

The impact of adverse experiences in the home on the health of children and young people, and inequalities in prevalence and effects



The impact of adverse experiences in the home on the health of children and young people, and inequalities in prevalence and effects

CONTENTS

About the Department of Health

The Department of Health (DH) helps people to live better for longer through leading, shaping and funding health and care in England, making sure people have the support, care and treatment they need, with the compassion, respect and dignity they deserve. The Department takes a comprehensive approach to tackling health inequalities that addresses the wider social determinants, along with differences in access to and outcomes from health services, and one that promotes healthier lifestyles for all. DH has commissioned the UCL Institute of Health Equity to build on the work of the post-2010 strategic review of health inequalities (the Marmot review), to develop the evidence base around the wider social factors that shape health outcomes and contribute to health inequalities, and to support programmes and policy making at local, national and international level.

About the UCL Institute of Health Equity

The Institute is led by Professor Sir Michael Marmot and seeks to increase health equity through action on the social determinants of health, specifically in four areas: influencing global, national and local policies; advising on and learning from practice; building the evidence base; and capacity-building. The Institute builds on previous work to tackle inequalities in health led by Professor Sir Michael Marmot and his team, including the Commission on Social Determinants of Health, Fair Society Healthy Lives (the Marmot Review) and the Review of Social Determinants of Health and the Health Divide for the WHO European Region. www.instituteofhealthequity.org

About this report

This report was written for the Department of Health by Matilda Allen and Angela Donkin of the UCL Institute of Health Equity.

The author is grateful to the Department of Health and to all of those who contributed to the programme of work and commented on the report. A list of these expert reviewers and other contributors is provided in an Appendix.

© Crown copyright 2015.

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v2.0. To view this licence, visit OGL or email psi@nationalarchives.gsi.gov.uk.

Where any third party copyright information has been identified, you will need to obtain permission from the copyright holders concerned.

Executive summary	4
Introduction	6
Conceptual Framework	6
Methods and Scope	6
ACEs, the Social Determinants of Health and Health Inequalities	6
Part A: Adverse Childhood Experiences – what are they and why are they important?	8
1. What are Adverse Childhood Experiences (ACEs)?	9
2. Observed associations between ACEs and health	10
2.a Injury and death during childhood	10
2.b Premature mortality and suicide	12
2.c Disease and illness	13
2.d Mental illness	14
3. Pathways from ACEs to negative health outcomes	16
3.a Link from ACEs to health-harming behaviours	16
3.b Link from ACEs to the Social Determinants of Health	17
3.c Neurobiological and genetic pathways	17
4. The importance of action	19
4.a The economic case	19
4.b Intergenerational transmission	19
Part B: Risk factors for ACEs	21
5. Risk Factors	22
5.a The context in which families live	22
5.b Parental and family factors	22
5.c Household adversity	23
Part C: Prevalence of ACEs	24
6. Prevalence in England	25
6.a Maltreatment	25
6.b Household adversities	26
6.c Clustering of ACEs	26
7. Variations in ACE prevalence	27
7.a Variations by local area	27
7.b Variations by poverty, disadvantage or socioeconomic status	28
7.c Variations by age	30
7.d Changes over time	31
7.e International comparison in prevalence	31
Part D: Taking action on ACEs	35
8. The current policy landscape	37
9. Improving the context in which families live	39
10. Tackling Parental and Family risk factors	43
11. Tackling household adversity	45
12. Principles for Action	47
12.a Early intervention and prevention	47
12.b Integrated working	47
12.c Proportionate Universalism	47
13. Areas for further research	48
Conclusion	49
References	50

EXECUTIVE SUMMARY

Adverse childhood experiences

Adverse childhood experiences (ACEs) are situations which lead to an elevated risk of children and young people experiencing damaging impacts on health, or other social outcomes, across the life course. This report addresses the issue for those under the age of 18 who: are abused or neglected; live in households where domestic violence, drug and alcohol misuse, mental ill health, criminality, or separation are present; or who live in care. In many cases multiple ACEs are experienced simultaneously.

Approximately half of the English population have experienced one or more ACEs, although this varies according to the type of ACE. For example, in one study, 12% reported witnessing domestic violence before the age of 18, but only 3.9% parental drug misuse (1). Experience of adversity tends to cluster (several ACEs co-occurring) – and those who experience four or more adversities are at a significantly increased risk of poor health outcomes across the life course compared to those with no ACEs (2-4). It is also probable that some ACEs are more likely to have negative impacts than others, although due to the fact that they are often experienced (and measured) simultaneously, this is hard to ascertain.

ACEs increase the risk of poor health

It is not always the case that children will be harmed by exposure to ACEs: for instance, sometimes parental separation can be protective of children's wellbeing (for example, where domestic violence is present). However, evidence from England and elsewhere shows that children and young people who are exposed to ACEs are at a greater risk of death or injury before reaching adulthood, and of premature mortality later on in life. For example, women who were exposed to two or more ACEs before the age of 18 have an 80% higher risk of dying by age of 50 compared with those who were not exposed to any ACEs (5). Not only are those who are exposed to ACEs more likely to die at a younger age than those who are not, but they are also more likely to experience a range of illnesses – including cancer, heart disease, lung disease, liver disease, stroke, hypertension, diabetes, asthma and arthritis (2, 6-8). ACEs also increase the risk of mental ill health: the World Health Organisation estimates that 30% of adult mental illness in 21 countries could be attributed to ACEs (9).

The potential 'pathways' by which ACEs could impact on health outcomes include through an increase in health harming behaviours. For example, those who experienced four or more adverse experiences during childhood have an increased odds ratio of 11 for using heroin or crack cocaine (1); a negative impact on educational, employment and

income outcomes; and an impact on genetic, epigenetic and neurobiological functioning, which also impacts on health across the life course (3, 10, 11).

There are clear inequalities in the prevalence of ACEs, which leads to inequalities in impacts

There is a clear inequalities dimension to ACEs. While all ACEs are present across society, inequalities in wealth, disadvantage and the existence of poverty impact on the chances of experiencing ACE. Children growing up in disadvantaged areas, in poverty, and those of a lower socioeconomic status are more likely to be exposed to ACEs compared to their more advantaged peers – and more likely to experience 'clustering' (co-occurring) of ACEs (2-4). Aside from these socioeconomic factors, there is a range of other risk factors for ACE, including poor and harmful parenting approaches and the relative stress under which families live (12). These risk factors are also universal but are again more likely to occur lower down the social gradient (13).

Due to inequalities in the prevalence of ACEs, and the observed negative health impacts of ACEs, it is likely that ACEs are currently contributing to health inequalities. There is also evidence that ACEs are 'transmitted' across generations – so that the children of parents who experienced ACEs in their own childhood are also more likely to experience ACEs (14-16). This perpetuates inequalities in health across generations.

Acting to prevent ACEs could improve health, reduce inequalities and save money

Taking action on the causes, prevalence and impacts of ACEs is therefore necessary in order to improve health, reduce inequalities within generations, prevent the transmission of disadvantage and inequality across generations and improve the quality of children, young people and adult's lives. One study suggested that 12% of binge drinking, 14% of poor diet, 23% of smoking, 52% of violence perpetration, 59% of heroin and crack cocaine use and 38% of unintended teenage pregnancy prevalence nationally could be attributed to ACE experience below the age of 18. Reducing these rates would improve health and also save money (1).

The cost of child maltreatment alone has been estimated to total £735m a year (17) and reducing the health impacts of ACE could decrease pressure on the NHS and other local support services. In 2009 the costs of domestic violence in the UK were estimated at £1.9bn in terms of lost

economic output, £10bn in human and emotional costs and approximately £3.1bn to government funded services (18). The cost of children in care is £2.9bn, of which an estimated half is spent on abused children (19, 20).

There are risk factors which increase the chances of being exposed to ACEs

In order to take effective action to reduce ACE prevalence, it is necessary to understand the risk factors for adverse experiences. While anyone can be exposed to ACEs, there is an increased risk associated with the following circumstances:

The context in which families live

Families that are socially isolated, live in poverty or deprived areas, or are of a low socioeconomic status are all at higher risk of exposure to ACEs than those that are not. For example, children who live in the most deprived 10% of neighbourhoods have a 10 times greater chance of being on a child protection plan than children in the least deprived 10% of neighbourhoods (21).

Parental and family factors

Poor parenting, low parental age and family structure have all been shown to correlate with ACE prevalence (15, 22, 23).

Household adversity

The presence of adversity in the home is an ACE in itself – and can have direct impacts on children's health and wellbeing (24). However it also increases the risk of other ACEs. For example, parental abuse of drugs or alcohol has been detected in over half of parents who neglect their children (25).

Action can be taken to tackle the risk factors for ACEs

Taking preventive action to reduce the prevalence of ACEs, and thereby improve population health, therefore requires acting on the risk factors identified. Some current policies, for example the Troubled Families Programme (26), aim to do this. However this and many other interventions are only available for those with the very highest levels of need. It may be the case that many children who are exposed to ACEs but are not identified by local safeguarding systems would benefit from a 'proportionate universalism' approach, universal in scope but recognising the increased burden faced by those lower down the social gradient. This could act on the three risk factors as follows:

Improving the context in which families live

a. Community level

Local programmes that tackle social isolation, increase community coordination and mitigate the negative impact of poverty, the recession and austerity measures on families may help to reduce stress, increase resilience, and therefore reduce ACE prevalence.

b. National level

National efforts are needed to ensure that spending and policy decisions do not lower the living standards of families below a level needed to afford a healthy life, or increase inequalities. Given that 34% of families are currently receiving less than the minimum income standard (27), a reversal of the economic fortune of families will be needed. Addressing low wages and insufficient benefits for families would help to reduce health inequalities and reduce inequalities in childhood wellbeing.

Tackling parental and family risk factors

Parenting programmes have a range of benefits, and some have been found to reduce child maltreatment (26, 28, 29). Making these available to a wider range of parents, and implementing them with the involvement of a range of sectors, could reduce ACE prevalence.

Reducing household adversity

Local organisations and practitioners can work in multi-agency teams to provide integrated responses that recognise multiple needs and adversities, and act holistically and flexibly to better detect and respond to those facing adversity at home. National government departments (including Health and Education) can support these efforts by providing combined budgets and measurement tools, training staff to respond to adversities, and acting as an advocate for positive policies across government.

In addition, all policies could usefully incorporate the principles of early intervention and prevention, integrated working and proportionate universalism. Integrated working, for example, can help both to detect and respond to the risk factors for ACEs. This should include a range of partners including criminal justice, health, education and other services and staff who work with families.

More evidence is needed on policy implementation and the relative benefits of programme options. However, from the evidence available it is clear that ACEs affect a large proportion of the population, and that they are impacting on physical and mental health, potentially reducing life expectancy and contributing to inequalities in health. The evidence that shows a greater prevalence for those living in poverty or lower down the social gradient creates a clear equity case for action. There is also a clear economic case for taking action. Acting on known risk factors can help prevention efforts to reduce adversity, improve health and tackle health inequalities and a range of other desirable social and economic outcomes.

INTRODUCTION

Childhood and adolescence are key periods for development, growth and education, and are of critical importance in shaping adulthood. It is widely recognised that just as supportive, nurturing, safe and happy childhoods are necessary for later health and wellbeing, if individuals live in damaging circumstances, or are exposed to adverse conditions early in life, this can have negative short- and long-term effects, including for health.

This report examines these negative circumstances for children and young people aged 0 to 18 in England. What adverse childhood experiences (ACEs) are, their health impacts, the likely pathways by which these health impacts occur, and reasons for action are presented in Part A of the report – represented in blue and purple in the conceptual framework below.

In order to reduce the incidence of ACEs, it is necessary to act on their risk factors (in green in the conceptual framework). These risk factors are presented in Part B of the report.

There are clear inequalities in the prevalence of ACE and those who are exposed are more likely to be of a relatively low socioeconomic status, live in poverty or deprivation. Prevalence, plus variations by local area, age, time and country, are discussed in Part C.

What works to tackle ACEs, and some promising policy areas, form the content of Part D, the report's final section.

CONCEPTUAL FRAMEWORK

The conceptual framework provides an outline of the topic areas that are discussed in this report and how they relate to each other. The arrows represent correlations, connections or possible pathways but do not show evidenced causation because in many areas the current evidence is suggestive of causation but it is not proven.

METHODS AND SCOPE

This report draws on published peer-reviewed articles, academic research reports and longitudinal studies, and third sector organisations. In addition, policy documents and analyses of policy impacts are included. It is not a systematic literature review but showcases a selection of evidence in order to inform the areas for action presented in Part D. It is also based on the experience and expertise within the UCL Institute of Health Equity, and the

contributions of a range of external partners, including the Department of Health, gained through a consultation process.

The focus is on England but international evidence is presented where this is informative. For example, a long-running American study on ACEs can provide evidence on long-term health impacts that is informative for the English context. In addition, in some places we have used evidence from across the UK rather than England alone, as this was the data available. However, there are policy and other contextual differences between the UK countries, and some results may vary depending on country.

'Adverse childhood experiences' or ACEs, is the term used in this report. The scope of this definition is described in Section 1. In some places within the report, a wider set of experiences or conditions are included, for instance subjective wellbeing or child poverty, as they give an indication of the conditions in which children and young people live.

The report examines inequalities in ACE prevalence according to a number of different variables – including poverty and other socioeconomic factors. However, it is not within the scope of this work to address issues of intersectionality, including how experience of adversity varies by children's ethnicity, gender, disability, sexuality or the related issue of children as carers.

The report covers children and young people aged 0–18, and we use the term 'children and young people' throughout to mean this. However, we have also provided information where possible on data by age, and tried to include significant evidence related to children over age 5, since this has been less thoroughly examined in previous reports.

ACES, THE SOCIAL DETERMINANTS OF HEALTH AND HEALTH INEQUALITIES

The term 'social determinants of health' (SDH) refers to the conditions and circumstances in which we are born, grow, live, work and age. These conditions are shaped by inequalities in power, money and resources and therefore are unequal in their distribution (13, 14). This inequality in the social determinants of health contributes to inequalities in health outcomes. In England, between the most and least deprived local areas there is a difference of 17 years in the number of years that people live in good health.

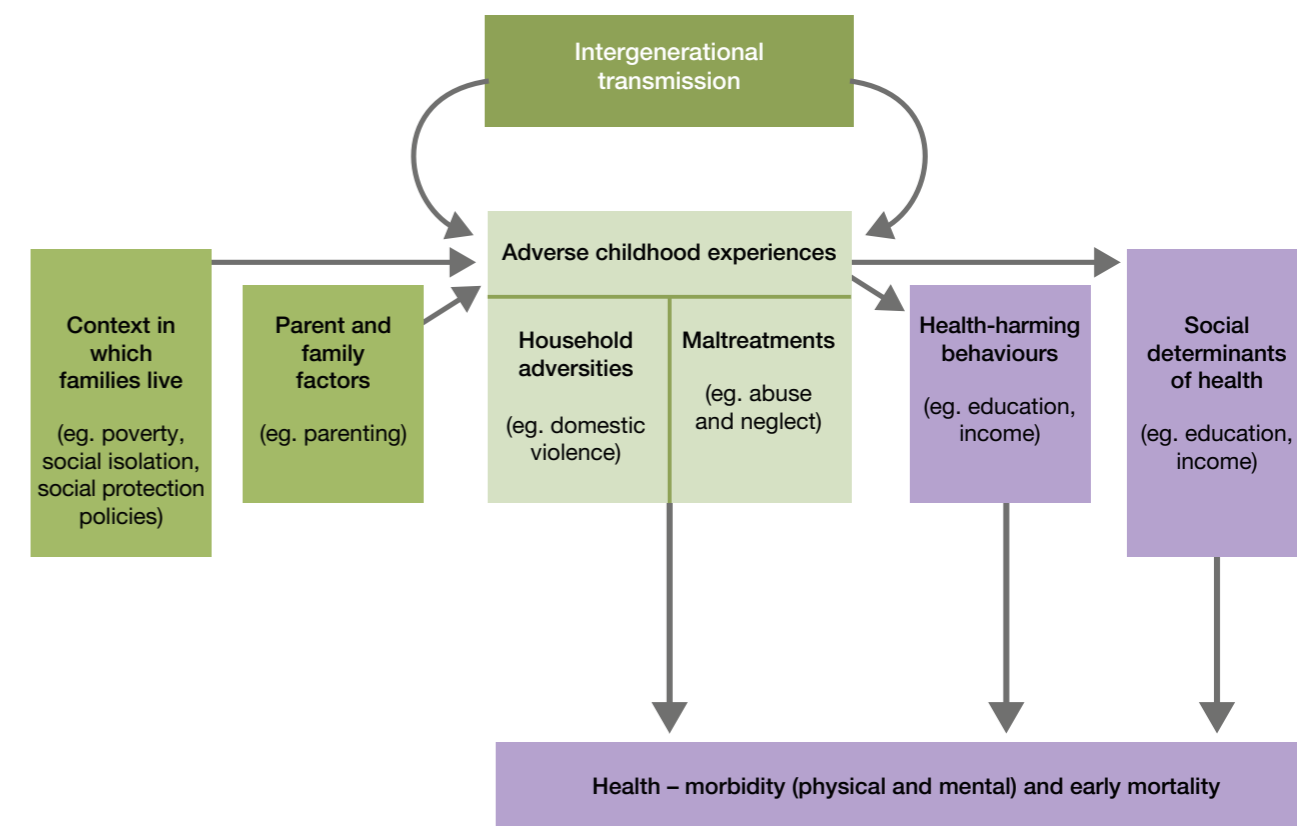
Fair Society Healthy Lives (known as the *Marmot Review*) (13), set out the evidence of inequalities in health and the social determinants of health in England, and proposed six high level policy objectives in order to take action on the social determinants of health. These were:

1. Give every child the best start in life
2. Enable all children, young people and adults to maximise their capabilities and have control over their lives
3. Create fair employment and good work for all
4. Ensure a healthy standard of living for all
5. Create and develop healthy and sustainable places and communities
6. Strengthen the role and impact of ill health prevention

These relate to ACEs and health in three ways. Firstly, tackling the presence and impacts of ACEs is an important component of some of these policy objectives – such as giving children the best start in life and maximising capabilities and control.

