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# The economic cost from childhood exposure to severe domestic violence

Technical report prepared for Hestia in association with Jon Franklin



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# 1 Introduction

This report was commissioned by Hestia to explore the long-term cost to UK taxpayers from the additional use of public services by children who have been exposed to domestic violence.

## 1.1 Background

Hestia began providing support to adults in crisis in 1970. Since then it has grown to support over 9,000 adults and children in London each year – working with those experiencing domestic abuse, modern slavery and mental health needs. As the largest provider of domestic abuse refuges in London, Hestia is keen to keep the voices of both the adults and children involved in their services at the heart of the policy development process.

In January 2019 the government published its draft Domestic Abuse Bill. This will set the policy framework for government interventions to support victims of domestic abuse for years to come. Alongside the draft Bill the government published a report entitled “The economic and social costs of domestic abuse”. This report estimated the total costs of domestic abuse in the year 2016/17 to have been more than £66bn. This includes costs to government, lost productivity and the costs to adults including the impact on their wellbeing. However, this analysis did not include any estimates of the costs on children – highlighting the relative paucity of good quality evidence available to make an estimate.

Hestia have a particular concern that the needs of children exposed to domestic abuse will not be met by the current proposals. As such they have commissioned this work to explore whether there are any components of the fiscal costs from childhood exposure to domestic violence that can be estimated. It is hoped that any initial estimate can help to support the policy debate on this important issue.

## 1.2 Objectives and scope of the analysis

This report provides an indicative estimate of the potential cost of providing public services to help children that have witnessed, or experienced domestic abuse.

The impacts on children from exposure to domestic violence are complex and wide-reaching, affecting physical health, self-perception, behaviours, relationships, wellbeing and stability of home and family environment<sup>1</sup>. Furthermore, exposure to domestic violence is often associated with exposure to other forms of maltreatment such as child abuse and neglect. This complex interaction of risks and outcomes makes a full economic analysis of all impacts and consequences of exposure to domestic violence a substantial and challenging task.

Our analysis focuses on assessing those impacts that have been best evidenced and quantified in existing literature. We focus on a chain of evidence that links exposure to domestic violence in childhood to the prevalence of externalising behaviours such as conduct disorder and hyperactivity deficit disorders. We estimate the associated additional cost of public service usage by these children up to age 28 using existing published unit cost estimates where these are available<sup>2</sup>. The scope of our analysis is illustrated in Figure 1, overleaf:

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<sup>1</sup> Artz et al. (2014)

<sup>2</sup> We have also reviewed the evidence linking externalising behaviours such as conduct disorder and attention disorders to lifetime income. Although there are some relevant studies such as Knapp et al. (2011) and Colman et al. (2009) they provide a mixed picture on employment effects that they emphasise requires further examination before drawing out policy implications. We have, therefore, chosen not to include these effects in our analysis.

