into more than 60 local units covering England, Wales and Scotland. With more than 1.7 million employees working across these different settings, there are clearly challenges for implementing a 'whole health response' to DVA in the UK.

The UK is also distinctive in terms of its national risk-led approach to DVA, which involves bespoke tools, roles and multi-agency practices that have been embedded in local areas across the UK for nearly two decades (Robinson, 2017). In brief, this involves three key components: the use of a shared risk assessment tool (DASH), the widespread implementation of an accredited role focused on delivering victim advocacy (IDVA), and a common infrastructure for multi-agency case management

(MARAC). Each will be briefly explained before we proceed to discuss examples of interventions to improve alignment and integration within healthcare settings of the UK's infrastructure for responding to DVA.

Since 2009, nearly all UK police forces<sup>1</sup> have been using the Domestic Abuse, Stalking, and Honour-Based Violence (DASH) risk tool in their response to DVA (Robinson, 2010). Building on the development of existing tools by the South Wales Police (the FSU9, see Robinson, 2004) and the London Metropolitan Police Service (SPECSS, see Richards, 2003), the DASH risk assessment model was developed by a multi-agency expert panel convened by the Association of Chief Police Officers (ACPO) during 2008 and rolled out nationally in 2009 under the previous Labour government. Consequently, in all local areas of the UK there is a widely understood approach, which involves using the DASH to determine whether certain risk factors are present (a risk 'score', ranging from 0 to 27) and then using professional judgement to translate this into a risk 'grade' (standard, medium or high risk). This assessment then determines the type and degree of intervention and safety planning with victims (for example, whether they are eligible to be referred to a MARAC, discussed further later in the article).

Independent Domestic Violence Advisors (IDVAs) are trained professionals with the expertise to support victim-survivors. They receive specialist accredited training and hold a nationally recognised qualification. The role emerged in the early 2000s to provide a common framework for providing advocacy specifically targeted at high-risk victim-survivors from the point of crisis, over a relatively short period of time, and is focused on addressing immediate risks to safety and barriers to service utilisation, before referring victim-survivors to other services (Robinson, 2009; Coy and Kelly, 2011). IDVAs most often work as part of a specialist DVA service and within a multi-agency framework and serve as the victim-survivor's primary point of contact, helping to ensure that their perspective, needs and safety concerns are at the centre of all decision-making. Evaluations of advocacy for victim-survivors have demonstrated effectiveness (Rivas et al, 2015) and IDVAs in particular have been shown to produce clear and measurable improvements in the safety of victim-survivors (Howarth and Robinson, 2016). The IDVA role was highlighted as both an effective and cost-effective intervention in the national guidance issued to healthcare providers by the UK's National Institute for Health and Care Excellence (NICE, 2014).

IDVAs are a key member of a Multi-Agency Risk Assessment Conference (MARAC), which is a locally convened meeting where information is shared on the highest risk domestic abuse cases. First developed in Cardiff, Wales in 2003, MARACs put in place plans and responsibilities for monitoring and protecting victim-survivors assessed at 'high risk', and are attended by a range of agencies, typically including police, probation, IDVAs, housing, health and social services (Robinson, 2006). Recognising the ability of MARACs to deliver improved safety, the Home Office announced nearly £2 million in funding to support their implementation in 100 areas in England and Wales during 2007–2008 (Steel et al, 2011). Since then, MARACs have become a mainstream DVA response framework, with more than 290 currently in operation across England, Wales, Scotland and Northern Ireland, responding to approximately 121,000 victims and an associated 153,000 children annually (SafeLives, 2023). Unquestionably the British approach to DVA has seen a step-change in the scale and coordination of partnership work. The key systems of health, criminal justice and DVA services are more effectively centralised, via Westminster and the Home Office,

than in many other high-income countries. This brief report does not allow for a full account of the on-going debates and challenges associated with current approaches. Common criticisms include that it is a managerialist response to a widespread and complex problem, with high volumes of cases leading to imperfect risk assessments and the inability to consistently monitor multi-agency actions and responsibilities (Walklate et al, 2021). The COVID-19 pandemic, concerns around the need to provide a 'whole family' approach, and more attention to earlier intervention have led to adaptations in some areas (Davies et al, 2023). Nevertheless, such initiatives should be seen as modifications to rather than a dismantling of the prevailing national framework.