Secondly, inequalities in the SDH could be contributing to inequalities in the prevalence of ACEs. Deprived areas and families living in poverty (who do not have a healthy standard of living) are likely, on average, to have a higher prevalence of ACEs (see Section 7).

Thirdly, the presence of ACEs could impact on the SDH, so that children and young people who are exposed to ACEs are more likely than those who are not to grow up to live in conditions (such as in poverty, or with damaging employment) that have a negative impact on their health (see Section 3 – represented in purple in the conceptual framework below).



ADVERSE CHILDHOOD EXPERIENCES

What are they and why are they important?

A

Key messages

WHAT ARE ADVERSE CHILDHOOD EXPERIENCES (ACEs) AND WHY ARE THEY IMPORTANT?

ACEs refer in this report to maltreatment (sexual, physical or emotional abuse; neglect) and household adversity (adult/s in the household with mental illness, substance abuse problems, or criminality; the presence of domestic violence or parental separation; or living in care), experienced from the ages of 0 to 18.

Children and young people who are exposed to ACEs have an increased risk of negative health outcomes across the life course.

At the most extreme, maltreatment can result in death or injury under the age of 18 – either at the hands of someone else or as a result of suicide or self-harm.

ACEs are also related to premature mortality. In men, the risk of death before the age of 50 is 57% higher among those who experienced two or more ACEs compared with those who experienced none. In women, the risk is 80% higher.

An increased risk of disease has also been found to be present among those who experienced ACEs. This includes heart disease, cancer, lung disease, liver disease, stroke, hypertension, diabetes, asthma and arthritis.

ACEs have a clear correlation with mental health outcomes across the life course. The World Health Organisation (WHO) estimates that 30% of adult mental illness in 21 countries could be attributed to ACEs.

ACEs often cluster and being exposed to many ACEs heightens the risk of poor health and other outcomes.

There are three potential pathways by which ACEs may impact on health:

- Through an increase in health-harming behaviours such as substance or alcohol misuse, smoking, sexual risk behaviour, violence and criminality, or behaviours leading to obesity. For example, those who experienced four or more ACEs have an increased odds ratio of 11 for using heroin or crack cocaine.

- Through an impact on the social determinants of health – particularly evident is a negative impact on educational, employment and income outcomes – each of which has an impact on health.

- Through an impact on genetic, epigenetic and neurological functioning.

The costs of child maltreatment and household adversity are high. One estimate puts child maltreatment alone at £735m a year.

An English study has suggested that 12% of binge drinking, 14% of poor diet, 23% of smoking, 52% of violence perpetration, 59% of heroin/crack cocaine use and 38% of unintended teenage pregnancy prevalence nationally could be attributed to ACEs, creating a clear need for prevention – for personal, societal and economic reasons.

Wider social and economic conditions such as poverty and neighbourhood deprivation can also have negative impacts on the health and wellbeing of children and young people, but are not included in the definition of ACEs in this report.

Clear inequalities in terms of prevalence and distribution of ACEs according to socioeconomic factors are shown in Part C; Part D presents actions to reduce ACEs that focus on improving the context in which families live. The clear inequalities in prevalence of ACE mean that some children and young people are more at risk of poor health outcomes than others – thereby potentially increasing health inequalities.

Those who experience adverse conditions are more likely to be children of parents who themselves were exposed to ACEs. This intergenerational transmission of adversity is another form of inequality that could reduce social mobility.

What are adverse childhood experiences (ACEs)?

1

The term 'adverse childhood experiences' (ACEs) was originally coined in an American study on the impact of adversities across the life course (2). Adverse childhood experiences have since been defined as: "intra-familial events or conditions causing chronic stress responses in the child's immediate environment. These include notions of maltreatment and deviation from societal norms" (5). This is the general definition used in this report.

Despite the term 'childhood', these adversities can be experienced by anyone. In this report, we include evidence on children and young people below the age of 18, with a focus on those over five where possible due to less of a focus on older children in the existing literature. The UN Convention on the Rights of the Child defines children as those under 18, and this is also the case in English legislation (30).

ACEs, or adverse experiences, within this report, refer to:

Maltreatment

- Physical abuse
- Emotional abuse
- Sexual abuse
- Neglect

Household adversity¹

- Domestic violence ("This ... encompasses physical, psychological, sexual, financial and emotional abuse and includes controlling and coercive behaviours" (31))
- Substance misuse (there are adults within the home with drug misuse or addiction problems, including alcoholism)
- Mental ill health (there are parents or other adults within the home with diagnosed or undiagnosed mental illness)
- Criminality (parents or others who usually live in the home are either in prison or on probation)
- Separation (parents are separated or divorced, or one or both parents are dead)
- Living in care (children are looked after by the state in a care setting or elsewhere – sometimes referred to as 'looked-after children and young people')

There are clear conceptual difficulties in this field. Research literature, policy frameworks and local interventions often use different definitions or classifications of ACEs and therefore comparing findings across contexts can be difficult.

The first type of adverse experiences, child maltreatment, has clear damaging effects on the child or young person. Household adversities vary in their impact on children and their development and later health. For example, many children whose parents have diagnosed mental illness or who are separated do not experience negative outcomes. However, these are included in the definition of ACEs in this report as they can increase the risk of poor health and wellbeing. For example, the Early Intervention Foundation has stated that, "witnessing domestic violence and abuse between parents... can have similar long-term consequences for a child to physical abuse that is targeted at the child" (32). In addition, the scope of this work places particular emphasis on conditions within the home, and the majority of the literature also include this wider group of 'household adversities'.

However, household adversities can also increase the risk of child maltreatment (15), and so in Part B we examine this relationship and included these household adversities as a risk factor.

There is also a case for including material or social context or resources within the scope of 'household adversity' – for example, living in extreme poverty or deprivation could be seen as an adverse experience. In this report we have not included these wider contextual factors as ACEs – in line with the position taken in the majority of the literature. However this is not to suggest that they are merely 'background' factors that should not be acted upon. As is discussed in Parts B and C, these are clear risk factors for ACE prevalence and tackling the unequal distribution of power, money and resources – and specifically negative economic circumstances that result from this – is an essential strategy to reduce the prevalence of ACEs, as well as reducing inequalities in childhood development and experiences more generally. ACEs must be seen as one part of a range of circumstances, experiences and contexts which impact on families and which must be considered holistically in order to be tackled successfully.

¹In some of the literature, this set of adverse experiences is called 'household dysfunction'.

Observed associations between ACES and health

2

In this section, we use evidence from studies conducted in other countries, in particular the USA, because studies on the long-term impacts of ACEs have been running for a longer period of time there than in the English context. While exact impacts may vary, a detected association between ACEs and health outcomes in another country, particularly one of similar wealth and development, is likely to suggest a similar association would be found in England. However, we do know that the strength of association may be different within the two countries, because differences in social protection levels and social care for example are likely to modify the effect. Further work to strengthen the English evidence base would be beneficial.

The evidence in this section varies in strength, and in some areas conclusive studies have not yet been conducted. Table 1 shows how the WHO summarises the strength of the current evidence regarding maltreatment (household adversity was not included in its scope).

Not everyone who is exposed to one or more ACEs will experience negative health outcomes: a review of children and young people who had experienced ACEs found that a “large proportion do appear to be functioning adequately or well” (33). The type of ACE, the number of ACEs experienced, and the length of time over which they are experienced, can impact on the risk of negative health outcomes.

In addition, contextual factors can increase resilience – the ability to ‘bounce back’ from adverse experiences. Supportive peer relationships, the impact of schools, potentially family wealth and a range of other factors can reduce vulnerability of children to poor health and wellbeing outcomes as a result of adversity (34) (35). However,

although protective factors can increase resilience, this does not make children and young people ‘invulnerable’ or impervious to harm – experiencing severe or multiple adverse experiences is likely to be damaging to children and young people regardless of how high their resilience levels are (34).

One UK-based study has found that those who experience neglect at an older age are likely to experience worse outcomes compared with their younger counterparts (36). This is supported by American evidence, which finds that maltreatment experienced during adolescence had a “stronger and more pervasive effect on later adjustment”, including in areas such as criminality, substance misuse and other health damaging behaviour (37).

2.a Injury and death during childhood

At their most extreme, the presence of ACEs can result in death during childhood. In 2012/13, there were 69 homicides of children aged 0–15 across the UK (38). The presence of ACEs can also increase self-harm and suicide among children and young people. There were 170 suicides of 15–19 year olds in the UK in 2013, 135 of which were in England and Wales. This was split into 112 male and 23 female (39). Part C on prevalence of ACEs gives further information on hospitalisation rates for injury among children and young people and how they vary by local area. Self-harm, suicide and injury rates among children and young people are likely to reflect, in part, the presence of ACEs. However there is a lack of clear data on this relationship.

Table 1
Summary of the strength of the evidence on health outcomes and child maltreatment, WHO 2013

Health outcome	Physical abuse	Emotional abuse	Neglect	Sexual abuse
Depressive disorders				
Anxiety disorders				
Suicide attempts				
Drug use				
STIs / risky sexual behaviour				
Eating disorders				
Obesity				
Childhood behavioural / conduct disorders				
Type II diabetes				
Alcohol problem use				
Cardiovascular disease				
Smoking				
Headaches / migraine				
Personality disorders				
Self-harm				
Arthritis				
Hypertension				
Ulcers				
Chronic spinal pain				
Schizophrenia				
Sexual re-victimisation as an adult				
Sexual perpetration				
Allergies				
Cancer				
Neurological disorders				
Underweight/malnutrition				
Uterine leiomyoma				
Bronchitis/emphysema				
Asthma				
Chronic non-cyclical pelvic pain				
Non-epileptic seizures				

KEY	
Robust association	
Plausible outcome/ limited evidence	
Plausible outcome/ emerging evidence	

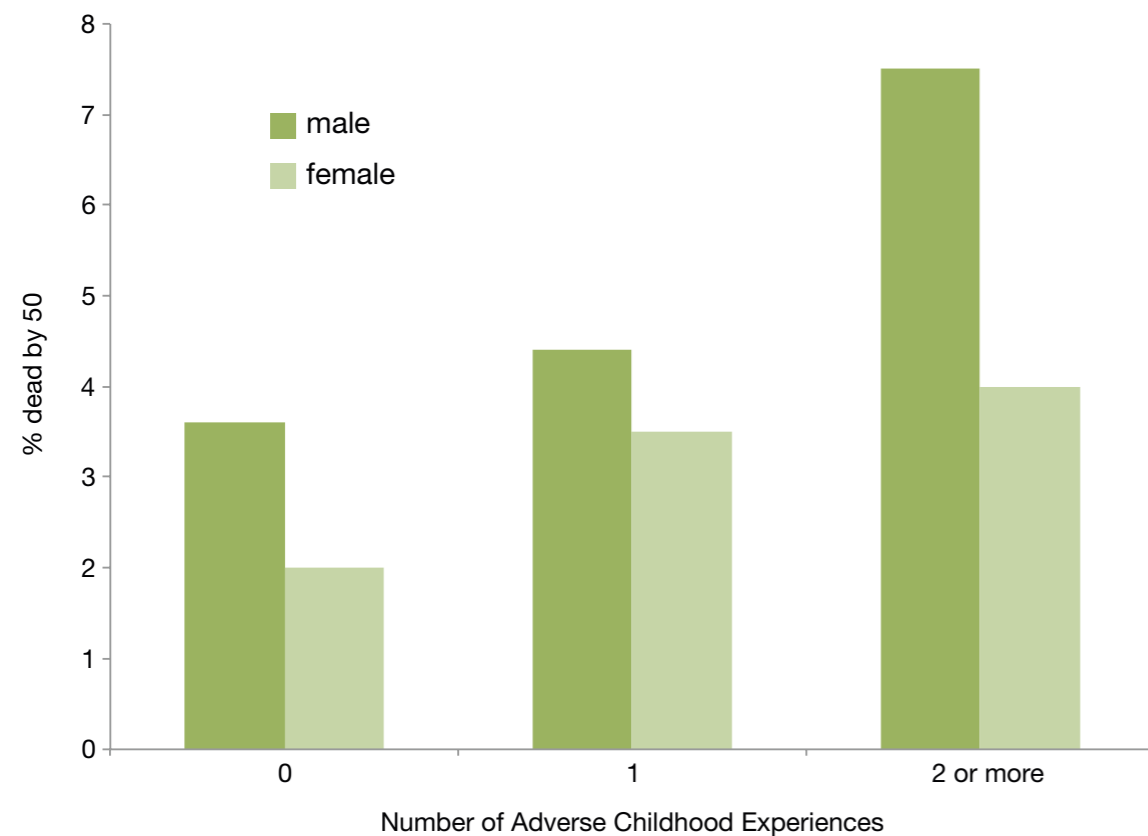
Source: from (15)

2.b Premature mortality and suicide

A British study published in 2013 used longitudinal data of a set of over 15,000 individuals born in 1958 to determine mortality rates by 50. The authors found that: “in men the risk of death was 57% higher among those who had experienced two or more ACEs compared to those with none. Women with one ACE had a 66% increased risk of death and those with two or more ACE had an 80% increased risk versus those with no ACE” (5). The definition of ACE used included maltreatment, living in care and some household adversity measures (offenders, parental separation, mental illness or alcohol abuse in the home). Figure 1 shows these rates, for men and for women. Although the overall proportions are small, the relationships between mortality and prevalence of ACEs are clear.

A different study of the same birth cohort (1958), examined what risk factors were present at age seven that predicted later suicide. The authors found that emotional adversities such as parental death or separation and living in care had an association with risk of suicide. This risk was graded: “the highest was for persons with three or more adversities” (40). Surveys conducted from 2010–2013 in eight Eastern European countries found that respondents who reported at least four ACEs had increased odds of 49 for attempting suicide (41). This is a particularly high figure, which may not be reflected in the English context – but it does demonstrate the potentially disastrous impacts of ACEs.

Figure 1
All-cause mortality rate by age 50 according to prevalence of adverse childhood experiences, British men and women, 2008



Source: Data from (5)

2.c Disease and illness

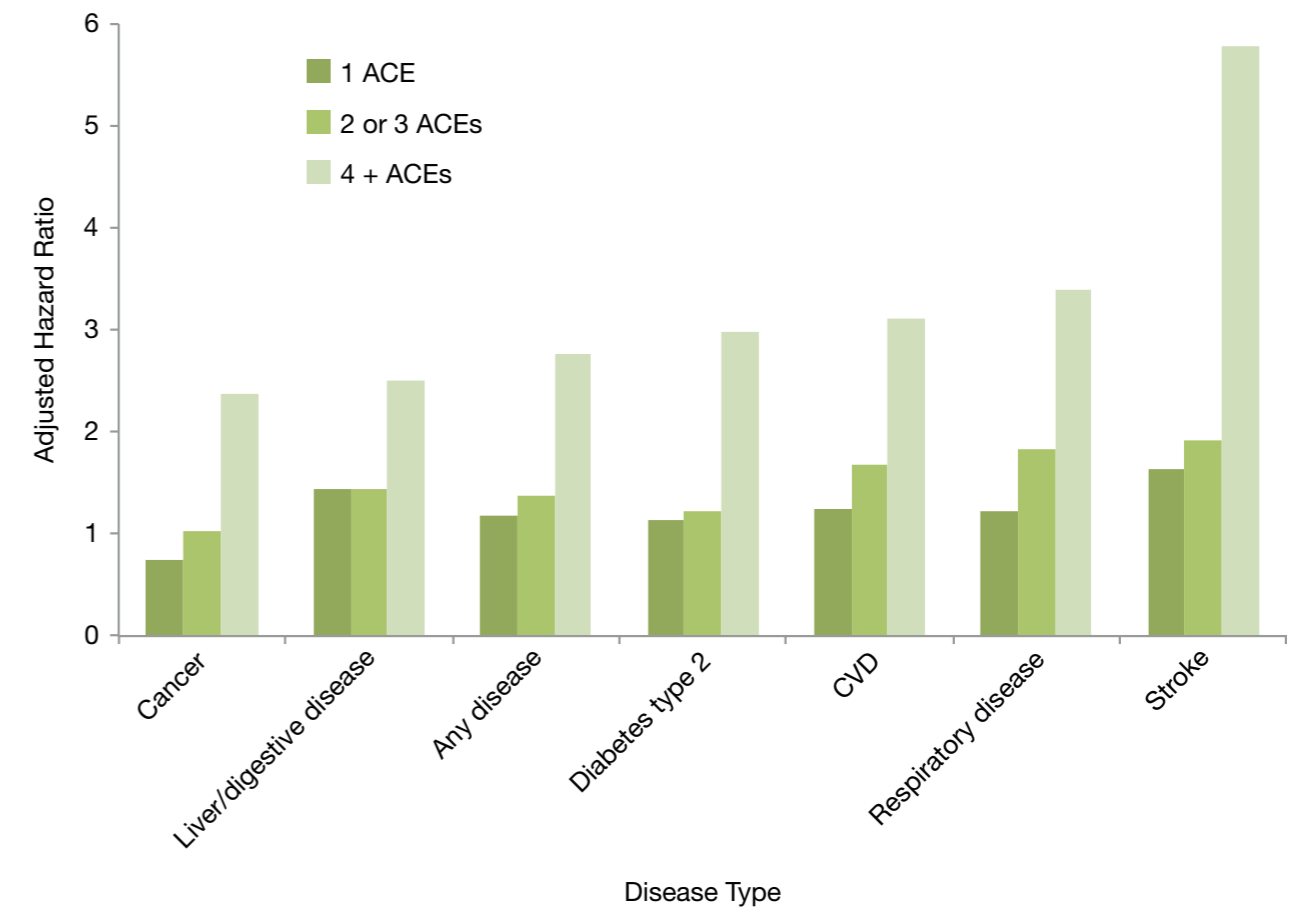
The US ACE study found a relationship between the number of ACEs and the presence of diseases in adulthood, including ischemic heart disease, cancer, chronic lung disease, skeletal fractures and liver disease (2).