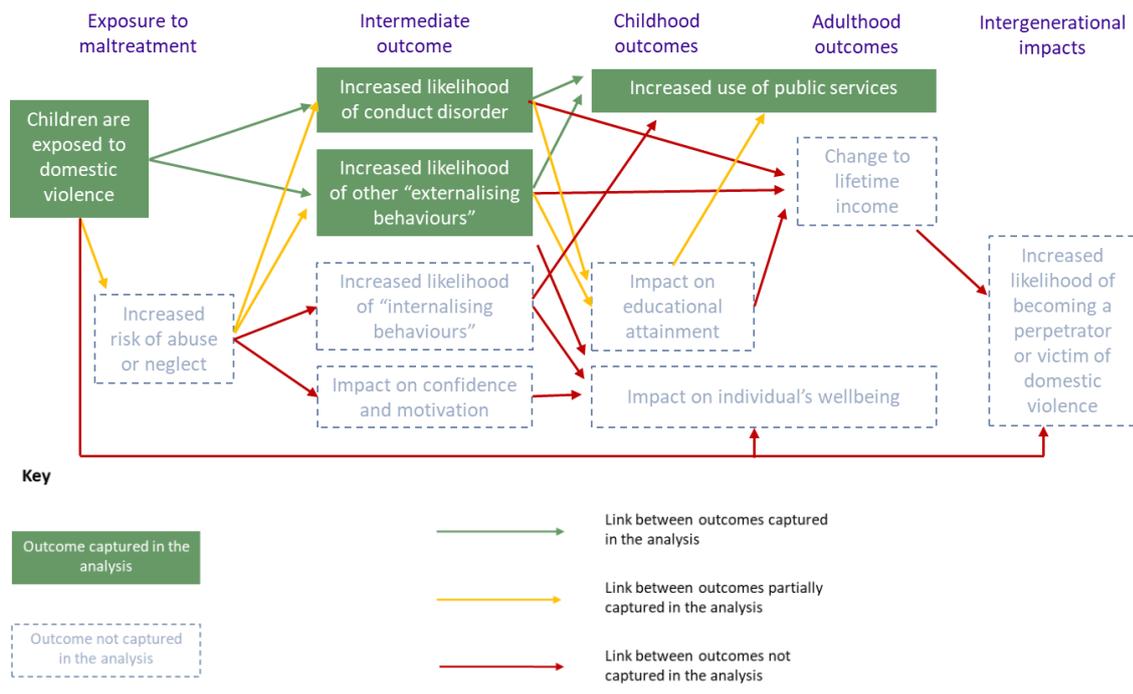


Figure 1: Overview of scope of our study

Our analysis is likely to provide a partial picture of the potential costs to society from exposure to domestic violence and there may be other costs not captured in our analysis such as other psychological impacts that could affect educational attainment, the impacts on lifetime income, the overall effect on an individual's wellbeing and the inter-generational effect on the likelihood of becoming a victim or perpetrator of domestic violence. In addition, as discussed in section 3.2 there are a number of limitations to the available evidence that implies a significant degree of uncertainty in our analysis. However, we hope that our analysis provides a useful starting place for considering the potential costs to society from children being exposed to domestic violence and, therefore, the potential savings from delivering better support for those children affected.

### 1.3 Structure of the report

The report is structured as follows:

- Section 2 provides an overview of previous research looking at the costs of childhood exposure to domestic violence.
- Section 3 describes the analytical approach taken in our analysis.
- Section 4 sets out the results of the analysis.
- Section 5 summarises the key conclusions of the analysis along with its implications.

## 2 Key findings from existing research

In this section we provide a brief review of existing studies looking at the costs of childhood exposure to domestic violence. It is broken down into three broad sections: the first reviews evidence from the UK, the second reviews evidence from other countries and the third section provides an overview of the limitations of existing studies.

### Previous studies from within the UK

There is very limited evidence available from the UK on the costs of childhood exposure to domestic violence. Research by Sylvia Walby exploring the costs to society from domestic violence is primarily focused on the costs arising from the adults involved but does include a component relating to the costs incurred by government in supporting affected children<sup>3</sup>. Her research suggests that the total cost to government of providing support to children exposed to domestic violence was around £315 million per year in 2017 prices. This estimate was based purely on the costs incurred by social services due to the co-occurrence of domestic violence and child abuse and adopted relatively high-level breakdown of social service costs based on broad assumptions. It did not include the costs of other services such as education and health, the cost impacts for children who were exposed to domestic violence but did not directly experience abuse themselves or the longer-term impacts of exposure to domestic violence over the lifetime of the children affected.

### Studies from other countries

More studies specifically focused on the costs of childhood exposure to domestic violence are available for other countries. For example, one study from the USA estimates the lifetime costs of childhood exposure to domestic violence at around £70,000 per child (in 2017 prices) with around 50% of this cost due to productivity losses, 30% due to the costs of crime and 20% due to healthcare costs<sup>4</sup>. This study draws on existing literature to estimate the change in prevalence of healthcare, criminal justice and educational<sup>5</sup> outcomes. The authors make explicit consideration of whether underlying studies incorporate robust counterfactuals and take account of co-occurring risk factors, however, the principle underlying data sources for these studies are cross-sectional in nature so risks remain that identified relationships are not causal.