A number of specific interventions have been developed to improve the British health service response to DVA. These attempt to align particular health-based settings more closely with the DVA infrastructure discussed earlier and/or to initiate bespoke interventions within health-based settings to address DVA. Those focused on screening, routine enquiry and other identification strategies have as their premise the need for better recognition of the prevalence of DVA within their patient group and to upskill health professionals to increase the rate of disclosures, which can then be referred on to specialist DVA services in the local community for advocacy and support. For example, the identification and response to improve safety (IRIS) model for general practitioners involves collaboration between primary care physicians and DVA services. It includes training and education for doctors, the implementation of clinical enquiry (that is, asking about a patient's safety or current or past experience of DVA during a clinical encounter) to identify DVA, and establishing a referral pathway to a DVA service where IDVAs can offer specialist support and advocacy (Feder et al, 2011). In addition, recent initiatives are seeing 'Health IDVAs' based within hospitals and other health settings such as maternity and sexual health services. Research highlights that these initiatives help to address DVA that would not necessarily come to the attention of criminal justice agencies, facilitate intervention at an earlier point, and enable victim-survivors to access IDVA support thereby leading to reductions in and cessation of abuse (Halliwell et al, 2019; Elvey et al, 2022; Trevillion et al, 2022). These are notable achievements, especially considering that victim-survivors accessing health services tend to be younger, experience more severe abuse, and disclose higher rates of complex needs compared to those accessing other community services (Halliwell et al, 2019). Despite these progressive inroads, the broader ecology of health system actions that could be involved in addressing DVA is far more diverse and requires further development to consistently meet the needs of all victim-survivors, regardless of the particular health-based setting and/or local area.

## The current study

Against this background, the Health Pathfinder intervention was created and implemented in eight health system sites in England between 2017 and 2020 (for additional details, see [Health Pathfinder Evaluation Team, 2021](#)). Drawing on innovative alliances between acute health (that is, hospital-based care), mental health and primary care (that is, community-based care provided by a general practitioner) settings, Health Pathfinder spearheaded a 'whole health response', including a combination of IDVAs co-located in health system contexts; dedicated coordinators and site-specific steering groups to develop and implement policies relating to DVA; targeted training for health professionals; and technical assistance to health system sites to improve

monitoring and evidence generation relating to DVA. Led by a coalition of five established and respected DVA organisations supporting victim-survivors, Health Pathfinder was notable for its attention to mental health and substance use settings as important sites of care alongside general practice and acute care, the role of equity and intersectionality in improving health responses for all women victim-survivors, and survivor voice. The goals of Health Pathfinder were ultimately to identify more victim-survivors earlier in their experiences of abuse, including across a wider range of risks to include victim-survivors notionally classed as ‘lower risk’, and help them to safety sooner.

Evidence for the effectiveness of multilevel strategies including clinician-facing and patient-facing interventions, system resourcing and policy change to improve health system responses to domestic abuse is scant, and that which exists highlights the challenges of demonstrating system-level change (for example, [Fisher et al, 2023](#)). This brief report addresses key questions about the impact of Health Pathfinder consistent with the intervention’s state goals. First, we examined whether Health Pathfinder changed the rate of high-risk referrals, as a proxy for impacts in general system capacity to address DVA; and second, we examined whether Health Pathfinder changed the risk profiles of victim-survivors referred to services, as a proxy for impacts in identifying women earlier in their experiences of DVA.

## **Methods**

The current study relied upon two national datasets: MARAC monitoring data, and Insights, a service-level database used to track the process and performance of DVA services across the UK. Both forms of data were routinely submitted to the national DVA charity SafeLives and were made available to the research team by Safe Lives for analysis. Ethical approval was provided by the Wales Research Ethics Committee 3 on 21 August 2019 (REC Ref: 19/WA/0206). Data received from Consortium Partners and Health Pathfinder sites were de-identified and anonymous.