Other studies have also found relationships with a risk of stroke (6), and the development of cancer (7), hypertension, diabetes, asthma (8), arthritis, angina pectoris and osteoporosis (6). US research has also found a three-fold increased risk of lung cancer for those with six or more ACEs and found that this cohort were roughly 13 years younger on average when first detecting symptoms than those without ACEs (42).

Figure 2 shows data from a 2013 survey of 4,000 English adults, which demonstrated increased odds of developing a range of diseases according to the number of ACEs experienced. The graph shows particularly high risks associated with experience of four or more ACEs.

Figure 3 is based on the same data and shows the amount of time that passes, on average, before individuals are diagnosed with a major disease, according to the number of ACEs experienced. The graph shows that those with more ACEs have a higher rate of diagnosis at younger ages. By the age of 69, among those who experienced four or more adversities during childhood, only approximately two in 10 people have not been diagnosed with a major disease.

Figure 2
Changes in risk of disease development with increased history of ACE, English survey data, 2013



Source: (3)

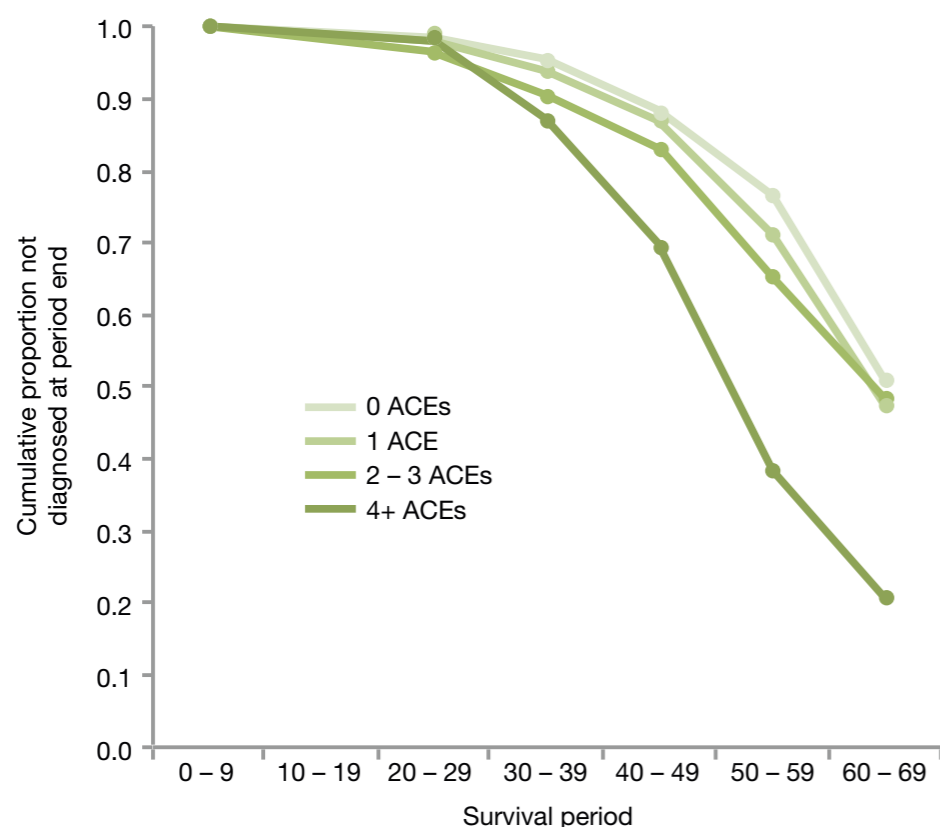
2.d Mental illness

Research has shown that the presence of ACEs can increase the chances of children and young people experiencing mental illness or a low level of mental wellbeing, including low self-esteem, depression and relationship difficulties (43-45). In addition, WHO Euro reports that post-traumatic stress disorder has been reported in as many as a quarter of abused children (15). Not only can experience of ACEs impact on childhood, but also there can be a lasting impact on adult mental health. The WHO World Mental Health Surveys estimate that 30% of adult mental illness in 21 countries could be attributed

to physical abuse in childhood or other adverse childhood experiences (9).

Some groups are more at risk of adverse mental health impacts than others: for example, a British cohort study found that looked-after children and young people were significantly more likely to be depressed, dissatisfied with life and have low self-efficacy (which relates to feelings of control over one's life) (46). After adjusting for family socioeconomic status, residential care was associated with an increased odds ratio of four for depression (47).

Figure 3
Cumulative proportion of individuals not diagnosed with a major disease with age: unadjusted survival at period end, England, 2013



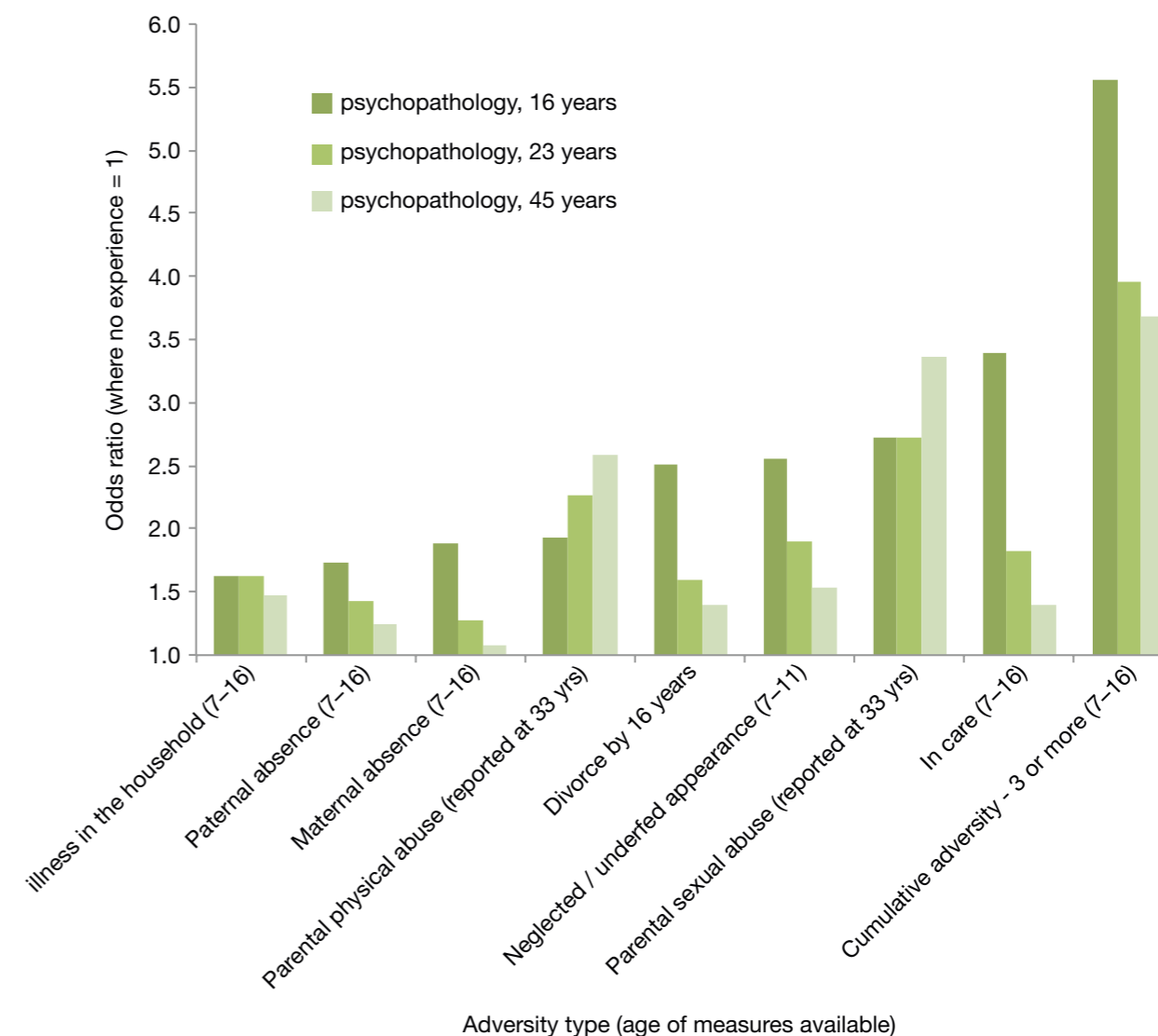
Source: (3)

Note: Respondents reported year of first diagnosis with a doctor or nurse with cancer, CVD, diabetes type 2, stroke, respiratory disease and liver/digestive disease

A study of the 1958 British birth cohort study estimated the impact of childhood adversities on psychopathology² across the life course (48). This is one of the few studies that focus on older children rather than the 0-5 age range. Figure 4 summarises some of the results related to adversity in the home.

The graph shows varying impacts of different ACEs over time. For example some ACEs, such as divorce of parents and being looked-after, have a higher impact on mental illness at younger ages, which then declines over time.

Figure 4
Increased odds ratio of psychopathology associated with various types of ACE, by age, UK, 2008



Source: using data from (48)

Note: This is controlling for sex and socioeconomic status. There are higher rates for unadjusted rates.

²Psychopathology was measured using tools which capture a range of symptoms including affective and anxiety disorders and depressive episodes.

Pathways from ACES to negative health outcomes

3

The evidence presented above, on the correlations between ACES and health experiences, does not determine causation – or what pathway might be involved in this causation. Data in this area is more limited, but some emerging evidence shows promise.

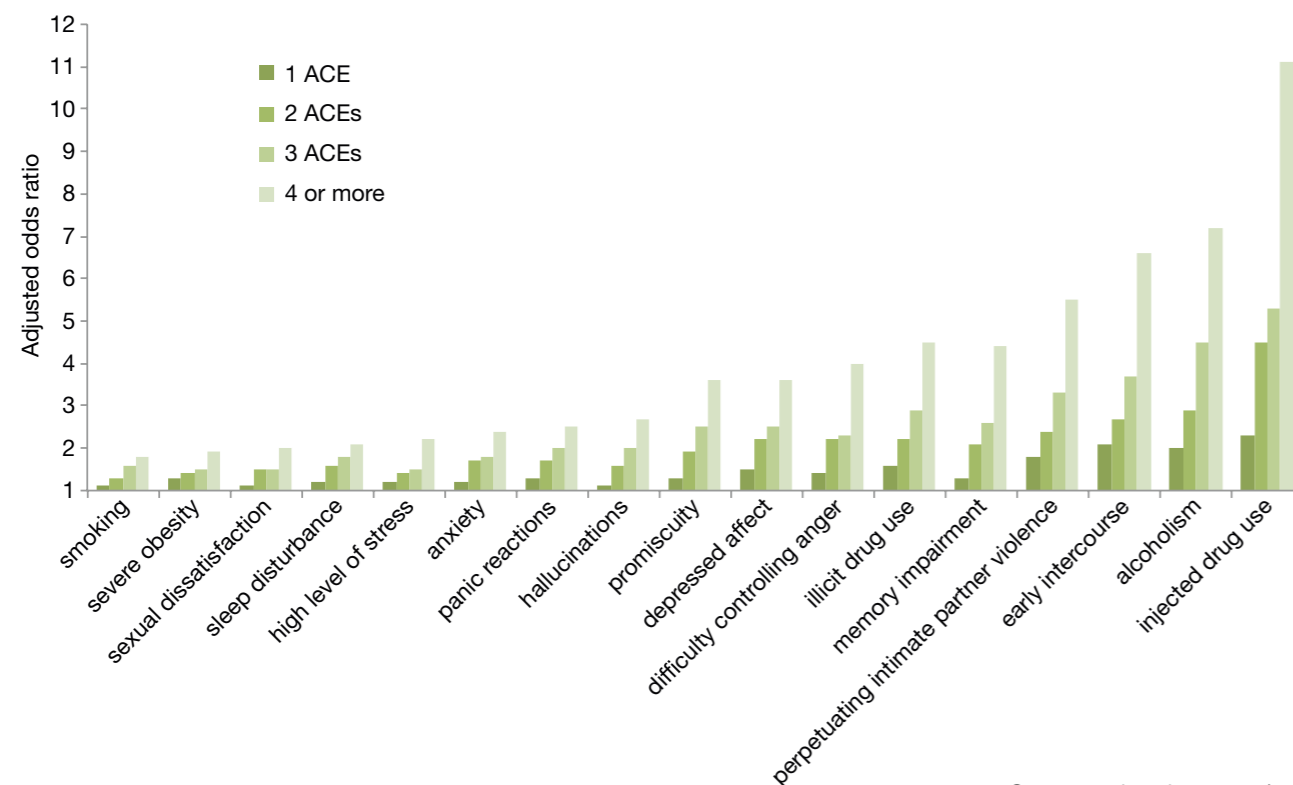
3.a Link from ACES to health-harming behaviours

It is possible that exposure to ACES during childhood and adolescence increases the likelihood of an individual later adopting health-harming behaviours, including substance misuse, alcohol misuse, smoking, sexual risk behaviour, violence and criminality or behaviours leading to obesity.

An English study published in 2014 found a correlation between the number of ACES experienced and health harming behaviours³. The increased odds ratios associated with four or more ACES varied from two for poor diet to 11 for incarceration. Heroin or crack cocaine use also showed a significantly increased odds ratio of 11. The authors conclude that, “resistance to commercial, cultural, and other environmental pressures to adopt health harming behaviours appears to be related to childhood stressors, with nurturing, ACE-free childhoods increasing personal resilience” (1).

Figure 5, using data from the US ACE study, shows the increased risk of outcomes such as anxiety, and health-harming behaviours (e.g. drug use) for those who have experienced one or more ACE in the home – and clear gradients in risk by number of ACES experienced.

Figure 5
ACE score and relative risk of a range of disturbances, USA, 2006



Source: using data from (10)

Note: These odds ratios were adjusted for age, sex, race and educational attainment. Full definitions for each of the areas are given in the full article.

³These were: unintended teenage pregnancy, early sexual initiation, smoking, binge drinking, cannabis use, heroin or crack cocaine use, victimization from violence, violence perpetration, incarceration, poor diet and low physical exercise.

Further results from the US ACE study have shown the association between ACE and later smoking: for example, 16% of smokers reported verbal abuse in childhood compared with 8% of non-smokers, and 14% reported physical abuse compared with 7% of non-smokers (49). English evidence supports these US findings (3): for example, those with four or more ACES have been found to have odds ratios of three for smoking (1).

A study using longitudinal data from the 1970 British Cohort Study also found that those who were looked after as children were significantly more likely to smoke and have criminal convictions (46). Generally, admission to care at a later age tends to result in increased risk of negative outcomes – for example, admission to care after the age of 10 was associated with an increased odds ratio of three for smoking and six for adult criminal convictions (47).

Studies of the association between ACE and obesity in the 1958 British birth cohort show that, “the risk of obesity increased by 20% to 50% for several adversities” (50). English evidence has also showed adjusted odds ratios of six for unintended teenage pregnancy among those who experienced four or more ACES (compared with those who experienced none), and eight for violence perpetration (1).

The adoption of these behaviours can be seen in the short term (mostly during adolescence but sometimes before) and in the longer term, during adulthood. They impact on health directly, through an increased likelihood of disease, accidents or violence, and, in some cases (for example, criminality), impact on the wider conditions in which people live – the social determinants of health.

3.b Link from ACES to the social determinants of health

As described in the introductory section of this report, the social determinants of health (SDH) are the conditions in which we are born, grow, live, work and age, and the impact that these conditions have on our health.

Experiencing ACES may have an impact on three key social determinants of health: educational attainment, employment and income. For example, a US study found lower rates of success in employment and education among those who were maltreated in childhood. Of men in the sample maltreated as children, 45% graduated from high school compared with 65% of non-maltreated men; for women this was 52% compared with 71% (51). There is evidence that ACES can impact on future employment and earning

potential (52, 53). Evidence also shows that maltreated children are more likely to have menial or semi-skilled jobs as young adults and are more likely to be unemployed than their non-maltreated peers (52).

There is significant evidence linking childhood maltreatment with poor educational outcomes (54-60). This includes evidence that verbal abuse contributes to lower language test scores for 10 year olds (57), and that abused children have lower grades, lower educational attendance and more placements in special education programmes (56). Evidence has also shown that maltreated children, particularly those who were neglected, had lower test scores and grades in reading and maths (59).

Other studies have shown an impact of household adversities on the SDH – for example, data from the 1970 British Cohort Study has shown a clear association between maternal mental health and children’s educational attainment and future household income (61).

Evaluating the full impact of the pathway from ACE to health via the social determinants is complex, as many studies of the impact of ACE control for educational attainment, socioeconomic status or other SDH, which therefore makes it harder to isolate these as pathways. In general, a greater relationship can be seen between ACE and health outcomes when these factors are included (often as ‘unadjusted figures’). However, this may be due to common causes – for example, family poverty in childhood can increase the chances of experiencing ACE and increase the chances of being unemployed later on in life. In addition, US studies need to be replicated in the English context before strong conclusions can be drawn.