A study from Canada estimated the costs of childhood exposure at around £100,000 per child over a ten year period (in 2017 prices)<sup>6</sup>. This study incorporated evidence on a wide range of effects including medical costs, early pregnancy, addiction, conduct disorder, suicide and “child poverty”. The increase in the prevalence of each effect was estimated based on pre-existing literature and evidence on unit costs. However, there was relatively limited consideration of the extent to which symptoms may co-occur or the extent to which studies captured causal relationships.

### Limitations of previous studies

Our review has highlighted a dearth of evidence on the cost of childhood exposure to domestic violence in the UK, with the main exception being the study by Sylvia Walby mentioned above. This is underlined by the Home Office report published alongside the Draft Domestic Abuse Bill that highlighted “there is still insufficient evidence on the impacts of domestic abuse on children for this to be included in the estimates in the cost of domestic abuse”<sup>7</sup>. In particular, it emphasises the lack of robust longitudinal studies to support the quantification of impacts.

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<sup>3</sup> Walby (2004)

<sup>4</sup> Holmes et al (2018)

<sup>5</sup> Educational outcomes are used to estimate lifetime productivity impacts based on further evidence on the lifetime effects educational attainment on employment prospects.

<sup>6</sup> Andresen & Linning (2014)

<sup>7</sup> Oliver et al. (2019)

We agree that more longitudinal evidence is needed in this area. However, in the absence of this, we have explored the potential societal cost to childhood exposure to domestic violence by using available cross-sectional evidence on how this is related to the prevalence of conduct and hyperactivity disorders. This is similar to the underlying approach used in the US and Canadian studies mentioned above. We consider that this approach can give an indication of the potential scale of cost to the UK taxpayer associated with the increased demand on public services. We recognise, however, that our approach has a number of important limitations and the estimated cost is subject to significant uncertainty (see section 3.2).

### 3 Analytical approach

Our analysis draws on evidence on the proportion of children that have been exposed to domestic violence and the underlying prevalence of conduct and hyperactivity disorders amongst children in the UK. We estimate the impact of domestic violence on the prevalence of these disorders using existing studies and apply unit cost estimates from relevant literature to estimate the impact of childhood exposure to domestic violence on the costs of taxpayer funded services.

Section 3.1 provides an overview of the approach and the sources of information used at each stage. Section 3.2 summarises the key limitations of the approach and the implications for how our findings should be interpreted.

#### 3.1 Overall approach

Our overall approach comprises four key steps, outlined in Figure 2:



Figure 2: Overview of analytical approach

Each of these steps are described in more detail below.

##### Step 1: Identify the number of children exposed to domestic violence in the UK

We base our prevalence estimates for childhood exposure to domestic violence on the nationally representative survey commissioned by the NSPCC in 2011<sup>8</sup>. In order to align with the definitions used in evidence for step 3, we base the estimates on the proportion of parents responding positively to the question “has the child ever witnessed one parent being kicked, choked or beaten up by the other parent” as a proxy for exposure to “severe” domestic violence. We then multiply these prevalence figures by the mid-2017 population estimates from the ONS for each age category to arrive at the number of children that had been exposed to severe domestic violence<sup>9</sup>. Table 1 summarises the data used:

	Age 0-10	Age 11-16	Age 17-18
Prevalence of severe domestic violence	3%	4%	6%
Total population in age cohort	8,860,000	4,360,000	740,000
Number of children exposed to domestic violence in age cohort	290,000	180,000	30,000

Table 1: Summary of number of children exposed to domestic violence. Sources: Radford et al. (2011) & ONS (2017)