### *Analytic approach*

Our general strategy for analysis was to undertake a controlled interrupted time series analysis with multiple baselines. Interrupted time series analysis takes advantage of multiple rounds of data collection before and after intervention implementation (that is, the point of ‘interruption’) to estimate the effectiveness of interventions, and is considered a comparatively strong design in the absence of randomisation ([Lopez Bernal et al, 2017](#)). The use of controls, or other units where the intervention has not been implemented, can strengthen inference by providing a counterfactual time trend. Given that the controls used in this analysis – specifically, police forces for MARAC monitoring data, and DVA services for Insights data – were likely to be exposed to the same confounding events ([Lopez Bernal et al, 2018](#)), the inclusion of controls improved the credibility of our analysis. Finally, our analysis used multiple baselines, an extension of standard interrupted time series analysis that accounts for the multiple points in time at which interventions are implemented across exposed sites ([Ewusie et al, 2020](#)). Interrupted time series models have been used for evaluation of system-level DVA interventions in healthcare in the UK; for example, [Sohal et al \(2020\)](#)

examined the impact of a system-level referral intervention in 144 general practices in four boroughs using similar methods to those described here to link intervention implementation to a steep increase in DVA referrals generated, using general practices from a borough not receiving the intervention as a control.

### *MARAC data*

Data are collected from all MARACs in England, Wales, Northern Ireland and Scotland. Data are collected at meeting level which means information is available about the cohort of cases discussed at each meeting but not data on individual cases. We analysed MARAC data on a national level, taking police force area as a geographical unit of analysis for ease of reference, and analysed data for eight quarters in the 2018–2019 time period. We compared MARACs in police force areas including Health Pathfinder sites against MARACs in police force areas not including Health Pathfinder sites, using as an outcome the rate of MARAC referrals standardised by the number of women aged 16+ in each area, derived from the previous census, and then a subset of these data focusing only on specific MARACs linked to sites where Health Pathfinder was implemented. MARACs are multi-agency in nature (that is, not ‘owned’ by police forces), but we used police force areas in part due to availability of census data to standardise our analyses.

Our analysis of MARAC data unfolded in several steps. First, we inspected general time trends for rates of referral to MARACs, in non-Health Pathfinder police force areas and established the functional form of the relationship between time and the outcome, and compared this to time trends in Health Pathfinder police force areas pre-implementation. Second, we generated two variables: a binary variable capturing quarters with data that included Health Pathfinder implementation and a continuous variable capturing the number of quarters following implementation in Health Pathfinder sites. Third, we estimated a multilevel Poisson regression with random intercepts, police force areas at level 2, and quarters at level 1, and with number of cases standardised by the female population aged 16+ from the last census. This analysis included variables for whether sites were Health Pathfinder sites; time measured in quarters; the interaction between time and whether sites were Health Pathfinder sites to capture different pre-implementation time trends; quarters in Health Pathfinder sites that included implementation; and the number of quarters post-implementation in Health Pathfinder sites. Because one police force area (Metropolitan London) included several Health Pathfinder sites with staggered implementation and because London MARACs were outliers in terms of population size in catchment, we reran analyses without London police force areas for robustness.

### *Insights data*

Insights provides the most comprehensive dataset on DVA services in the UK, including data from services working with victims, survivors and their children. It provides a comprehensive picture of the experiences of victim-survivors, and the support they receive.

Our analysis of Insights compared IDVA contacts for four services from three Health Pathfinder sites against 18 other sites nationally. Our key outcome from these data related to the risk profiles of victim-survivors referred to services. To understand risk profiles, we considered the proportion of cases classified as standard risk on intake (that is, not classified as medium or high-risk based on the professional judgement of the worker completing the DASH for the case, or based on not meeting the actuarial threshold of 14 ticks on the DASH), and the average number of ticks (that is, 'yes' responses) on the DASH for each case at intake. The timeframe for all analyses was 2018–2019, with time periods measured as quarters, and covered the same period as the MARAC data. Thus, eight quarters of data were included in the analysis.