3.c Neurobiological and genetic pathways

Finally, there may also be a link between ACE and health that occurs through the direct impact of ACE on neurobiological and genetic functioning.

Studies have suggested a relation between trauma (which can result from maltreatment), other ACES, and brain dysfunction or neurobiological impacts that can affect later health (3, 10, 11). It is likely that part of this link is due to increases in damaging responses to stress (10). These alterations to stress-responsive neurobiological systems can impact emotional regulation, somatic signal processing, substance abuse, sexuality, memory, arousal and aggression (11). The pathways are summarised in Table 2.

Table 2
Links from trauma to observed adult outcomes, via ‘neurobiological effects’

Demonstrated neurobiological defects from early trauma	Area of function or dysfunction
Hippocampus, amygdala and medial prefrontal cortex atrophy and dysfunction that mediate anxiety and mood problems	Anxiety, panic, depressed affect, hallucinations and substance abuse
Increased locus coeruleus and norepinephrine activity, decreased by heroin and alcohol use	Smoking, alcoholism, illicit drug use, injected drug use
Amygdala defects, role in sexual and aggressive behaviour and deficits in oxytocin with impaired pair bonding	Early intercourse, promiscuity, sexual dissatisfaction, perpetuation of intimate partner violence
Hippocampus role in memory storage and retrieval, hippocampal and amygdala size reduction in childhood trauma, deficits in memory function	Memory storage and retrieval
Repeated stress and distress, via glucocorticoid pathways, leads to increased intra-abdominal and other fat deposits	Body weight and obesity
Repeated stress and distress, via several pathways, leads to increase in other physical problems	Sleep, high perceived stress
Multiple brain and nervous system structure and function defects, including monoamine neurotransmitter systems	Co-morbidity/ trauma spectrum disorders

Source: Adapted from (10)

The areas of genetics and epigenetics also may provide links between ACE and health. It has been suggested that, “exposure to prolonged activation of physiological stress responses due to events chronically unsupported by positive and secure relationships causes deleterious modifications to biological systems (neuroendocrine, inflammatory, immune) involving epigenetic modifications, that may or may not be reversible” (5). This then increases morbidity and early mortality as individuals are less able to adapt to negative exposures and more likely to engage in damaging health behaviours (5).

More research is needed in order to ascertain the extent of these pathways, whether impacts vary by age of the victim, and whether they occur at ‘lower’, less serious levels of maltreatment or household adversity, as well as in cases where children are severely neglected or abused.

The importance of action

4

It is clear that acting to reduce the prevalence of ACEs would be likely to improve health, both in the short and long term, and this is a key reason for action. In addition, inequalities in the prevalence of ACEs mean that health inequalities are likely to be increased through inaction. There are two further reasons for action: the high economic costs and the intergenerational transmission of ACEs.

4.a The economic case

Calculations in the US have estimated that the cost of new cases of child maltreatment that were identified in one year (2008) is in the region of US \$124bn (62). This is made up of increased costs of childhood health care, child welfare, special education, criminal justice, adult medical costs and productivity losses.

Some economic costing has also been calculated for the UK or England context.

For example, in 1996, the annual cost of child maltreatment in the UK was estimated to be £735m (17) while in 2004, UK figures estimated £1.14bn of social service funding was being spent on children for reasons for ‘abuse and neglect’ (63).

In 2009 the costs of domestic violence in the UK were estimated at £1.9bn in terms of lost economic output, £10bn in human and emotional costs, and approximately £3.1bn to government funded services (18). The cost of children in care is £2.9bn, of which an estimated half is spent on abused children (19, 20).

In the England context, a study has suggested that 12% of binge drinking, 14% of poor diet, 23% of smoking, 52% of violence perpetration, 59% of heroin/crack cocaine use and 38% of unintended teenage pregnancy prevalence nationally could be attributed to ACEs (1), meaning that tackling ACEs could reduce the high level of cost associated with these behaviours or outcomes. In addition, many of the health impacts described in Section 2 are costly for the NHS and other parts of the public sector.

The variation of cost estimates and the fact that many are outdated makes it hard to know the exact financial cost of maltreatment and other ACEs. In addition, definitions and methodologies used vary between calculations. For example, the £1.14bn figure cited above for social service funding only relates to the annual cost of services directly provided for children in need and those who are looked-after; it does not include longer-term economic costs. The fact that many incidences of ACE are not officially detected and recorded also makes cost estimates hard to quantify. However, as guidance from the National Institute for Health and Care Excellence (NICE) on child maltreatment states, the figures we do have available, “demonstrate that the economic costs associated with child maltreatment are

substantial” and that, “early identification [of maltreatment] may lead to significant downstream savings” (64).

4.b Intergenerational transmission

There are clear intergenerational links in exposure to ACEs. In general, those children who experience ACEs are more likely to have a parent who has also experienced ACEs. This perpetuation of disadvantage, from one generation to the next, contributes to societal inequalities as it places an extra burden on those children who come from disadvantaged backgrounds, increasing the risk of ACEs across generations.

This ‘intergenerational transmission’ of adversity has been reported in relation to child abuse (15), mental ill health (61) and substance misuse (65). Exposure to domestic violence and other forms of violence increases the risk of becoming both a victim and perpetrator of violence in adolescence and later life (66, 67), sometimes called the ‘cycle of violence’ (16). One study has suggested that approximately a third of parents who were maltreated in childhood will maltreat their own children (68). In part this may be due to children modelling the behaviour of their parents when they grow up and not having a ‘positive’ experience to learn from and replicate. Parenting programmes that teach about good parenting could help to break this cycle (69).

A 2015 US study examined the pathways by which ACEs experienced in childhood increase the risk of intimate partner aggression in adulthood (70). The study found that among men, post-traumatic stress disorder mediated the relationship between sexual abuse and intimate partner aggression, and substance abuse mediated the relationship in men and women. It concluded that, “programs geared towards aggressors should address abuse (sexual, physical and psychological), which occurred during childhood and recent substance abuse and PTSD [post-traumatic stress disorder]. These programmes should be implemented for men and women” (70).

However, experiencing one or more ACEs in childhood or adolescence is not fate – it does not mean that the individual is destined to perpetuate these conditions in relation to their own children. Most people who are maltreated do not go on to maltreat their own children and most of those who were exposed to violence do not go on to perpetrate or be a victim of violence. More research is needed on the factors that enable these people to ‘break the cycle’ – although it appears that having a higher socioeconomic status and sufficient economic resources may help. For example, English evidence has found that father’s mental illness ceased to have an impact on their children’s attainment and development where the family had higher socioeconomic resources (71).



RISK FACTORS FOR ACES

B

Risk factors are cumulative – meaning the more a family or child experiences, the more vulnerable they are (15) – and often co-occur and are interlinked. However, as the NSPCC states, “we cannot say that any single factor – or collection of factors – causes maltreatment... it is nonetheless possible to identify certain contexts and environments that are more frequently associated with child abuse and neglect” (38).

Key messages

RISK FACTORS

Risk factors for ACEs are interlinked and often co-occur. Distinguishing the individual impact of any one risk factor is therefore complex.

The socioeconomic context in which families live impacts both on ACEs directly and on other risk factors such as household adversity or parenting style. The contextual factors that have been shown to act as risk factors for ACEs include:

- Poverty, low socioeconomic status and disadvantage
- Unemployment
- Deprived communities
- Social isolation

Parenting style and capability have been linked to the prevalence of ACEs. This interacts with other family risk factors, including age of parents and family structure.

Household adversity is a type of ACE but also acts as a risk factor for child maltreatment. In cases where children have been neglected or abused, household adversities (including parental substance misuse, separation or absence, mental ill health and domestic violence) are more likely to be present.

All of these risk factors do not occur equally or randomly in the population and are more concentrated lower down the socioeconomic gradient. This results in inequalities in the prevalence of ACEs (see Section 7).

Risk factors

5

5.a

The context in which families live

Difficult and challenging social, economic and cultural factors impact on families and increase the stress on parents and families. All of these will likely increase the risk and likelihood of ACEs.

Poverty/low socioeconomic status/disadvantage

Most parents who live in poverty, are disadvantaged or have low socioeconomic status do not maltreat their children. However there is evidence that low economic status and having insufficient economic resources can act as a risk factor for child maltreatment (38, 72). For example, there is evidence that women from poorer childhood homes were twice as likely to have suffered from abuse or neglect and three times as likely to have suffered from more than one form of abuse than those from more affluent childhood homes (73). US research has found that children in households with an annual income below \$15,000 (in 1993) were 22 times more likely to experience harm as a result of maltreatment compared with those in families with incomes over \$30,000 (74). More recent US research has also found a clear relationship between material factors and child maltreatment (75). This includes a random-assignment study where a gain in income resulted in a reduction in child abuse and neglect, compared with a control group (76). While random-assignment is rare, other studies have shown a correlation between reductions in income and increases in child maltreatment (75).

UK longitudinal research has found that an indicator of deprivation (derived from measures of paternal unemployment, overcrowding, living in rented or council accommodation and not having access to a car) had the strongest association with child maltreatment out of all the risk factors included in the study (77).

The association between poverty and maltreatment is most commonly explained by stress factors linked to unemployment, low income and depleted resilience, including social isolation, mental ill health, domestic abuse and substance misuse (33, 38). For example, parents with a low income are four times more likely to feel 'chronically stressed' than parents with higher incomes (78). The NSPCC states, in relation to social status and child maltreatment, "the most common explanation centres on the stress factors that are associated with unemployment and low income, such as social isolation and mental ill health. Poverty can also erode parents' resilience to deal with these stress factors" (38). Therefore, acting to reduce poverty may be a good way to reduce the incidence on ACEs; this is discussed further in Part D.

Further information on English prevalence of ACEs according to measures of socioeconomic status, deprivation or wealth is presented in Part C on prevalence.

Unemployment

Studies that find a relationship between ACEs and unemployment rarely control for income, in order to ascertain the effect that unemployment might have over and above, or separate from, the increased risk of low income. However, some studies do mention unemployment specifically as a risk factor (15), and it may be the case that unemployment increases the chances of children experiencing ACEs, perhaps due to increased stress in the home.

Deprived communities

The WHO states that, "maltreatment tends to be more common in families in deprived communities. These areas can lack 'social capital' – the institutions, relationship and norms that shape a society's social interaction – and may have many alcohol outlets" (15).

The impact of local deprivation has also been seen in UK studies: children who live in the most deprived 10% of neighbourhoods have a 10 times greater chance of being on a child protection plan and an 11 times greater chance of being taken into care than children in the least deprived 10% (21). This may have an impact separate from the likely lower incomes and increased poverty of families in this area – in part through a lack of local services or community conditions which increase stress for families and do not provide sufficient social support. There is also evidence linking violent neighbourhoods to an increased risk of child maltreatment (79).

Social isolation

There is some evidence that parents who maltreat their children are more isolated, more lonely and have less social support than those who don't (80, 81). This may be in part because social isolation increases stress, and those who are isolated have a lack of positive parenting role models, or a lack of pressure from others to conform to positive parenting behaviours (82).

Evidence on the protective nature of parental social networks has found that they protect against poor outcomes for children (83) and increase the amount of positive interactions mothers have with their children (84). Social networks provide a shared understanding of parenting (84) and a buffer to the challenges of parenting (12).

5.b

Parental and family factors

Parenting

There is some evidence that links parenting with child maltreatment. For example, a retrospective study in the UK found that incompetent parenting by mothers (such as being impatient, irritable or giving too little time and attention) was

associated with their offspring reporting maltreatment during childhood (85). Parents who maltreat their children are also more likely to use harsh discipline strategies, less likely to use positive parenting strategies, and more likely to respond to negative but not positive behaviours (86, 87).

One element of knowledgeable parenting is having appropriate expectations and accurate understanding of children's development. Some studies have found links between higher (unsuitable) expectations of children and lower understanding of developmental processes, and child maltreatment (88, 89).

While some of these findings refer specifically to younger children, it is likely that damaging parental relationships with children over the age of five, and some parenting practices, may be related to ACEs. One study also found that poor parenting was a background factor for adolescent physical abuse (22). However in some cases, parental behaviours that may have been abusive or neglectful for a younger child are not so damaging for older children (90).

Causation in this area is hard to ascertain and it is likely that poor parenting and child maltreatment also have common causes, such as poverty or parental substance misuse. Parenting therefore interacts with, and is related to, other risk factors.

Age

There is some evidence that younger parents may be more likely to maltreat their children than older parents (15, 91). For example, a longitudinal study of British parents found that parents who were younger than 20 had a three times greater risk of having a child placed on the child protection register before the child's sixth birthday (77). It may be the case that younger parents are more likely to be exposed to other risk factors – such as poverty and unemployment – compared with their older counterparts, and that this increases the risk of child maltreatment (23) and likelihood of poor parenting.

Family structure

Children living in single parent families have been shown to be at increased risk for maltreatment (15, 74, 92). A UK cohort study of more than 14,000 individuals also found a relationship between family structure and child maltreatment – single parent and reordered (with step-parent) families both had a higher risk of children becoming placed on local child protection registers. The odds ratio was three times higher in these families. However, the authors report that this odds ratio drops substantially when other factors are controlled for, suggesting that, "while important, the effects of family structure are modified by the confounding roles of parental background and socioeconomic environment" (77). Having larger numbers of children in the household has also been linked to an increase risk of neglect (93).

It is not clear whether living with only one parent is the actual risk factor for child maltreatment, or whether this is indicative of poverty or low socioeconomic status (since one-parent

families are more common lower down the social gradient), which are also risk factors. In some cases, for example in which there is domestic violence or other conflict in the home, separation may be beneficial for the child and reduce the chances of maltreatment. In addition, while factors such as family structure can increase the risk of child maltreatment, the absolute risk is still low: for example, in the UK longitudinal study cited above, only 3.5% of all single mothers had children registered for child abuse or neglect (77).

5.c

Household adversity

Throughout this report, some ACEs are grouped under the term 'household adversities'. These are: domestic violence, parental separation, living in care, and parents or caregivers who have substance misuse problems (including alcoholism), mental ill health or who are in prison or on probation. As well as having directly negative impacts on children and young people (as outlined in the previous section on health impacts), these also increase the chances of them being exposed to maltreatment. For this reason, they are included here as risk factors.

In England, an examination of the household conditions present in cases of child death or serious injury shows the presence of domestic violence in more than 60% of cases, parental mental illness in 60% of cases, and parental substance misuse in 42% of cases (94). However, deaths and serious injuries represent a very small fraction of all child protection cases – there are many less serious or immediate impacts, which also reveal household adversity as a risk factor. For example, further research shows that more than 34% of under-18s who have lived with domestic violence have been abused or neglected by a parent or guardian (25), and parental abuse of drugs or alcohol, or both, has been detected in more than half of parents who neglect their children (24).

US research supports these findings: parental substance abuse has been found to be a contributing factor for between 30 and 60% of maltreated children in the welfare system and children whose parents abused alcohol were approximately three times likelier to be abused and over four times more likely to be neglected when compared with those whose parents were not substance misusers (31).

Child maltreatment, particularly sexual abuse, in institutional care settings has received much publicity recently. Overall prevalence across the population is not possible to ascertain with certainty but one study from 1992 found that out of 1,000 children in institutionalised care in the UK, 158 reported that they had been sexually abused (95). This figure is now out of date, however, and prevalence may have changed significantly since then. A 2013 National Crime Agency report found that children cared for by institutions were more vulnerable to abuse due to the structure and status of institutions and the power of the adults working in them (96).

PREVALENCE OF ACES



Key messages

PREVALENCE OF ACES

Approximately half of the English population have experienced one or more ACEs during childhood or adolescence.

Rates for maltreatment alone are also high – the NSPCC estimates that over 25% of all young adults (up to 17 years old) in the UK have experienced severe abuse or neglect at some point in their childhood.

English survey data, which asked participants if they had been exposed to a range of household adversities up to the age of 18, reported the following prevalence levels:

- Alcoholism – 9%
- Drug abuse – 4%
- Mental illness – 12%
- Incarceration – 4%
- Domestic violence – 12%

Approximately 60 children per 10,000 were in care in England as of March 2014.

ACEs tend to cluster, and an ‘ACE count’ of four or more ACEs experienced is particularly associated with lower outcomes across the life course.

Although ACEs occur across society, and no one is ‘immune’ from adverse experiences, there is an increased risk associated with being in a lower position on the social gradient. Children and young people living in deprivation, in poverty or who are of a low socioeconomic status are more likely to be exposed to one or more ACEs than their socioeconomically better-off peers. This inequality in the prevalence of ACEs could be contributing to inequalities in health.

International comparisons show that England does well compared with similar countries on some maltreatment indicators but performs relatively poorly on some household adversities (such as domestic violence).

Prevalence in England



Calculating the prevalence of ACEs is complex: it is considered that those cases which come to the attention of statutory services represent only a minority of the full prevalence. For example, the NSPCC estimates that for every child subject to a child protection plan or on a child protection register, another eight children have suffered maltreatment (38). Classifications by official services may also ‘oversimplify’ – for example, data on reasons for a child being in need is suspect because social workers are required to give a single reason when almost all situations are multi-factorial. In some cases this leads to reporting of only neglect or abuse, as these categories trigger services when others such as household adversity would result in no action. Survey data that asks parents or guardians about ACEs their children have been exposed to can be subject to under-reporting. Survey data of adults about their own childhood is also widely used in this area but has been criticised as being vulnerable to reporting bias.

However, despite these issues with the data, it is clear that many children and young people have been exposed to adverse experiences – and there is clear need for greater action to reduce the prevalence of ACEs. For example, recent English survey data found that almost half of adults had experienced one of nine ACEs during childhood (1).