<sup>8</sup> Radford et al. (2011)

<sup>9</sup> ONS (2017)

## Step 2: Identify prevalence of externalising behaviours in the absence of domestic violence

We use the results from the 2017 “Mental Health of Children and Young People in England” prevalence survey for our baseline level of externalising behaviours for the children affected<sup>10</sup>. The literature used in Step 3 of our analysis uses the World Health Organisation ICD-10 definition of conduct disorders – this aligns with the “any behavioural disorder” grouping in the prevalence survey<sup>11</sup>. We use the “any hyperactivity disorder” category from the prevalence survey to capture the prevalence of other externalising behaviours. We assume that, in the absence of exposure to domestic violence, the prevalence of these disorders would be in line with the national average. The assumptions are summarised in Table 2, below.

	Age 0-10	Age 11-16	Age 17-18
Prevalence of conduct disorders in the absence of domestic violence	5%	6%	1%
Prevalence of hyperactivity disorders in the absence of domestic violence	2%	2%	1%

Table 2: Baseline prevalence of conduct disorder and hyperactivity disorders. Source: NHS Digital (2018)

## Step 3: Estimate impact of childhood exposure to domestic violence on prevalence of externalising behaviours

To estimate the impact of childhood exposure to domestic violence on the prevalence of conduct disorders we draw on a 2009 UK based study, referred to throughout as the “Meltzer study”<sup>12</sup>. This study uses the 2004 national survey of the mental health of children and young people to estimate the change in the prevalence of conduct disorder where a child or parent has responded as saying that the child has “witnessed severe domestic violence”<sup>13</sup>. The study uses a logistic regression analysis controlling for a range of demographic characteristics including: age, gender, ethnicity, income, number of siblings, type of accommodation and mother’s mental health. It is estimated that exposure to severe domestic violence is related to an increase in the prevalence of conduct disorders by a factor of 2.0-3.9.

There is no equivalent estimate of the effect of exposure to severe domestic violence on the prevalence of hyperactivity disorders in the UK. However, a number of meta-analyses and literature reviews, drawing on evidence from around the world, have concluded that there is a significant relationship between exposure to domestic violence and broader definitions of externalising behaviours that frequently include hyperactivity disorders as well<sup>14</sup>. One study, based on evidence from a longitudinal study in Michigan state, estimates that exposure to domestic violence increased the prevalence of externalising behaviours, including hyperactivity disorders, by a factor of 2.7<sup>15</sup>. This study was based on a relatively small sample from Michigan state however it is broadly in line with the impacts estimated for conduct disorder in the Meltzer study. For the purpose of our estimate we make the simplifying assumption that exposure to domestic violence has the same impact on hyperactivity disorders as for conduct disorders.

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<sup>10</sup> NHS Digital (2018)

<sup>11</sup> WHO (1993)

<sup>12</sup> Meltzer et al. (2009)

<sup>13</sup> Prevalence of witnessing severe domestic violence is estimated at 4%, in line with the prevalence figures taken from the more recent NSPCC study under Step 1.

<sup>14</sup> See for example Kitzman et al (2003) and Artz et al (2014).

<sup>15</sup> DeJonghe et al (2011)

Table 3 below summarises the assumed prevalence of conduct disorders and hyperactivity disorders amongst children that have been exposed to domestic violence. For all results we present a range based on the 95% confidence interval presented in the Meltzer study – that exposure to domestic violence increases both conduct and hyperactivity disorders by a factor of between 2.0 and 3.9.