Our analysis of Insights data unfolded in a similar fashion to the MARAC data. Our analysis was restricted to 22 services with sufficient Insights data over the eight quarters in the analysis, and included four services participating in Health Pathfinder. First, we inspected general time trends in non-Health Pathfinder services and established the plausibility of a linear time trend, and compared this to time trends in Health Pathfinder services pre-implementation. This suggested that time trends were similar. Second, we generated two variables: one capturing quarters with data that included Health Pathfinder implementation and one capturing the number of quarters following implementation in Health Pathfinder sites. Third, we estimated a multilevel regression with random intercepts, services at level 2, and individual contacts at level 1. This analysis included variables for time measured in quarters; quarters in Health Pathfinder sites that included implementation; and the number of quarters post-implementation in Health Pathfinder sites. We used a Poisson link with robust standard errors to estimate prevalence ratios for victim-survivors at standard risk and a Normal link with robust standard errors to estimate mean differences in DASH scores.

## **Results**

Our analysis of MARAC data included 311 quarters of data from 39 of the 43 UK police force areas, with 27 of these quarters including Health Pathfinder implementation (that is, the eight Health Pathfinder sites were clustered in six police force areas). Our exploratory analysis of MARAC data confirmed the plausibility of a linear time trend but suggested that different time trends for MARAC referrals were in operation between Health Pathfinder project areas and non-Health Pathfinder project areas. Thus, our models included an interaction term for Health Pathfinder status by time.

Findings from analysis of MARAC data are reported in [Table 1](#). In our analysis including all police force areas, Health Pathfinder sites had a numerically, but not statistically, higher rate of MARAC referrals (rate ratio 1.316, 95% CI [0.877, 1.975]) at baseline. In non-Health Pathfinder sites, the rate of referrals increased by 2.2 per cent quarter on quarter, though in Health Pathfinder sites a significant interaction term (rate ratio 0.902, 95% CI [0.891, 0.912]) suggested that on average, pre-implementation MARAC referrals decreased by 7.8 per cent per quarter. Implementation in Health Pathfinder was associated with a 10.9 per cent step change in the rate of referrals to MARAC, and growth in subsequent quarters of 10.1 per cent in the rate of MARAC referrals. Both findings were statistically significant. A sensitivity analysis excluding London police force areas did not find evidence of a step change arising

**Table 1: Impact of Health Pathfinder on MARAC referrals**

Coefficient	All police force areas Rate ratio (95% CI)	Excluding London Rate ratio (95% CI)
<b>Site-level</b>		
Intercept	0.0008 (0.0007, 0.0009)	0.0008 (0.0007, 0.0010)
Health Pathfinder area	1.316 (0.877, 1.975)	1.323 (0.849, 2.062)
<b>Quarter-level</b>		
Time	1.022 (1.019, 1.024)	1.022 (1.019, 1.024)
Time by Health Pathfinder	0.902 (0.891, 0.912)	0.910 (0.899, 0.921)
Implementation period	1.109 (1.071, 1.149)	0.990 (0.943, 1.039)
Time since implementation	1.101 (1.087, 1.115)	1.100 (1.082, 1.118)

from Health Pathfinder implementation (rate ratio 0.990, 95% CI [0.943, 1.039]) but did generate nearly identical estimates of quarter-on-quarter growth in the rate of MARAC referrals (rate ratio 1.100, 95% CI [1.082, 1.118]).

Our analysis of Insights data included 11,065 intake records from 22 services, including four services in three Health Pathfinder sites. Exploratory analysis did not suggest any meaningful difference between services at baseline, so our analysis only included three regression terms (see Table 2). Across all services, the prevalence of victim-survivors judged to be at standard risk increased 2.1 per cent quarter on quarter, though this was only marginally significant ( $p=0.051$ ). However, implementation of Health Pathfinder was associated with a step change in the prevalence of victim-survivors at standard risk of 33.6 per cent (95% CI [12.8%, 58.1%]), which was sustained over time based on the non-significant time since implementation coefficient (prevalence ratio 0.989, 95% CI [0.964, 1.009]). However, parallel findings on the DASH were not demonstrated as all terms were non-significant, suggesting neither an impact of time nor an impact of Health Pathfinder on DASH scores of victim-survivors seen by DVA services.