6.a Maltreatment

A 2013 English survey of adults found that 6.3% of respondents reported experiencing sexual abuse, 14.8% physical abuse and 18.2% verbal abuse (1). The NSPCC estimates that over 25% of all young adults in the UK have experienced severe abuse or neglect at some point in their childhood. Table 3 shows how this varies by age, type of maltreatment and gender.

Table 3
Percentage of 0–10 and 11–17 year olds estimated to have experienced a range of maltreatment, UK, 2011

Age	Maltreatment type	Male	Female	Total
0–10	Any neglect in childhood	4.9%	5.2%	5%
11–17		14.8%	11.8%	13.3%
0–10	Severe neglect in childhood	3.3%	4.2%	3.7%
11–17		9.9%	9.8%	9.8%
0–10	Severe physical violence by parent or guardian	0.9%	0.7%	0.8%
11–17		3.1%	4.4%	3.7%
0–10	Contact or non contact sexual abuse by anyone in the past 12 months	0.7%	0.5%	0.6%
11–17		6.8%	12.2%	9.4%
0–10	Emotional abuse by parent or guardian in the past 12 months	1.7%	2.0%	1.8%
11–17		2%	4%	3%

Source: (33)

This data also refers to the UK, not to England alone. The NSPCC report does not provide a further breakdown by country, but some official data does, referring to overall numbers rather than percentages. For example, in 2012/13,

7,964 cruelty and neglect offences of under 16s and 23,663 sexual offences of under 18s were recorded by police in England and Wales (97).

6.b Household adversities

Substance misuse

A 2013 study of 4,000 English residents aged 18 – 69 found that 9.1% of adult respondents had lived at some point during childhood with a household member who abused alcohol, and 3.9% with a drug misuser (1).

Mental ill health

In the same study, 12.1% reported mental illness in the home (of parents or other carers) (1).

Criminality

4.1% of English adults reported the incarceration of a parent or other household member during childhood (1).

Separation

Separation can refer to parental divorce or separation, or the death or absence of one or both parents. In the study referenced above, 22.6% of respondents reported parental separation (1).

Domestic violence

In the study referenced above, 12.1% of respondents reported domestic violence in the home (1). Official data suggests that 25% of young people in England and Wales have witnessed at least one episode of domestic violence and abuse by the age of 18 (98).

Living in care

Children in care refers to those children and young people who are 'looked after' by a local authority (99). As of March 2014, there were 68,840 looked after children in England. This is equivalent to 60 children per 10,000, the majority of whom – 62% – are in care due to experiences of abuse or neglect (100).

As was mentioned earlier in the report, some of these household adversities are more likely to be associated with a higher risk of negative outcomes than others. This report places less focus on the 'less serious' household adversities – in particular parental separation. However, many studies include a set of ACEs and do not disaggregate by type. It can be seen from these prevalence rates, however, that even if parental separation were not included, a significant percentage of the population would still be exposed to one or more ACEs.

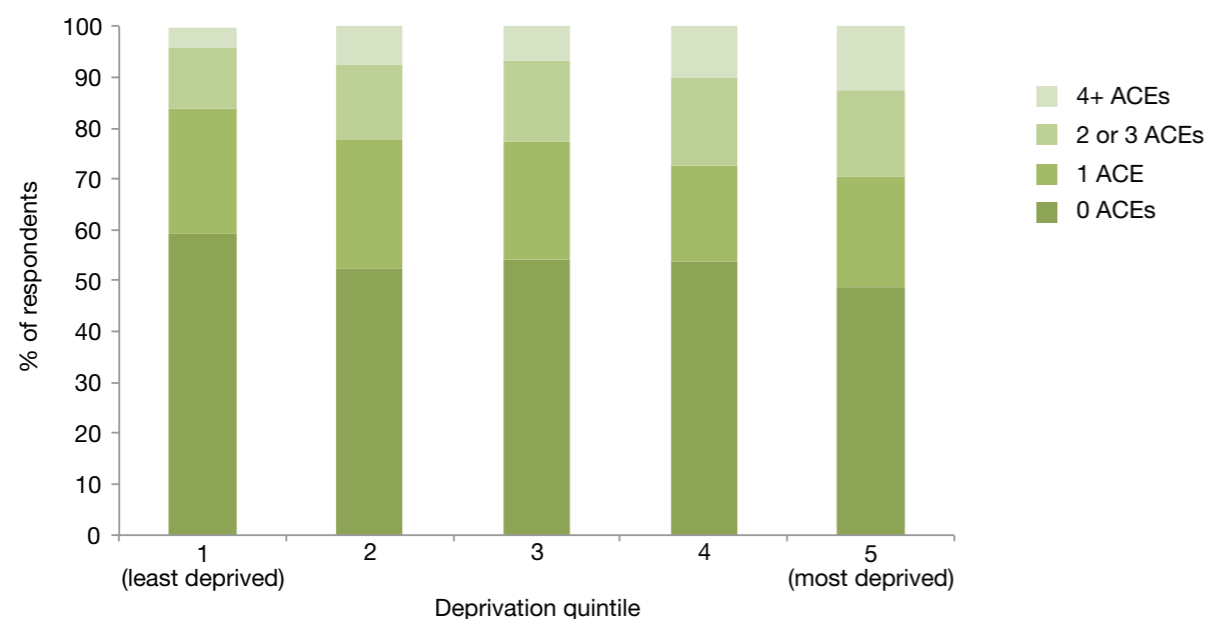
6.c Clustering of ACEs

Many studies of ACE occurrence have found that they tend to co-occur or 'cluster'. For example, the US ACE study found that "the clear majority of patients in our study who were exposed to one category of childhood abuse or household dysfunction were also exposed to at least one other" (2).

This suggests that there may be common risk and protective factors for a range of ACEs and that tackling these could reduce incidence of a range of adverse experiences. In addition, it has been suggested that clustering increases the risk of harm, and that the experience of four or more ACEs is a threshold above which there is a particularly higher risk of negative physical and mental health outcomes (2-4). This can be seen, for example, in much of the data presented in Section 2, where there is a clear gradient in health impact by number of ACEs experienced, and a particularly heightened risk for four or more ACEs.

Figure 6 shows that a greater clustering of ACEs is also present in more deprived areas, which increases the risk of poor health outcomes as a risk of ACE exposure in these areas.

Figure 6
Number of ACEs experienced by deprivation quintile, England, 2013



Source: using data from (3)

Variations in ACE prevalence

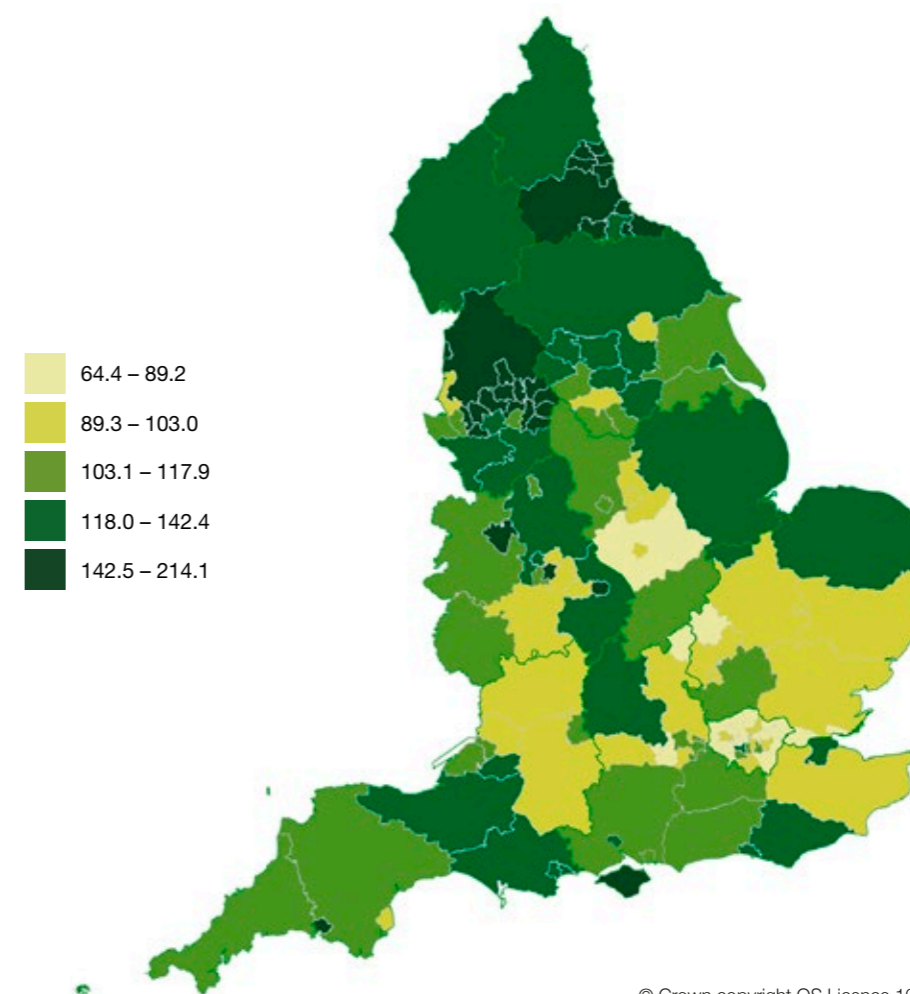
7

7.a Variations by local area

Some types of ACE, for example childhood abuse reported to police, have such low incidence rates that it is not possible to come to conclusions about prevalence by geographical area. Others are not collected at a local level. However, a range of indicators of childhood wellbeing, development and related factors are available on the Child and Maternal Health Observatory (ChiMat) website (101) for each local authority, including some relating to looked-after children, parents in treatment for drug and alcohol misuse, hospital admissions for self-harm, and domestic violence. Figure 7 presents an example.

The domestic violence rate per 1,000 population in 2010/11 varied from the lowest rate of 4.3 in Nottinghamshire and Nottingham to the highest of 26.9 in Hartlepool, Middlesbrough, Redcar and Cleveland and Stockton-on-Tees (excluding the City of London) (103). The rate of looked-after children also varies by local authority – the lowest being 20 per 10,000 in Wokingham and the highest at 152 per 10,000 in Blackpool (100). The variations in prevalence sometimes occur along a social gradient – where those who live in less deprived areas, or localities with lower poverty rates, experience lower rates of ACEs. This is discussed further in the following section.

Figure 7
Hospital admissions caused by unintentional and deliberate injuries in children (0–14 years), per 10,000 resident population, England upper-tier local authorities, 2012/13, ChiMat



© Crown copyright OS Licence 10020290

Source: (102)

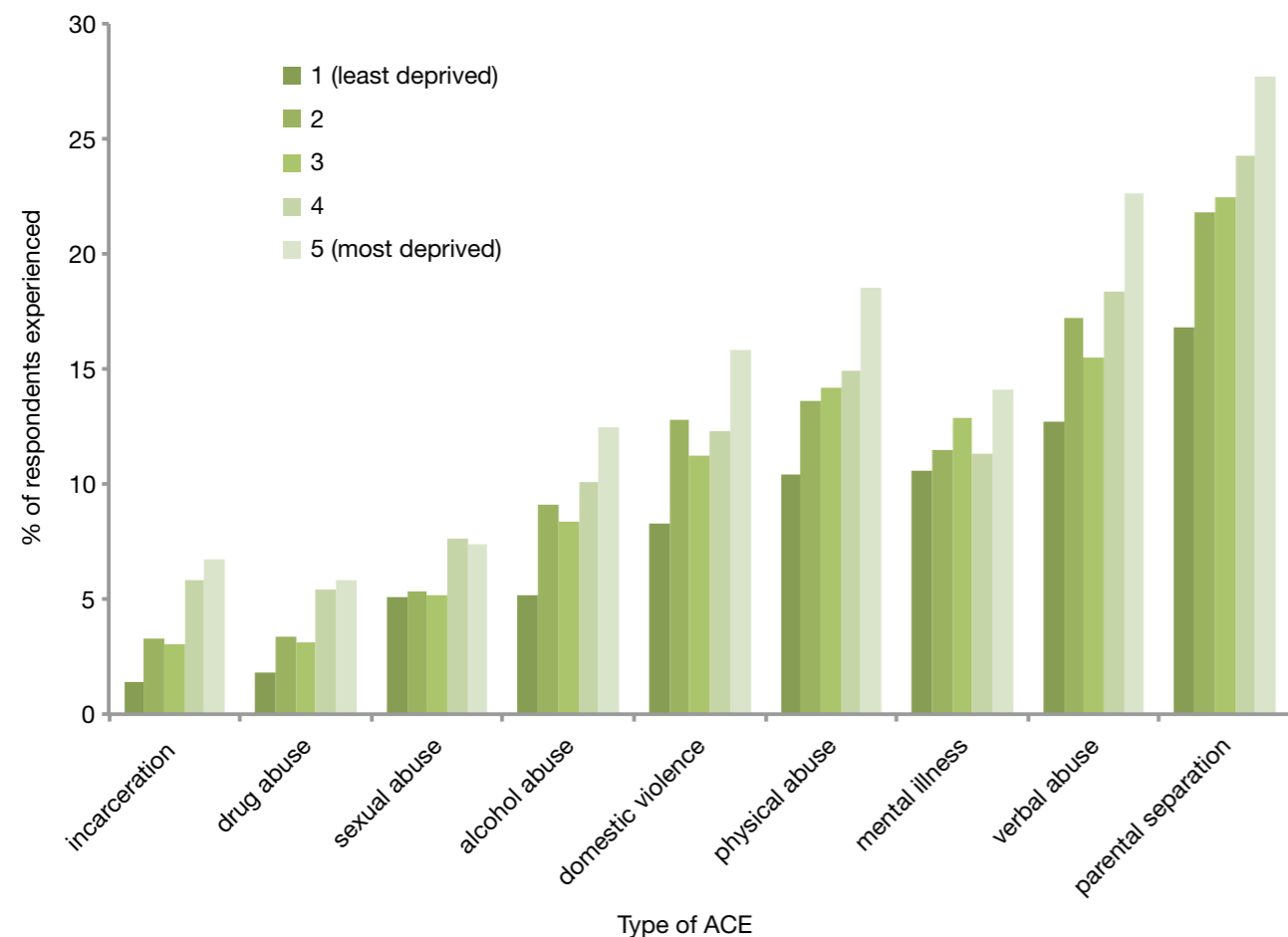
7.b Variations by poverty, disadvantage or socioeconomic status

The majority of parents who live in poverty, disadvantage, or are of low socioeconomic status, do not mistreat their children (38). However, UK research has found that being in a lower socioeconomic group is associated with a more significant level of abuse (104) and data from England and Wales from the 1980s and 90s showed a steep social class

gradient in intentional injury among children and young people: for example, the homicide rate for children aged 0–15 in the lowest social class was 17 times that for those in the highest social class (105).

A Scottish study found that 82% of families with higher incomes (over £33,571) had no instances of poor maternal mental health, while this dropped to 54% for families in the lowest quintile (under £8,410) (106).

Figure 8
Percentage of survey respondents who experienced a range of ACEs by deprivation quintile, England, 2013



Source: using data from (3)

Note: incarceration, drug abuse, alcohol abuse, domestic violence, mental illness and parental separation refer to conditions within the household – family members or other residents in household experiencing these conditions. Sexual, physical and verbal abuse refer to abuse experienced by the child

Summary - ACEs and health inequalities

The impact of inequalities on both the prevalence of ACEs and the resultant health impacts have been raised at various points thus far in the report.

To summarise:

1. Inequalities in wealth, disadvantage and the existence of poverty impact on the chances of experiencing ACEs. Children growing up in disadvantaged areas, in poverty, or of a lower socioeconomic status are more likely to be exposed to ACEs than their more advantaged peers.
2. Aside from these socioeconomic factors, there is a range of other risk factors for ACE, which are outlined in Section B of this report – including poor and harmful parenting approaches and the relative stress in which families live. These risk factors are heightened further lower down the social gradient.
3. Those lower down the social gradient are more likely to experience ‘clustering’ of ACEs – for example, many studies report an increased incidence of four or more ACEs for children and young people living in poverty or deprivation.
4. Due to inequalities in the prevalence of ACEs, and the observed negative health impacts of ACEs, it is likely that ACEs are currently contributing to health inequalities.
5. For any given experience of ACEs, it may be the case that those lower down the social gradient have a worse outcome, due to an increased stress response. One study states that “stressful events are likely to be experienced differently depending on an individual’s position on the social gradient. Individuals lower on

the social gradient may be more vulnerable to the physiological or behavioural effects of stressful environmental exposures with fewer resources and coping strategies at their disposal compared to individuals with a higher social position” (5).

6. There is evidence that ACEs are ‘transmitted’ across generations – so that the children of parents who experienced ACEs in their own childhood are also more likely to experience ACEs. This perpetuates inequalities in health across generations.

7. Taking action on the causes, prevalence and impacts of ACEs is therefore necessary in order to improve health, reduce inequalities within generations, prevent the transmission of disadvantage and inequality across generations, and improve the quality of lives for children, young people and adults.

As the Commission on the Social Determinants of Health stated in relation to maltreatment:

Unequal distribution of child maltreatment threatens to further widen the health and social divide within and between countries, leading to greater inequity in health and social justice (14).

This position is supported by the WHO, which has stated:

Child maltreatment is a leading cause of health inequality, with the socioeconomically disadvantaged more at risk. It worsens inequity and perpetuates social injustice because of its far-reaching health and development consequences (15).