	Age 0-10	Age 11-16	Age 17-18
Prevalence of conduct disorders for those exposed to domestic violence	10-20%	12-24%	2-3%
Difference to baseline	+5-15%	+6-18%	+1-2%
Implied increase in children with conduct disorders	14,200-42,700	10,800-32,400	200-700
Prevalence of hyperactivity disorders for those exposed to domestic violence	3-7%	4-8%	2-3%
Difference to baseline	+2-5%	+2-6%	+1-2%
Implied increase in children with hyperactivity disorders	4,800-14,500	+3,500-10,400	+200-700

Table 3: Impact of childhood exposure to domestic violence on disorders. Source: Calculations based on Meltzer (2009)

#### Step 4: Estimate additional costs from exposure to domestic violence

We estimate the increase in service costs relating to the increased prevalence of conduct disorders and hyperactivity disorders from exposure to domestic violence using unit cost estimates two key from Scott et al. for childhood costs and D’Amico et al. for costs during adulthood<sup>16</sup>. Both of these studies use longitudinal data gathered from cohorts of children in London boroughs to monitor the difference in the use of public services for a group of children with conduct/attention disorders and those without disorders. They then apply unit cost information from a range of sources to estimate the total cost difference covering the following public services:

- **Health and adult social care costs:** The D’Amico et al. study asked participants about their use of accident and emergency (A&E), general hospital and psychiatric out-patient department services (specialty clinic visits) and any general or psychiatric hospital in-patient admissions (stays). They were also asked whether they had been prescribed medication for anxiety, depression, psychosis or ADHD. Health and social care-related unit costs for hospital services were obtained from National Health Service (NHS) reference costs for 2009/10 and unit costs for GP visits, nurse consultations, counselling and social care support were taken from the Personal Social Services Research Unit (PSSRU) volume for 2010.
- **Crime costs:** The D’Amico study asked participants for details about their contacts with the police and probation officers, arrests, appearances in court, and stays in prison or remand. Costs for the criminal justice system were taken from Home Office and Ministry of Justice publications. The length of a remand or prison stay was assumed to be equal to 1 month as no specific information was available. Only costs to government were included in their analysis.
- **Educational costs:** Scott et al. used data on: remedial help at primary school, remedial help at secondary school, exclusions, social worker support for truancy and adult literacy classes.

<sup>16</sup> Scott et al. (2001) & D’Amico et al. (2014)

Assumed unit costs are provided in their paper and were based on previous research. However, their study does not identify individuals with hyperactivity disorders separately, therefore we have not included any estimate of the impact of hyperactivity disorders on childhood costs.

- **Foster and residential care costs:** Scott et al. used data on whether an individual had experience foster or residential care and assumed a 26 week stay. Assumed unit costs are provided in their paper and were based on previous research.

We present the estimated costs of additional public service provision from age 10 to 28 for children exposed to domestic violence in “present value” terms. This means that costs in the near term are weighted more heavily than costs in the future, aiding comparison of costs experienced at different points in time for children currently in different age cohorts. Both of the studies used for our unit cost information report arithmetic mean cost differences over the period of observation up the age of 28<sup>17</sup>. They do not discount costs to a particular point in time and provide no breakdown of when costs occur over the lifetime of the individuals. Therefore, we have assumed that costs are spread evenly over age 10-16 for additional educational costs, age 10-17 for foster and residential care and age 18-28 for health, adult social care and crime costs.

There is a relatively high degree of comorbidity between conduct disorders and hyperactivity disorders, with 62% of those with a hyperactivity disorder also presenting with a conduct disorder and 24% of those with conduct disorders presenting with hyperactivity disorders<sup>18</sup>. For the purposes of our analysis we have assumed that the costs identified for “attention disorders” in D’Amico et al. are representative for our definition of “all hyperactivity disorders” and that the costs of hyperactivity disorders and conduct disorders is additive. Given the relatively small scale of the available cost information for hyperactivity disorders this is not expected to significantly affect results.

The unit costs applied are provided in Table 4 – further details of the approach are available in Annex B. It is worth noting that we are only able to incorporate Health and Adult Social Care costs for Hyperactivity Disorders, reflecting a lack of available evidence in relation to these conditions.

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<sup>17</sup> The study used by D’Amico et al. (2014) provided final data points from an age range of 25-30, with an average of 28.