## Discussion

Collectively, our analyses suggest that Health Pathfinder had a meaningful impact in a) increasing the number of highest-risk cases receiving multi-agency safety planning,

**Table 2: Impact of Health Pathfinder on victim-survivor risk**

Coefficient	Standard-risk victim-survivors Prevalence ratio (95% CI)	DASH score Mean difference (95% CI)
<b>Site-level</b>		
Intercept	0.309 (0.020, 0.474)	9.270 (7.797, 10.744)
<b>Quarter-level</b>		
Time	1.021 (1.000*, 1.043)	0.020 (-0.193, 0.234)
Implementation period	1.336 (1.128, 1.581)	-0.749 (-2.270, 0.772)
Time since implementation	0.989 (0.964, 1.009)	-0.280 (-0.603, 0.042)

Note: \* $p$ -value 0.051.

and b) identifying and referring victim-survivors at what might be an earlier stage in abusive relationships. To conclude this brief report, we discuss our key findings and their implications for policy and practice.

Our finding relating to quarter-on-quarter improvements in MARAC referrals was robust to exclusion of the largest police force areas, providing added confidence as to this finding's significance. While we found that the proportion of victim-survivors assessed as being at standard risk changed as a result of Health Pathfinder, this finding was not mirrored in the 'scored' level of risk reflected in the number of 'yes' responses to the 27 DASH questions. However, this analysis is likely to be less informative than an analysis focusing on professional or actuarial judgement, such as the risk classifications made by IDVAs, given the limitations of any scale in capturing all of the dimensions of risk experienced by victim-survivors (Robinson and Howarth, 2012). In addition, this analysis does not account for later 'revisions' to risk classifications as a result of IDVA expertise.

Our analyses also pose an interesting question. While it may appear at first glance to be contradictory that more high-risk cases were detected (that is, cases discussed at relevant MARACs) and also that risk profiles shifted to include a wider spectrum of risks (that is, more victim-survivors classified as standard risk), these findings are not necessarily at odds. Because MARAC data are with respect to the entire population in the area, the population rate of high-risk cases discussed at MARACs can be viewed as a proxy for general system-wide capacity to support enquiry, disclosure and referral. This outcome is not with respect to a specific DVA service, and captures the totality of activity in identifying and referring DVA cases of consideration across a range of channels and actors across a system. Thus, the most likely interpretation of our findings relating to the rate of cases discussed at MARACs are that these reflect underlying system improvements across multiple stakeholders involved in Health Pathfinder. At the same time, Health Pathfinder improved detection of DVA across a wider spectrum of risks as demonstrated by the cases recorded in Insights data from participating services. This is, by definition, a more specific scope of activity than the activity reflected in data relating to MARAC referrals, and with respect to a narrower population; it considers only those victim-survivors referred via new and existing pathways to these services, rather than the totality of system-wide identification and referral. One of the potential benefits of an improved whole health response is the ability to detect domestic abuse across the risk spectrum and, importantly, refer victim-survivors before risk escalates. These twin features of our quantitative analysis – improved system response and improved response across a broader spectrum of risk – closely reflect the Health Pathfinder logic model developed in consultation. In particular, the combination of victim-survivor-level and system-level impacts suggests that key mechanisms and outcomes of more disclosures, earlier identification, more appropriate referrals for specialist support, more people helped to safety and sooner, and shifts in organisational culture and response to DVA were achieved.

Our analysis had a number of limitations, however. The first was our limited ability to ensure comparability between Health Pathfinder and non-Health Pathfinder sites, which would have strengthened our inference. In addition, we were only able to use Insights data from three of the eight Health Pathfinder sites. Another key limitation underlying our quantitative analyses is that the data we were able to analyse meaningfully, and in a comparative fashion, focused on measurement of risk, meaning that we were unable to consider the full range of potential benefits that

Health Pathfinder might offer victim-survivors. To do this, we would have needed longer-term data on health and needs, for example through record linkage with NHS data. In addition, our MARAC analysis relied on census data from 2011 to standardise numbers of MARAC referrals. While this was useful in capturing the comparative size of different police force areas, it also means that ‘absolute’ estimates of time trends may not provide a true estimate of changes in rates over time. Finally, we were to probe to the degree necessary how Health Pathfinder improved health equity not only for women victim-survivors experiencing domestic abuse, but for women victim-survivors also experiencing multiple forms of oppression.

Despite these study limitations, this brief report provides an important empirical contribution to the small but emerging evidence base about multi-level system responses to DVA and how positive change can be demonstrated. Our analyses provide additional evidence that these interventions are an important part of health systems’ contribution to ending DVA, and that these interventions are effective when implemented as a multilevel, whole-system response.