7.c Variations by age

Maltreatment

Some international evidence shows that the highest rates of fatal child abuse are found among children aged 0–4 years (107, 108). However, since this is a measure of fatality, this may represent the increased vulnerability of this age range, rather than a higher prevalence. Generally, injury and death rates of children and young people tend to fall in the middle age ranges and then increase in adolescence. However, “the risk of family violence is superseded by interpersonal violence among peers – strangers and non-family members – after the age of 15 years” (109), meaning that increased rates in this age range may not represent adverse experiences in the home environment. These variations can be seen in European data, presented in Figure 9.

Figure 10 shows how hospital admissions for violence vary by age and gender of the child, and by level of deprivation of the local community. This shows that despite the changing rates according to age and gender, both boys and girls in the most deprived areas have higher rates of hospitalisation at every age than those in the most affluent communities.

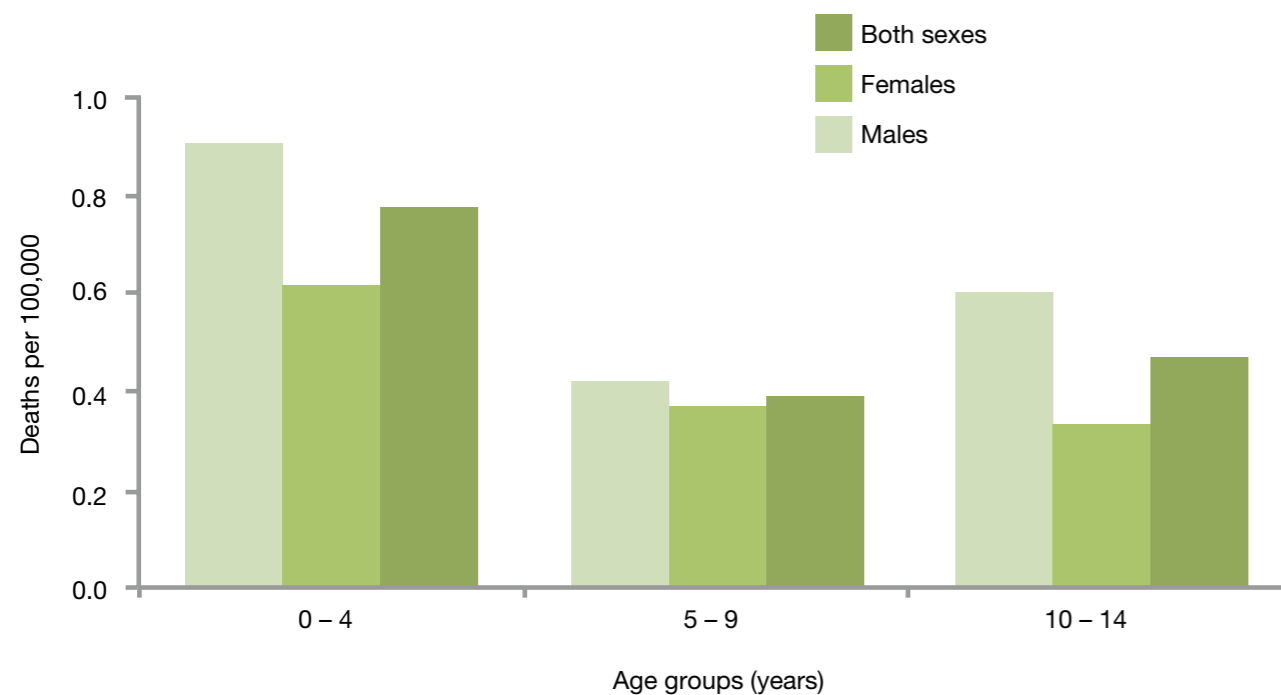
In one UK study, two patterns of abusive relationships were found – continual abuse since early childhood and abuse that started during adolescence. In this survey, over half of the respondents who had experienced abuse said that this had started at nine years old or over (104).

Household adversity

A US study that examined prevalence of household adversities according to age found that, “the prevalence of most ACEs naturally increases by age, since parents were asked whether their child had ‘ever’ had the experience.” Parents of children aged 12 to 17 were at least twice as likely as parents of children aged 0 to 5 to report that their children had experienced the following ACEs: parental separation or divorce, drug or alcohol problems in the household, mental illness in the household, witness to domestic violence (110). This same pattern likely applies in England as well.

However, NSPCC data suggests that rates of exposure to domestic violence are similar across age groups – 3.2% of those aged 0–10 had witnessed domestic violence in the past 12 months, compared with 2.5% of 11–17 year olds (33). Over 75% of children in care in England are aged five and over (100), showing a significant portion of those exposed to this ACE are older children.

Figure 9 Age-standardized death rates from violence by age and sex, European region, 2008



Source: (15)

7.d Changes over time

Estimating changing rates over time is complex. There is some evidence that child maltreatment in the UK has reduced over time (38), but the rate of reporting to police or others has also probably increased in the case of some adverse experiences such as sexual abuse. Police recorded figures for England and Wales comparing 2013 to 2014 show an increase of 29% in rapes and sexual assaults of female children under 13, an increase of 72% for rapes and sexual assaults of male children under 13, and 42% for ‘sexual activity’ involving a child under 13 (97). However, some of the recent increase in reporting of sexual offences to police is likely to be a result of Operation Yewtree, connected to the Jimmy Savile inquiry (97).

In terms of child deaths, children are becoming safer. “A child was two times more likely to die from physical assault 30 years ago compared with today”, but even so, “one child dies at the hands of another person every week” (38). In addition, levels of child neglect have barely changed over the same period (38).

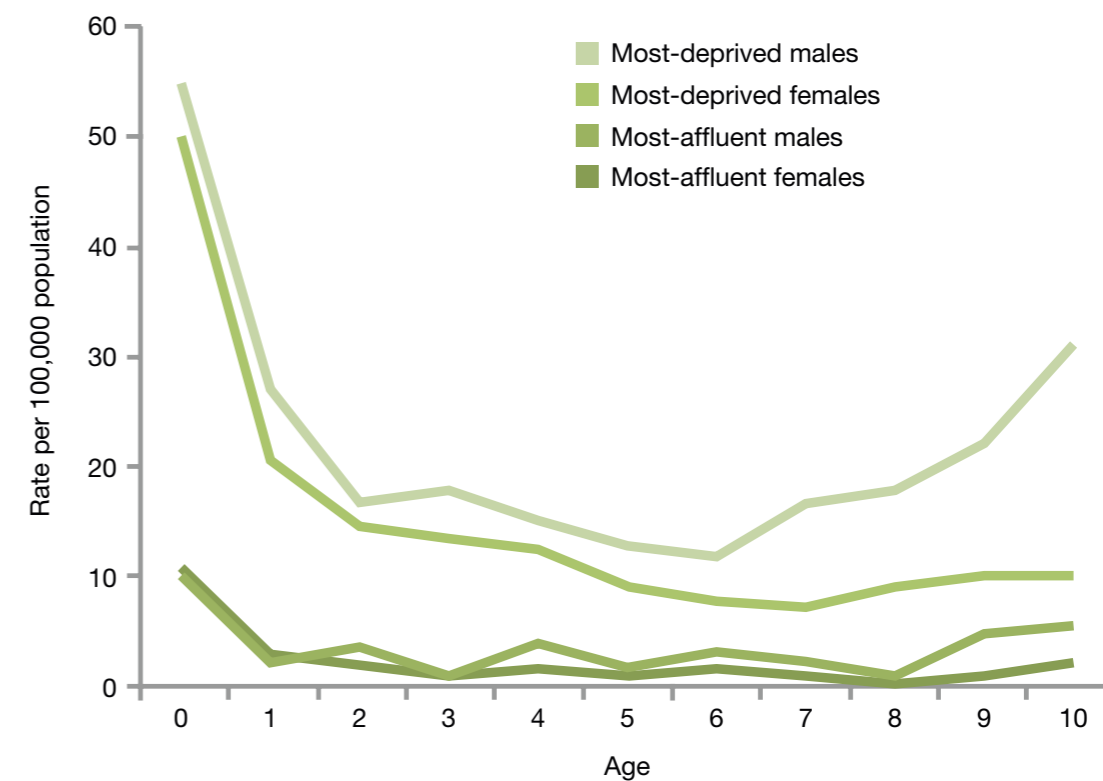
Some other household adversities, such as parental separation, have increased over time. The number of children in care has generally increased year on year over recent decades and is currently at its highest number at any point since 1985 (100).

7.e International comparison in prevalence

England, and the UK more broadly, can be compared with other countries in the prevalence of some ACEs, although differences in methodologies and definitions between country-based studies means that these comparisons should be considered as indicative rather than conclusive.

The UK has comparatively high rates of domestic violence (Figure 11) but comparatively low rates of child death from maltreatment (Figure 12). However, both of these figures show room for improvement when comparing the UK to many countries of similar or lower levels of development and wealth. Some caution is also probably needed as the data regarding child death rates is now out of date, and does not represent the full prevalence of child maltreatment – which does not necessarily result in death.

Figure 10 Annual rates of emergency hospital admissions for violence in children (aged 0–10) from the most deprived and most affluent communities (quintiles) by age, England 2004/5 and 2008/9



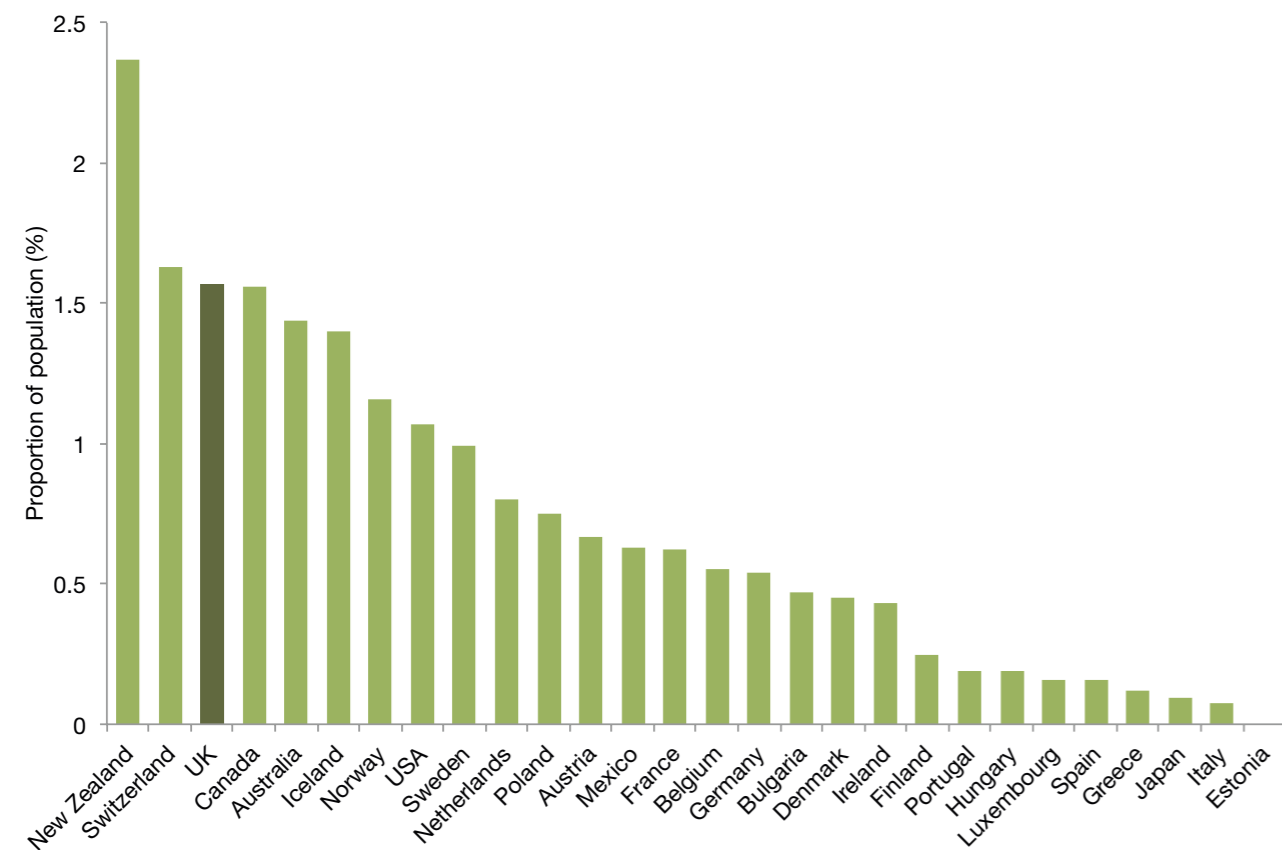
Source: (15)

The OECD also states in reference to the data in Figure 11 that, "the size of these estimates should be read with caution", due to issues regarding reporting of intimate partner violence. For example, a different survey of violent acts reported by women reported Switzerland as having the lowest prevalence levels in the OECD (111).

Comparing the UK or England to the US, there are some indications that the overall incidence of ACEs is similar. For example, one study found that 46% of American children had experienced at least one ACE (110) while English survey data puts this figure at 47% (1). US research published in 2015 also suggests that six in 10 adults have experienced ACEs during childhood (70).

However, the studies used slightly different definitions of ACE and different questions. For example, one of the US studies included economic hardship and witnessing violence in the neighbourhood (as well as other measures of household adversity); the English survey did not. Other studies find a much higher rate of some ACEs in the US – for example, the NSPCC reports that child maltreatment is three times higher there than in England, according to US national statistics (33)

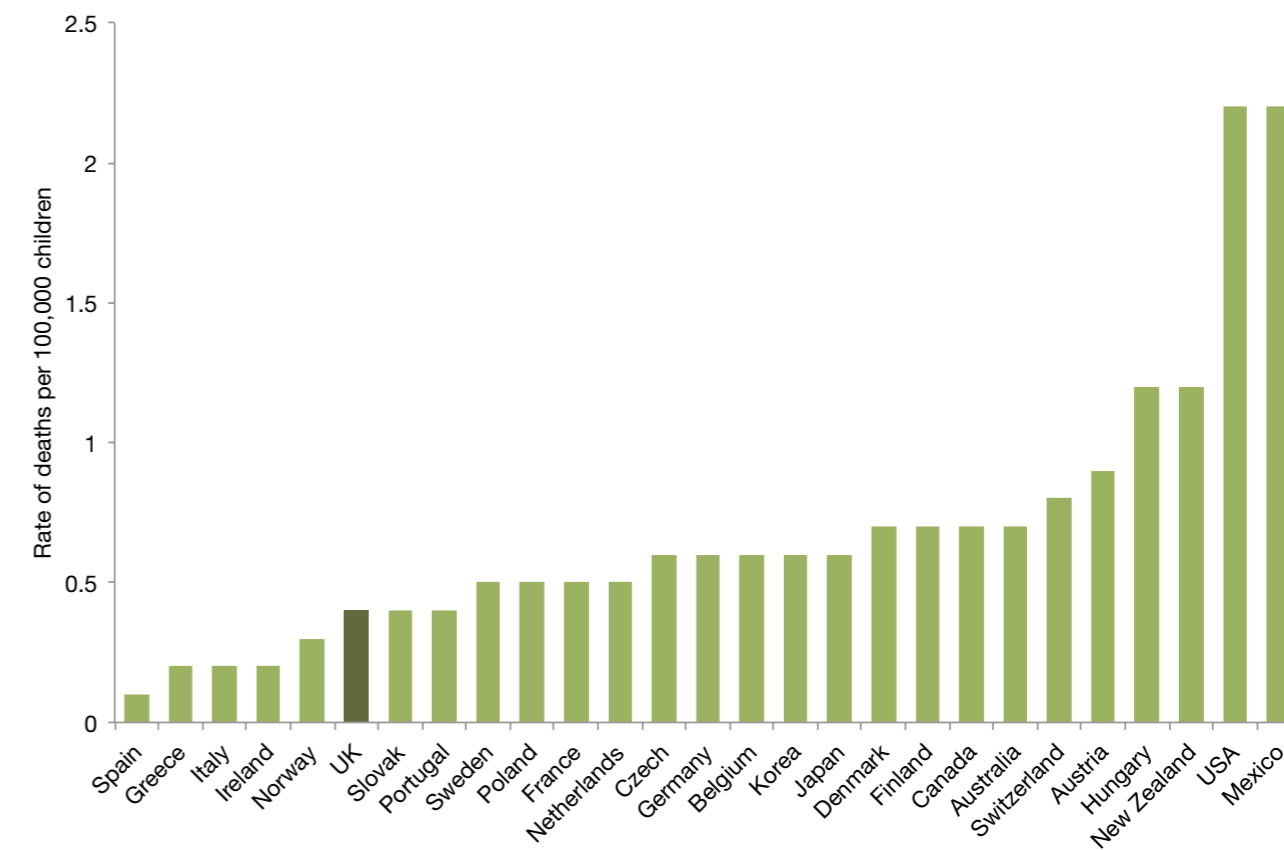
Figure 11
Prevalence of partner physical or sexual assault, women and men, 2004 and 2005, selected OECD countries



Source: (111)

Note: Data refers to 2004 for Australia, Bulgaria, Canada, Estonia, Japan, Mexico, New Zealand, Norway, Poland and the US. For the rest, data refers to 2005.

Figure 12
Rate of deaths from maltreatment, children under 15 years old, selected OECD countries, 2003



Source: (112)

Note: Data are for the most recent five year period during the 1990s for which information is available for each country, calculated to give a one year average.



TAKING ACTION ON ACES

D

Key messages

TAKING ACTION ON ACES

There are some promising policy options and programmes to tackle ACEs. These are presented as responses to the risk factors presented in Part B: the context in which families live, parental and family risk factors, and household adversity.