<sup>18</sup> NHS Digital (2018)

		Age 0-10	Age 11-16	Age 17-18
Unit Cost from an individual with Conduct Disorder (Present Value, 2017 prices)	Health and Adult Social Care Costs	£670	£890	£1,000
	Crime Costs	£1,400	£1,800	£2,100
	Educational Costs	£12,000	£8,500	N/A <sup>19</sup>
	Foster and residential care costs	£6,800	£5,300	£1,100
Unit Cost from an individual with Hyperactivity Disorder (Present Value, 2017 prices)	Health and Adult Social Care Costs	£300	£400	£500
	Crime Costs <sup>20</sup>	N/A	N/A	N/A
	Educational Costs	N/A	N/A	N/A
	Foster and residential care costs	N/A	N/A	N/A

Table 4: Summary of unit costs applied. Source: Scott et al. (2001) & D'Amico et al. (2014)

### 3.2 Key assumptions and limitations

Our indicative estimates are based on the best available literature, however, there are still some important limitations to this evidence that should be considered:

- Uncertainty over the impact of childhood exposure to domestic violence on conduct disorders:** we base our assessment of the impact of childhood exposure to domestic violence on the Meltzer study. Although the study attempts to control for a range of socio-demographic factors that might influence the prevalence of conduct disorder, it does not necessarily identify a causal link between exposure to domestic violence and conduct disorder. As a result, there is a risk that we have over or under-stated the impact of childhood exposure to domestic violence on the prevalence of conduct disorder. We have reflected this uncertainty throughout by presenting a range of estimates using the 95% confidence interval from the Meltzer study.
- Uncertainty over the impact of childhood exposure to domestic violence on hyperactivity disorders:** there is no UK-based evidence on the link between childhood exposure to domestic violence and hyperactivity disorders. We have assumed that the link is broadly in line with relationships identified in a USA based study (and therefore the findings for conduct disorder) but there is a risk that this has over- or under-stated the impact. In the absence of better evidence, we have tried to reflect this uncertainty throughout our analysis by presenting a range of estimates using the 95% confidence interval from the Meltzer study however, given that this range was based on evidence for conduct disorders and not hyperactivity disorders, this should only be considered indicative.
- Uncertainty over unit cost of public services related to conduct and hyperactivity disorders:** unit costs estimates are based on studies with relatively small samples of individuals in London. This creates additional uncertainty around our results, particularly around how representative these figures are for the rest of the UK. Furthermore, the study used to estimate the costs during

<sup>19</sup> Educational costs are assumed to be borne in primary and secondary education.

<sup>20</sup> D'Amico et al. (2014) estimate that an individual with attention disorder is slightly less likely to commit crime, implying a small "unit benefit". We have chosen to ignore this effect for this study as it is small (less than £300 per individual) and is assumed to be a result of factors not relevant for the link to domestic violence.

childhood is from 2001 and it is likely that costs will have changed over time. We consider the sensitivity of results to unit cost estimates used in Section 4.2.

- **Limited evidence on unit cost of public services resulting from hyperactivity disorders:** we use estimates of the additional health costs resulting from hyperactivity disorders but are unable to find reliable estimates for any other types of costs. We consider the sensitivity of results to unit costs resulting from hyperactivity disorders in Section 4.2.
- **Limited scope of the analysis:** as highlighted in Section 1.2, our analysis focuses on a relatively narrow range of the potential costs from childhood exposure to domestic violence. It also focuses on evidence relating to “severe” physical violence and does not quantify the impact of other forms of domestic abuse such as economic abuse, coercive control or threatening behaviour. If a wider range of factors were included, then it may identify significantly larger costs to the taxpayer.

These limitations mean that our estimate of the potential cost to the UK taxpayer of childhood exposure to domestic violence is subject to a significant degree of uncertainty that reflects the current level of publicly available information. There is a need for further research in this area to support more robust assessments of the potential economic impacts of domestic violence on the children affected.