### Note

<sup>1</sup> A majority of the 43 police forces in England and Wales were using the DASH risk model either in its original form or in an altered form at the time of a major national inspection by [Her Majesty’s Inspectorate of the Constabulary \(HMIC, 2014\)](#). For more information on the variability of DASH among forces and operational challenges, see [Robinson et al \(2016\)](#).

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### Conflict of interest

The authors declare that there is no conflict of interest.

### References

- Coy, M. and Kelly, L. (2011) *Islands in the Stream: An Evaluation of Four London Independent Domestic Violence Advocacy Schemes*, London: Trust for London and the Henry Smith Charity.
- Davies, P., Barlow, C. and Fish, R. (2023) The hard and complex work of implementing new multi-agency risk assessment approaches to policing domestic abuse, *Crime Prevention and Community Safety*, 25: 148–65. doi: [10.1057/s41300-023-00175-3](https://doi.org/10.1057/s41300-023-00175-3)
- Elvey, R., Mason, T. and Whittaker, W. (2022) A hospital-based independent domestic violence advisor service: demand and response during the Covid-19 pandemic, *BMC Health Services Research*, 22(1): 865. doi: [10.1186/s12913-022-08183-z](https://doi.org/10.1186/s12913-022-08183-z)
- Ewusie, J.E., Soobiah, C., Blondal, E., Beyene, J., Thabane, L. and Hamid, J.S. (2020) Methods, applications and challenges in the analysis of interrupted time series data: a scoping review, *Journal of Multidisciplinary Healthcare*, 13: 411–23. doi: [10.2147/JMDH.S241085](https://doi.org/10.2147/JMDH.S241085)

- Feder, G., Agnew Davies, R., Baird, K., Dunne, D., Eldridge, S., Griffiths, C., et al (2011) Identification and referral to improve safety (IRIS) of women experiencing domestic violence with a primary care training and support programme: a cluster randomised controlled trial, *The Lancet*, 378: 1788–95. doi: [10.1016/S0140-6736\(11\)61179-3](https://doi.org/10.1016/S0140-6736(11)61179-3)
- Fisher, C.A., Troy, K., Rushan, C., Felmingham, K. and Withiel, T.D. (2023) Evaluating the impact of a family violence transformational change project in a major trauma hospital: a three-year follow-up comparison study of knowledge, confidence, and family violence response skills in clinical staff, *Frontiers in Health Services*, 6(2): 1016673.
- Halliwell, G., Dheensa, S., Fenu, E., et al (2019) Cry for health: a quantitative evaluation of a hospital-based advocacy intervention for domestic violence and abuse, *BMC Health Services Research*, 19: 718. doi: [10.1186/s12913-019-4621-0](https://doi.org/10.1186/s12913-019-4621-0)
- Health Pathfinder Evaluation Team (2021) *Independent Evaluation of Health Pathfinder: Full Technical Report*, Cardiff: Cardiff University.
- HMIC (Her Majesty's Inspectorate of the Constabulary) (2014) *Everyone's Business: Improving the Police Response to Domestic Abuse*, London: HMIC.
- Howarth, E. and Robinson, A.L. (2016) Responding effectively to women experiencing severe abuse: identifying key components in a British advocacy intervention, *Violence Against Women*, 22(1): 41–63. doi: [10.1177/1077801215597789](https://doi.org/10.1177/1077801215597789)
- Lopez Bernal, J., Cummins, S. and Gasparrini, A. (2017) Interrupted time series regression for the evaluation of public health interventions: a tutorial, *International Journal of Epidemiology*, 46(1): 348–55. doi: [10.1093/ije/dyw098](https://doi.org/10.1093/ije/dyw098)
- Lopez Bernal, J., Cummins, S. and Gasparrini, A. (2018) The use of controls in interrupted time series studies of public health interventions, *International Journal of Epidemiology*, 47(6): 2082–93. doi: [10.1093/ije/dyy135](https://doi.org/10.1093/ije/dyy135)
- Macdonald, M. (2021) *The Role of Healthcare Services in Addressing Domestic Abuse. House of Commons Library Briefing Paper 9233*, London: House of Commons Library.
- NICE (National Institute for Health and Care Excellence) (2014) *Review of Interventions to Identify, Prevent, Reduce and Respond to Domestic Violence*, London: NICE, <http://www.nice.org.uk/guidance/ph50/evidence>.
- Oliver, R., Alexander, B., Roe, S. and Wlasny, M. (2019) *The Economic and Social Costs of Domestic Abuse Research Report 107*, London: The Home Office.
- Richards, L. (2003) *MPS Domestic Violence Risk Assessment Model*, London: Metropolitan Police Service.
- Rivas, C., Ramsay, J., Sadowski, L., Davidson, L.L., Dunne, D., Eldridge, S., et al (2015) Advocacy interventions to reduce or eliminate violence and promote the physical and psychosocial well-being of women who experience intimate partner abuse, *Cochrane Database of Systematic Reviews*, 2015(12): CD005043. doi: [10.1002/14651858.CD005043.pub3](https://doi.org/10.1002/14651858.CD005043.pub3)
- Robinson, A.L. (2004) *Domestic Violence MARACs (Multi-Agency Risk Assessment Conferences) for Very High-Risk Victims in Cardiff: A Process and Outcome Evaluation*, Cardiff: School of Social Sciences, Cardiff University.
- Robinson, A.L. (2006) Reducing repeat victimisation among high-risk victims of domestic violence: the benefits of a coordinated community response in Cardiff, Wales, *Violence Against Women*, 12(8): 761–88. doi: [10.1177/1077801206291477](https://doi.org/10.1177/1077801206291477)
- Robinson, A.L. (2009) *Independent Domestic Violence Advisors: A Process Evaluation*, Cardiff: School of Social Sciences, Cardiff University.