Three general principles for action are also evident:

1. Early intervention and prevention. Acting proactively to prevent ACEs from occurring, and reacting quickly when they do, is likely to have better results, and cost less, than responding only after the negative impacts have become clear.
2. Integrated working. In order to tackle the diverse risk factors for and impacts of ACEs on children and young people, multi-agency,

coordinated and cooperative working is required. This should include those working in criminal justice, education, health and other services which have contact with families.

3. Proportionate universalism. ACEs can occur in any area or family, therefore universal strategies are needed for prevention. However, there is a higher level of risk lower down the social gradient, meaning that action should be proportionately more focussed on these areas.

More research is needed on how to adapt programmes, or create new ones, for older children and young people. Experiences and impacts of adversity, as well as the success of interventions, are likely to vary as a child gets older.

This part of the report focusses on what can be done to reduce the prevalence, and inequalities in prevalence, of ACEs. Due to the focus on primary prevention, issues of safeguarding, child protection and services provided for those who have experienced ACEs are not discussed here; this is a specialised area and worthy of its own, separate examination, of which there have been some published to date, including some specifically on older children and young people (90).

The evidence on which particular programmes work to reduce the prevalence of ACEs is still limited. In this section we have included studies that show an impact on the risk

factors for ACEs as well as on the prevalence of ACEs themselves. While it would be logical to presume that tackling proven risk factors would reduce ACE prevalence, more research is needed to prove this connection.

Table 4 summarises the current strength of evidence for a range of programmes, most of which are included in this section. Where evidence is insufficient or weak, further evaluation may be needed. In some cases there is evidence that a programme has had an impact on risk factors for maltreatment, including household adversities, but not yet an evidenced reduction in maltreatment levels.

Table 4
Summary of evidence for the effectiveness of universal and selective programmes – impact on child maltreatment and risk factors for child maltreatment

Programmes		Impact on	
		Child maltreatment	Risk factors (household adversities)
Universal	Sexual abuse prevention programmes	Insufficient/mixed/weak	Effective
	Media-based public awareness	Insufficient/mixed/weak	Promising
	Abusive head trauma prevention	Promising	Promising
	Changing social norms	Insufficient/mixed/weak	Insufficient/mixed/weak
	Reducing the availability of alcohol	Insufficient/mixed/weak	Promising
	Reducing poverty	Insufficient/mixed/weak	Insufficient/mixed/weak
	Community interventions	Insufficient/mixed/weak	Promising
	Preventing exposure to intimate partner violence	Insufficient/mixed/weak	Insufficient/mixed/weak
Selective	Home visiting	Promising	Effective
	Parenting programmes	Promising	Effective
	Multi-component preschool programmes	Promising	Promising
	Enhanced paediatric care	Promising	Promising
	Support or mutual aid groups	Insufficient/mixed/weak	Insufficient/mixed/weak

Effective: judged to be effective or supported by at least two well-designed studies or a systematic review.

Promising: Judged to be promising or supported by one well-designed study.

Insufficient/mixed/weak: Judged to have insufficient, weak, or mixed evidence supporting it.

Source: adapted from (15)

Table 4 shows the importance of careful design and evaluation of programmes, both to ensure that the intervention is having the desired effect and to add to the evidence base in this area.

The health sector has a vital role in preventing ACEs – as recognised by the WHO, for example, which states that the health sector should lead efforts to reduce child maltreatment. Within the health system, action can be taken by accident and emergency (A&E) departments,

GPs, hospitals, speech and language therapies, sexual health services, school nurses, child and adolescent mental health services (CAMHS), midwives, health visitors, paediatricians, young people drug and alcohol services and teenage pregnancy services (38). The health sector has a clear role in bringing together health actors, as listed here, and acting as a coordinator for wider policy areas such as family planning, parental leave, social welfare, employment, education and criminal justice (15).

The current policy landscape

8

Many sectors and policies have relevance to adverse experiences for children and adolescents. Below a brief description is provided of some of these. Some other programmes (for example, parenting programmes) are mentioned throughout the text. Information on child protection services has not been included here, due to the focus of this report on primary prevention, and the focus is on programmes that interact with a child’s home life rather than those located at school or other venues.

While some programmes have been extended or received increased funding (for example, the Troubled Families Programme), in other areas there have been significant reductions in funding that may have impacted on the ability of local areas to provide a universal offer to their local population (for example, see the information on children’s centres and the early intervention grant, below). Programmes that are highly targeted may be successful in improving outcomes for those most at risk but are likely to miss a larger group of families who are also exposed to ACEs but are not included in specific criteria. In addition, further evidence is needed on the effectiveness of these programmes in reducing ACEs and inequalities in the prevalence of ACEs.

Troubled Families Programme

The Troubled Families Programme is a cross-government initiative led by the Department for Communities and Local Government. The Programme aimed to join up local services, dealing with each family’s problems as a whole rather than individually and appointing them a dedicated key worker. A £448m three-year budget for 2012-2015 was drawn from six departments to fund the original programme, with the ambition of turning around the lives of 120,000 troubled families by May 2015 (26).

In June 2013, the Government announced plans to expand the Troubled Families Programme for five further years from 2015/16, to reach up to an additional 400,000 families (113). To be eligible for the expanded programme, a family must have at least two of the following six problems: parents or children involved in crime or anti-social behaviour; children not attending school regularly; children who need help who are identified as in need or are subject to a Child Protection Plan; adults out of work or at risk of financial exclusion or young people at risk of worklessness; families affected by domestic violence and abuse; and parents or children with a range of health problems (113).

Although the original programme did not include specific health criteria, local authorities had the discretion to include a local measure where families were causing high costs to

the public purse. Many opted for indicators covering health problems, including working with families where mental health issues or alcohol and substance abuse were present.

A three year evaluation is currently underway which will gather data on 35 indicators in the areas of education, employment and training; housing and safeguarding; crime/anti-social behaviour; and health (114). As at February 2015, over 105,000 troubled families have “turned their lives around”: meaning children back in school where they had previously been absent; levels of youth crime and anti-social behaviour significantly reduced; or that an adult in the home had moved off benefits and into work for three consecutive months or more (115).

Family Nurse Partnership

The Family Nurse Partnership (FNP) provides intensive support to young, first-time mothers and their babies. Home visits by trained nurses support mothers from before birth until the child’s second birthday, aiming to prevent poor outcomes in disadvantaged children and families and to prevent the intergenerational transmission of disadvantage (116). Evidence from the US shows that the programme can reduce child abuse and neglect, as well as some indicators of household adversity (117). In 2013, the Department of Health announced that 16,000 families in England would receive FNP support by 2015 (118).

Family Intervention Services

Family Intervention Services were centrally funded in England up to March 2011 and provided intensive support to families with multiple social, economic, health and behaviour problems. Evaluations showed that those families who received support through this programme showed a 58% reduction in anti-social behaviours such as vandalism, and a return on investment of £2 for every £1 spent. Although the programme is no longer centrally funded, many local authorities continue to offer the service (119). A similar programme, the Family and Young Carer Pathfinders Programme, has also shown positive results (120).

Healthy Child Programme

The Department of Health’s Healthy Child Programme (HCP) runs up to age 19, and offers all families a programme of screening tests, immunisations, developmental reviews, and information and guidance. It aims to improve outcomes for children and families and also support early identification of and response to concerns about safety or abuse (121). The HCP is delivered primarily by health visitors for children up to age five, and by school nurses from ages five to 19.

Evidence-based interventions for vulnerable children

Until March 2015, the Department for Education (in partnership with the Department of Health and the Youth Justice Board) is providing funding for local authorities to set up evidence-based intervention programmes for children with complex needs who are at risk of moving into care (122). Implementation is supported and monitored by the National Implementation Service (123), which currently works with over 70 local authorities and 58 local partnerships.

Children's Centres

Sure Start Children's Centres are a universal service across England, with a tailored approach to reach and support disadvantaged children. They provide support and services – including help and advice for local families with children aged 0–5 (124). Children's Centres policy is the responsibility of the Department for Education. Some centres provide childcare, including, in some cases, the provision of 15 hours a week of free education for two year olds from the most disadvantaged backgrounds (125). Effective children's centres work closely in partnership with other services, such as health visiting, social care and midwifery, to support children and families. Offering integrated and joined-up support is vital for meeting families' needs effectively. However, the 2014 Sure Start Children's Centre Census by 4children showed there has been a 20% budget cut from 2012/13 to 2014/15, a reduction of expenditure of over £830m (126). In many areas this has resulted in a shift from universal to targeted services (126).

Domestic violence

The UK government has set out a range of policies which aim to end domestic and sexual violence against women and girls (127). These include:

- £40m of funding until 2015 for specialist local support services and national helplines
- Campaigns such as This is Abuse
- Establishing domestic violence protection orders, which prevent perpetrators of domestic violence from returning to their home for up to 28 days
- Since March 2014, police have been allowed to disclose information to the public about a partner's previous violent offending

However, there have also been some cuts to services such as support of women's refuges, rape crisis centres and legal aid (128, 129). A 2012 report by the UNESCO Chair in Gender Research Group concluded that "substantial reductions in national budgets are leading to cuts in local services to prevent and protect against gender-based violence against women and girls. These cuts in service provision are expected to lead to increases in this violence" (130).

Early Intervention Grant

The Early Intervention Grant, paid to local authorities by central government to support disadvantaged children and families, was announced in 2010, and replaced a number of other funding streams, including money allocated specifically for Sure Start Children's Centres. The Local Government Association (LGA) reported that in 2011/12 this totalled £2.235bn and in 2012/13 £2.37bn, and that this represented a 32% cut when compared with the grants it replaced (131). Further reductions in this fund have occurred over time: it has decreased by an average of 19% per local authority between 2010/11 and 2012/13 (38), and by 2015 the funds have been estimated to be half the value they were when the Grant was introduced (132). The Grant itself has now been abolished, with the equivalent funds being paid through 'start-up funding assessments' (133).

In addition, there are a number of other relevant policy areas, including:

- Drug and alcohol abuse treatment (134, 135)
- Couples counselling and other relationship support (136)
- Mental health programmes and strategy (137)

Improving the context in which families live

9

Potential areas for action – improving the context in which families live

Practitioners and local systems

- Tackling social isolation and increasing community connectedness could reduce rates of child maltreatment through decreasing parental stress and encouraging positive parenting role models. Programmes that work with families at risk can include social capital development and community coordination.
- Mitigating the impact of the recession and austerity measures on families (particularly those who are living in poverty) could help to protect those at risk of ACEs.
- Action at a local level is needed across sectors, in order to involve education, public health, health care, work and employment, and so on. This can be supported by cross-sector work at a national level.

National systems

- Tackling inequality and reducing absolute poverty are both likely to reduce the prevalence of ACEs. Although these are complex and long-term goals, the support and advocacy of national systems (including health) is essential, and can include the evidence linking child maltreatment and household adversity with economic factors.
- Tackling poverty requires a focus not only on unemployment, but also on low wages and insufficient benefits or support for families with children.
- Examining equity impacts, i.e. the differential impact of policy decisions on families with children, and those on lower incomes, can reveal where extra burdens are being placed on those who are at risk of ACEs.

Families exposed to disadvantage, poverty and low socioeconomic status (which overlap significantly although they are not the same) are at higher risk of ACEs (see Section 7b). This and other features of the context in which families live (Section 5a) can be improved in order to reduce the prevalence of ACEs. Table 5 shows that a focus on societal and community action is essential and can impact across the life course.

In order to tackle the stress or disadvantage associated with being of a relatively low socioeconomic status, it is important to reduce inequalities within society. This relates

both to income and to other factors such as education or housing conditions. Dr Peter Sidebotham, the author of a series of reviews into child deaths in high-income countries, has stated, "Politicians should recognise that child survival is as much linked to socioeconomic policies that reduce inequality as it is to a country's overall gross domestic product and systems of healthcare delivery" (139). Fair Society Healthy Lives (the Marmot Review) provides detailed information on policy options to reduce social and economic inequalities in society in order to reduce inequalities in the social determinants of health and in health outcomes.

Table 5
Strategies for preventing child maltreatment by developmental stage and level of intervention, WHO

Level of intervention	Developmental stage			
	Infanthood (<3 years old)	Childhood (3–11 years old)	Adolescence (12–17 years old)	Adulthood (18+ years)
Societal and community	Implementing legal reform and human rights: <ul style="list-style-type: none"> • Translating the Convention of the Rights of the Child into national laws • Strengthening police and judicial systems • Promoting social, economic and cultural rights Introducing beneficial social and economic policies: <ul style="list-style-type: none"> • Providing early childhood education and care • Ensuring universal primary and secondary education • Taking measures to reduce unemployment and mitigate its adverse consequences • Investing in good social protection systems Changing cultural and social norms: <ul style="list-style-type: none"> • Changing cultural and social norms that support violence against children and adults Reducing economic inequalities: <ul style="list-style-type: none"> • Tackling poverty • Reducing income and gender inequalities Reducing environmental risk factors: <ul style="list-style-type: none"> • Reducing the availability of alcohol • Monitoring levels of lead and removing environmental toxins 			
				Providing shelters and crisis centres for battered women and their children Training health professionals to identify and refer adult survivors of child maltreatment
Relationship	Home visitation programmes Training in parenting	Training in parenting		
Individual	Reducing unintended pregnancies Increasing access to prenatal and postnatal services	Training children to recognise and avoid potentially abusive situations		

Source: (138)

As was outlined above, “factors such as support networks and financial security can either be protective or [their absence] can add to the stress and threaten mental wellbeing (of parents)” (124). This increased stress can act as a risk factor for household adversity and child maltreatment.

Reducing the number of families in poverty and increasing income among those at the lower end of the social gradient

Policy strategies to improve the conditions in which families live could usefully focus on the differential risk of poverty for those families with children, and increase financial resources for these families.

Increasing wages, or combining wages with benefits that increase income, can help to ensure that minimum income standards are met and that basic necessities are present. Joseph Rowntree Foundation data shows that in 2012/13, 71% of lone parent households and 34% of couple households with children lacked the income required for an adequate standard of living. Both these figures have increased since 2008/09 – from 65% for lone parent and 24% for couple households. This compares with only 29% of single working-age and 17% of couple working-age households without children (27). These figures represent not only insufficient income, but also increases in prices.

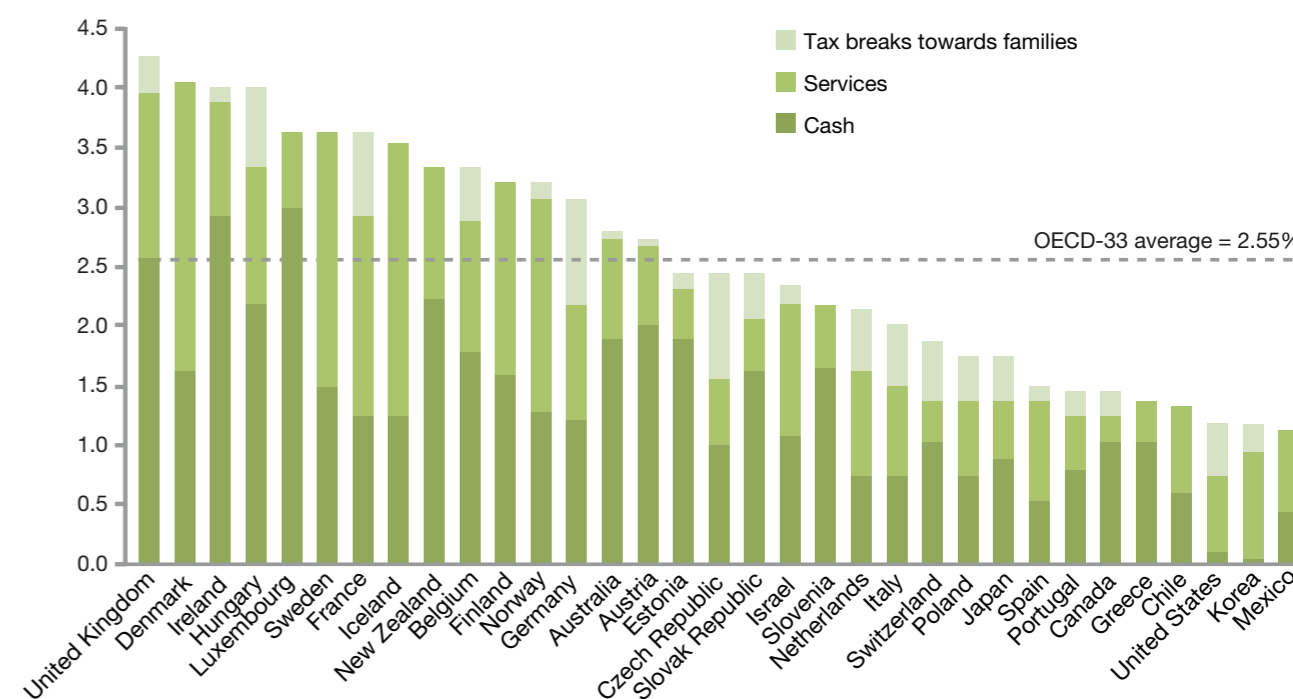
One way to decrease poverty among families is through family benefits – which include cash transfers, public spending and financial support through the tax system.

The UK spends a higher percentage of GDP on family benefits than the OECD average, although the OECD also reports that this is “partly due to increase in spending in income tested benefits during the crisis” (140), which may mean that these figures do not represent a long-term commitment to increasing the minimum income available for families with children.

There is also some evidence that spending on family cash benefits and tax breaks has a greater impact on child poverty than spending on services and that the current focus in England on services over benefits and tax breaks will be damaging to child poverty rates (141).

Affecting change to economic distributions at a societal level is a difficult task for those who are not directly responsible for fiscal policy or national policy in other departments. However, an increased advocacy role is needed among those who are aware of the heightened risk for ACEs among those experiencing poverty, and the consequent negative impacts on health that this could have. The health sector, for example, could speak up and advocate for the importance of considering equity impacts, and the impacts on families, of central spending decisions.