## 4 Key results of the analysis

This section sets out our estimated impact of the costs to public services from childhood exposure to domestic violence. All costs are discounted and presented in 2017 prices.

### 4.1 Analysis of additional costs to public services from childhood exposure to domestic violence

Table 5 summarises the long-term costs to public services from increased prevalence of conduct disorders and hyperactivity disorders as a result of childhood exposure to domestic violence. It represents the total additional costs up to the age of 28 for all children in the UK that have currently been exposed to extreme domestic violence. For all results we present a range based on the 95% confidence interval presented in the Meltzer study for the relationship between exposure to domestic violence and prevalence of conduct disorders.

Long-run costs to UK taxpayer	
Health and Adult Social Care Costs	£20-£70 million
Crime Costs	£40-£110 million
Educational Costs	£260-£790 million
Foster and Residential Costs	£150-£460 million
<b>Total costs</b>	<b>£480-£1,400 million</b>

Table 5: Summary of key results

We find that the total potential cost to taxpayers up to the age of 28 for all children exposed to domestic violence in the UK could be in the range of £0.5-£1.4 billion. This is equivalent to an average cost of £1,000-£2,900 per child that is exposed to severe domestic violence.

The majority of this cost (55%) is as a result of additional educational costs, with foster and residential care accounting for 32%, crime 8% and health costs 5%. The increased prevalence of conduct disorders accounts for 99% of the additional cost – although this primarily reflects the lack of evidence around the additional educational and foster/residential care costs from hyperactivity disorders.

### 4.2 Sensitivity analysis

In this Section we explore the impact of two sensitivity tests to explore the implications of the key limitations of the study highlighted in Section 4.2:

- Sensitivity 1: The impact of including the additional cost of Education and Foster/Residential Care for hyperactivity disorders.
- Sensitivity 2: The impact of uncertainty about unit cost figures.

#### Sensitivity 1: The impact of including the additional cost of Education and Foster/Residential Care for hyperactivity disorders

As highlighted in Section 3.2 there is no UK-based evidence on the link between childhood exposure to domestic violence and hyperactivity disorders, for this reason these costs have not been included in our core scenario. For this sensitivity we assume that the unit costs for Education and Foster/Residential Care for Hyperactivity Disorders are 48% of the costs used for Conduct Disorders – this represents the same ratio in costs as is seen for adult health and social care costs in D’Amico et al. The results are summarised in Table 6:

	Long-run costs to UK taxpayer
Core scenario	£480-£1,400 million
Sensitivity 1 – Education and Foster/Residential costs for hyperactivity disorders	£540-£1,600 million
Difference	+ £70-£200 million

Table 6: Sensitivity 1 - key results

This shows that if impact of exposure to domestic abuse on the cost of education, foster and residential care for children with hyperactivity disorders is similar to children with conduct disorder this would materially increase the total costs to the taxpayer from childhood exposure to extreme domestic violence. The scale of this increase is uncertain but, under the assumptions used in this sensitivity, it probably would not alter the broad picture of the results.

### Sensitivity 2: The impact of uncertainty about unit cost figures

Our unit cost estimates are based on studies with relatively small samples of individuals in London as such there is significant uncertainty around these assumptions. One of the sources we draw on, Scott et al., estimate the levels of uncertainty around their total cost differences for individuals with conduct disorders, compared to those with no conduct disorder<sup>21</sup>. This provides a 95% confidence interval from 36% of their central estimate to 187% of their central estimate. For this sensitivity we explore the impact of changing unit costs in line with this confidence interval. The results are summarised in Table 7:

	Long-run costs to UK taxpayer
Core scenario	£480-£1,400 million
Sensitivity 2 – Reducing unit costs to 36% of their central value	£170-£520 million
Difference	-£310-920 million
Sensitivity 2 – Increasing unit costs to 187% of their central value	£890-£2,700 million
Difference	+£420-1,200 million

Table 7: Sensitivity 2 - key results

The sensitivity demonstrates the importance of the unit cost estimates on results. Our analysis would be particularly strengthened with more recent estimates of educational and residential/social care costs from conduct disorder. However, even if we adopt the lowest end of the range of cost estimates provided by Scott et al. then the fiscal costs of childhood exposure to domestic violence are still significant, in the range of £170 - £520 million.