- Robinson, A.L. (2010) Risk and intimate partner violence, in H. Kemshall and B. Wilkinson (eds) *Good Practice in Risk Assessment and Risk Management*, 3rd edn, London: Jessica Kingsley Publishers, pp 119–38.
- Robinson, A.L. (2017) Domestic violence and abuse in the UK, in E. Buzawa and C. Buzawa (eds) *Global Responses to Domestic Violence*, Cham: Springer, pp 107–24.
- Robinson, A.L. and Howarth, E. (2012) Judging risk: key determinants in British domestic violence cases, *Journal of Interpersonal Violence*, 27(8): 1489–518. doi: [10.1177/0886260511425792](https://doi.org/10.1177/0886260511425792)
- Robinson, A.L., Myhill, A., Wire, J., Roberts, J. and Tilley, N. (2016) *Risk-led Policing of Domestic Abuse and the DASH Risk Tool*, London: College of Policing.
- SafeLives (2023) Latest MARAC data, <https://safelives.org.uk/practice-support/resources-marac-meetings/latest-marac-data>.
- Sohal, A.H., Feder, G., Boomla, K., Dowrick, A., Hooper, R., Howell, A., et al (2020) Improving the healthcare response to domestic violence and abuse in UK primary care: interrupted time series evaluation of a system-level training and support programme, *BMC Medicine*, 18: 48. doi: [10.1186/s12916-020-1506-3](https://doi.org/10.1186/s12916-020-1506-3)
- Steel, N., Blakeborough, L. and Nicholas, S. (2011) *Supporting High-Risk Victims of Domestic Violence: A Review of Multi-Agency Risk Assessment Conferences (MARACs)*, London: Home Office.
- Trevillion, K., Howard, L., Sevdalis, N., Easter, A., Heslin, M., Wilson, C. et al (2022) Evaluating models of health-based mateRnItYViolence Advisor (RIVA) provision in maternity services, <https://arc-swp.nihr.ac.uk/research/projects/idva/>.
- Walklate, S., Godfrey, B. and Richardson, J. (2021) Innovating during the pandemic? Policing, domestic abuse and multi-agency risk assessment conferencing (MARACs), *The Journal of Adult Protection*, 23: 181–90. doi: [10.1108/jap-11-2020-0047](https://doi.org/10.1108/jap-11-2020-0047)
- WHO (World Health Organization) (2013) *Responding to Intimate Partner Violence and Sexual Violence Against Women, WHO Clinical and Policy Guidelines*, Geneva: WHO.