<sup>21</sup> They use a bootstrap sampling technique which involves repeatedly simulating a sample of the same size by randomly choosing observations from their dataset with replacement (i.e. a single observation could be chosen more than once) and then observing how the mean value varies across all of these simulated samples.

## 5 Summary and conclusions

### 5.1 Summary of findings

Our analysis has reviewed the long-run costs of increased public service usage resulting from childhood exposure to domestic violence. We have concluded that:

- Evidence suggests that childhood exposure to severe domestic violence could increase the number of children in the UK with conduct disorders by 25,000-75,000 and the number of children in the UK with hyperactivity disorders by around 10,000-25,000.
- We expect that the long-run cost to the taxpayer from supporting these children is likely to be in the region of £0.5-£1.4 billion.
- This is equivalent to £1,000-£2,900 per child exposed to severe domestic violence.
- More than half of the costs are expected to result from additional educational costs with around a further third resulting from additional foster and residential care.

Childhood exposure to domestic violence is a complex issue with a wide range of outcomes, impacts and risk factors. Our analysis has focused on a single chain of outcomes where there is sufficient evidence to build a credible estimate, however, it is likely to provide only a partial picture, missing a number of other outcomes and impacts that are important both in terms of both their impact on government services but also wider value to society.

### 5.2 Implications

There is significant uncertainty around the estimated long-run costs of childhood exposure to domestic violence. However, the results provided in our analysis support the case that the damage to children's mental health from exposure to domestic violence could result in a significant increase in the cost of public services. This highlights the need for access to effective mental health support to help these children and mitigate the long-run cost to society.

Our study has also highlighted the relative scarcity of evidence in the UK on this issue. In particular:

- There is a need for studies specifically designed to isolate the causal effects of childhood exposure to domestic violence on key mental health and educational outcomes.
- This will most likely require the development of appropriate longitudinal studies that track study participants over an extended period of time.
- These studies should specifically measure the impacts on the use of taxpayer funded services in order to influence the design of policy and support services.
- This should be combined with up-to-date measures of the unit costs for each of the affected services to support the design of robust funding models for any new policy options.

As noted above, the Home Office has recognised the lack of good quality longitudinal studies in this area and we believe that government support for building this kind of evidence is critical to tackling these difficult issues in the longer term.

## ANNEX A: References

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## ANNEX B: Approach to Unit Costs

The following table summarises the approach taken to breaking down costs from Scott et al. (2001) and D’Amico et al. (2014) across different ages:

Age of individual	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Conduct disorder - health and social care cost									113	113	113	113	113	113	113	113	113	113	113
Conduct disorder - crime cost									231	231	231	231	231	231	231	231	231	231	231
Conduct Disorder - additional education costs	2,246	2,246	2,246	2,246	2,246	2,246	2,246												
Conduct disorder - foster and residential care costs	1,134	1,134	1,134	1,134	1,134	1,134	1,134	1,134											
Hyperactivity disorder - health and social care cost									55	55	55	55	55	55	55	55	55	55	55

Table 8: Age

breakdown of unit costs (£, 2017 prices)

The following table summarises the discount rates applied to costs incurred at each age, by the three age groupings used in the analysis:

Costs at age...	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Discount Factors for 0-10 year olds	1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76	0.73	0.71	0.68	0.66	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.50	0.49	0.47	0.45
Discount Factors for 11-16 year olds									1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76	0.73	0.71	0.68	0.66	0.64	0.62	0.60
Discount Factors for 17-18 year olds													1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76	0.73	0.71	0.68

Table 9: Discount Factors by age cohort