Figure 13
Public spending on family benefits in cash, services and tax measures, % of GDP, 2011



Source: (140)

Notes: Data missing for Turkey. Data on tax breaks towards families is not available for Greece and Hungary. The data for Israel is supplied by and under the responsibility of the relevant authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Mitigating the impact of the recession and austerity on families

There is emerging evidence that not only the recession but also the policy response has had a negative impact on families. Unicef has stated that, “the shift from stimulus to consolidation increased inequality and contributed to worsening living conditions for children” (142).

The NSPCC has also reported on the equity impacts of budget cuts, stating that poorest families have been most affected by austerity measures (38), and the Children’s Society found that only 12% of 14 year olds reported that the economic crisis had had no impact on their family and 36% reported either ‘a fair amount’ or ‘a great deal’ of impact (143). Further research has found that the recession has increased the amount of stress, depression, anxiety and suicidal thinking among parents, which are all risk factors for child abuse and neglect (15).

Cumulative impact assessment (i.e. measuring the overall impact of a set of changes to government policies on the UK population) has been commissioned by the Equality and Human Rights Commission to evaluate the impact of policy changes in the 2010–15 period on groups of people

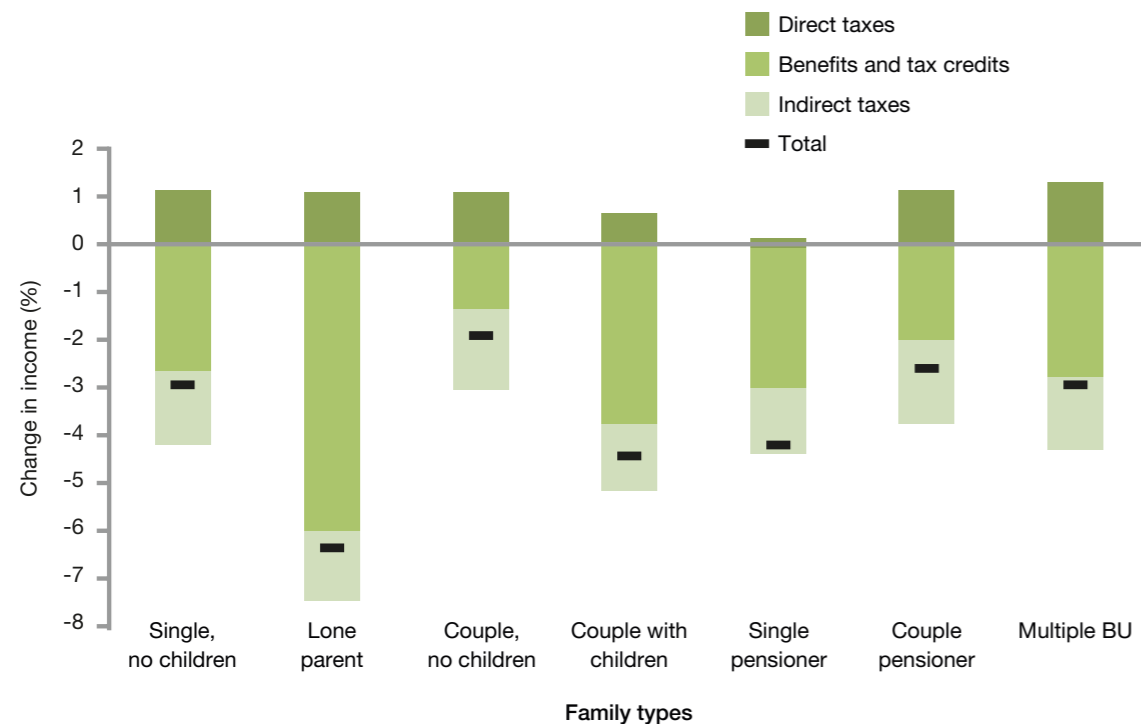
with different protected characteristics (144). Figure 14 shows that although everybody will be worse off, on average families with children lose most, particularly lone parents.

Local and national actors, including those in the health sector, could advocate for programmes to mitigate the negative impacts of the recession and austerity measures on children and families.

Increasing social resources for families

Tackling social isolation and increasing community connectedness and capital is also important (38). The WHO has reported that community interventions such as those presented in Section 10 on parenting programmes can prevent child maltreatment, “by expanding formal and informal resources and establishing a normative cultural context that promotes collective responsibility for more positive child development” (15). A review of these programmes found that the inclusion of social capital development and community coordination of individualised services were the most promising components (145). The aim of these programmes is not only to improve parenting or reduce parental isolation, but also to create community responsibility for child protection.

Figure 14
Distributional impact of tax, benefit and tax credit changes, 2010–15, as % of net income by family type, UK, 2014



Source: (144)

Note: ‘Multiple BU’ refers to ‘multiple benefit units’, where a sampled address consists of multiple families.

Tackling parental and family risk factors

10

Potential areas for action – tackling parental and family risk factors

Practitioners and local systems

- Parenting programmes have a range of benefits and some have been found to reduce child maltreatment.
- Parenting programmes can be made universally available, but targeted progressively more at families in greater need who face multiple risk factors – for example, young single mothers living in poverty. Given that poor parenting behaviours occur across the social gradient there is a case for proportionate universalist action.
- The involvement of a range of sectors, including schools and the health sector, can be useful to support parenting programmes – in terms of both referral and delivery.

National systems

- Further research is needed on which parenting programmes are most successful in reducing ACEs and their risk factors and in assessing whether findings from other contexts (particularly the USA) are applicable in the English context, which features of programmes work best, and what works for older children and young people.
- Successful parenting programmes can be supported and funded nationally in order to tackle ACE prevalence across the population.
- Promoting a multi-agency approach which provides support through a range of existing systems – such as schools and children’s centres – can help to reach a broad range of families.
- There is a clear role for the health sector in championing and implementing successful parenting and family programmes and in identifying and working with families and children at risk.

Investing in parenting programmes and family support programmes, at local and national levels, is a promising strategy for a number of reasons. Firstly, as was described in Section 5b, harmful parenting has been shown to be a risk factor for a range of ACEs, particularly in the area of child maltreatment. Secondly, there is relatively good evidence of the impact of parenting programmes on child development and outcomes, parental outcomes, and in some cases on ACEs. This includes evidence of cost-effectiveness (29). Thirdly, as the WHO states, “most maltreatment in the community is relatively mild, although it may persist for long periods. This type of abuse warrants parental supportive interventions by welfare and family support services, rather than investigation by child protection agencies” (15).

Many family support programmes such as home visiting, parenting programmes, and social development programmes have been tested in the US and some have been found to reduce ACEs, prevent health-harming behaviours, and be cost-effective (1, 15). However, the social policy context in the US differs significantly from the English context, meaning that further evaluations are needed in some cases to replicate results.

Investment in parenting can also help to prevent the intergenerational transmission of ACEs that was outlined in Section 4b. Positive parenting is likely to be passed down through generations and can break cycles of adversity (1). For example, in a US longitudinal study, 15 years after the birth of their first child approximately half the number of women who were visited by nurses became perpetrators of child abuse and neglect compared with those in a control group. Women in the programme who were unmarried and of low socioeconomic status also had 0.41 behavioural impairments due to use of alcohol or drugs compared with 0.73 in the control group, and 0.16 compared with 0.90 arrests (146).

In order to ensure parenting programmes can have an impact on children and young people’s lives, national policies are also needed. Section 8 outlined current policies such as the Troubled Families Programme. While these may be effective for those with the greatest need, more attention is needed across the social gradient to ensure that those families who are not seen as highest risk are also supported with information and guidance on parenting, including through approaches and activities at children’s centres and schools.

There is also evidence that surveillance of families is increasing, but the support being offered is not. Investigations of suspected abuse (Section 47 investigations) have increased by 86% since 2007/8 in England but the increase in child protection plans is much smaller (40%). This increase in investigations, coupled with the rise in the numbers of looked after children – who account for half of all children’s services expenditure – is squeezing the funding of programmes that support families, meaning that there is much more surveillance of families but less support for families. For example, 94,000 families received a Section 47 investigation in 2013/14 without a resultant child protection plan, up from 42,000 in 2007/8 (147).

A review of parenting programmes across Europe (148) found that child injuries, abuse and neglect were reduced as

a result of the Family Nurse Partnership, Positive Parenting Programme and Preparing for Life. Some of these are described in more detail in the case studies box below, which focusses on programmes that have been shown to impact on ACEs or their risk factors, and those that extend to older children.

Intensive family support that brings together a number of services has been shown to improve relationships within the family, reduce depression among parents and reduce children’s anxiety, anger and stress (154). Family support is more likely to be successful where support is maintained beyond the initial intensive phase and the family is supported by a strong relationship with a significant professional who is part of a universal service, in order to reduce feelings of stigma (155).

Case studies: parenting programmes

CANparent is a network of organisations in England that provide quality assured universal parenting classes. CANparent provides a quality mark to parenting class providers who have met criteria including evidence of benefit to parents. The CANparent website enables parents and commissioners to find quality marked classes across the country (28).

The Incredible Years (ages 2–12) has been shown to be effective in bringing about improvements in parenting dimensions (including harsh/critical parenting, nurturing/supportive parenting and discipline competence) among parents who have a history of child maltreatment (149). The cost–benefit ratio is 1.37 (29).

Functional Family Therapy (ages 11–18) is a family support programme focussed on young people who are engaging in antisocial behaviour, substance abuse or crime. It has shown improved child behaviours and reduced parent stress, depression and mental health problems, which are themselves ACEs and can also impact on child maltreatment. It has a cost–benefit ratio of 12.32 (29).

Triple P positive parenting programme (age 0–16) has shown evidence of positive impacts on risk factors for maltreatment, such as reductions in parenting stress, improvements in parenting practices and parenting self-esteem (150). In addition, a US study found that making the programme available to all parents in a

country led to 17% fewer hospitalisations as a result of child abuse, and 16% fewer out of home placements (151). It has a cost–benefit ratio of 5.05.

The Chicago child–parent centre (ages 3–9) in the US provides pre-school education, parent programmes, outreach services and ongoing family support when children enter school. It has been shown to benefit children’s development and skills and to improve parenting. Participating families had lower rates of child maltreatment by the age of 17 (7.2% in the intervention group and 9.7% in the control) (152). By age 21, return on investment is estimated to total over US\$7 per \$1 invested (152).

FEDUP (Family Environment: Drug Using Parents) (153) (age 5–12 years) is an NSPCC face-to-face intensive intervention for families in which there is parental substance misuse. An interim evaluation in 2014 (153) found that the percentage of children and young people reporting a clinical level of emotional and behavioural problems dropped from 37% before the programme to 25% after, and parents reported being less unhappy, being more confident about their parenting and having a greater knowledge about children’s needs at the end of the programme.

The IHE report Good Quality Parenting Programmes and the Home to School Transition (29) gives more information on parenting programmes and their relative benefits and sets out the case that parenting programmes should be strongly supported.

Tackling household adversity

11

Reducing the prevalence of ACEs and inequities in the prevalence of ACEs requires action across risk factors – as described in Section 5. Tackling household adversity such as domestic violence and parental drug or alcohol abuse is necessary in order to ensure the safety, health and wellbeing of the adults and children in the household, and because it is likely to reduce the prevalence of child maltreatment. The

importance of addressing parental and family risk factors and the context in which families live – including poverty – has been discussed in Sections 9 and 10.

Tackling household adversity is challenging. Often multiple issues, which are interrelated, are present in the home, and detecting as well as acting on these requires a holistic, multi-agency and long-term approach.

Potential areas for action – tackling household adversity

Practitioners and local systems

NICE guidance documents and other evaluation evidence advocates the following strategies:

- The importance of multi-agency teams, working across organisational and professional boundaries, in order to provide integrated care. For children over five, schools are key partners in this integrated system.
- The importance of recognising multiple needs or adversities and tackling these holistically – for instance, the mental health of people who have been a victim of domestic violence. This could help to tackle the clustering of ACEs in some households.
- The role of flexible and needs-based provision that recognises the differences between people and their contexts and responds accordingly.
- The function of health professionals and other parts of the health system in detecting and responding to risk factors for ACEs.
- The importance of recognising children’s needs, the impact that adverse conditions within the home may be having on them, and the differing effects for different ages of children. Older children and young people whose home circumstances are damaging may come into contact with a range of public services – for example, the criminal justice system. There is a need to determine and investigate adversities at home in these cases.
- Building on the lessons of existing programmes and either using or adapting these according to local context.

National systems

There are a number of actions that are possible at a national level, including:

- Recognising and supporting local integration efforts with the use of combined budgets, outcomes frameworks and other measurement tools.
- Training health and other staff, such as those who work in schools, to recognise, respond and refer those who are facing household adversity or risk factors on to other support services, or take steps to tackle these conditions within the health system.
- Gather and share information and data on the prevalence and clustering of adverse experiences, and effective evidenced programmes to tackle both individual and co-occurring ACEs.
- Work across government to advocate for cooperative systems that seek to protect and enhance the wellbeing of families facing adversity and the risk factors for ACE, and to take an early intervention and prevention approach.
- Investigate and, if appropriate, advocate for policy options that would reduce the risk factors for household adversity and child maltreatment – such as increasing the price of alcohol.

Evidence has found that perpetrator programmes that target domestic violence in a culturally specific context, or at the same time as tackling other issues such as mental health problems and drug and alcohol misuse, have had some success in reducing violence rates (31). The Early Intervention Foundation has also provided guidance on early intervention to prevent domestic violence and abuse, which focuses primarily on national government actions (31).

Greater alcohol availability in communities is associated with increased child maltreatment, therefore regulating alcohol sales and increasing prices could have an impact on child maltreatment, through reductions in parental (or other adult) consumption (15). A study in the US estimated that a 10% increase in beer tax would reduce the probability of severe violence towards children by 2.3% and overall violence by 1.2%, while a reduction of one alcohol outlet per 1,000 population would reduce the probability of severe violence towards children by 4% (156). UK economic studies have also suggested that increases in the price of alcohol would have benefits in preventing violence (157).

Improving mental health in the home – either in terms of preventing illness, treating it or mitigating its negative impact on children – is the subject of much literature, which cannot be assessed in full here. NICE has issued guidance on public health interventions to promote positive mental health and prevent mental health disorders (158). There have also been some positive evaluations of the NHS's Increasing

Access to Psychological Therapies (IAPT) programme, which provides interventions approved by NICE for those with depression and anxiety disorders (159). The first three years of the programme saw more than one million people entering treatment, with results of over 45% recovered and 65% significantly improved (160).

Due to the increased health burden associated with experience of four or more ACEs, programmes which seek to tackle a number of household adversities simultaneously may be particularly important.

For practitioners, NICE guidance provides some good information on recommended actions. The box below summarises some guidance from NICE in the area of domestic violence and abuse, and links to further relevant NICE guidance.

Responses to household adversity should consider and protect any children who are present in the household. It is also necessary, however, to understand that older children and young people may have differing responses or negative outcomes as a result of household adversity. For example, qualitative research in Scotland has found that for those over 15 years old, parental drug or alcohol abuse in the home led to the young people feeling that their childhood was shortened as they had had to take responsibility for themselves and others at a young age (165).

National Institute for Health and Clinical Excellence (NICE) guidance for practitioners in health and social care

Domestic violence and abuse: how health services, social care and the organisations they work with can respond effectively (32)

The cost of domestic violence and abuse (DVA) is so significant that even marginally effective interventions are cost-effective

Working a multi-agency partnership is the most effective way to approach the issue at both an operational and strategic level

Local action should:

- Plan services based on an assessment of need and service mapping
- Participate in local strategic multi-agency partnerships
- Develop an integrated commissioning strategy
- Commission integrated care pathways
- Ensure trained staff ask people about DVA
- Adopt clear protocols and methods for information-sharing

- Tailor support to meet people's needs
- Provide specialist advice, advocacy and support as part of a comprehensive referral pathway
- Provide specific training for health and social care professionals in how to respond to DVA

Other NICE guidance

NICE guidance is also available on:

- Behaviour change: the principles for effective interventions (161)
- Alcohol-use disorders: preventing harmful drinking (162)
- Drug misuse: psychosocial interventions (163)
- Looked-after children and young people (164)
- A range of other topics that may be relevant to professionals and local systems in their actions to reduce household adversities.

Principles for action

12

From the three areas of action discussed above, some general principles for action emerge, which can be considered across sectors and in programme implementation.

12.a Early intervention and prevention

Throughout this report, the focus has been on action to prevent ACEs rather than just relying on reactive activity – waiting for ACEs to occur and be made visible and then reacting.

Unfortunately, a climate of austerity and cuts has seen decreasing funding for early intervention and prevention. While expenditure on those who have experienced ACEs (for example, looked-after children) is essential, increased investment in primary and secondary preventive programmes that have been shown to work, such as some family support services, may in fact decrease the need for children to go into care in the first place. In 2012/13, expenditure on looked-after children exceeded expenditure on family supported services by a factor of 3.6 (38).

The NSPCC reports that, in part due to funding cuts and a shift away from preventive services, "children's social care services are increasingly forced into playing the role of 'watching and waiting' for the point at which children are at risk of very significant harm, acting as an emergency service, a service of the last resort" (38). Not only does this potentially increase the harm that children and young people are exposed to, but it is not economically sensible.

In addition, reports have suggested that 90% of child maltreatment goes unnoticed (52, 166, 167), which means that reactive responses to identified ACEs may be failing to tackle the majority of the problem.

12.b Integrated working

It is clear from the literature that the risk factors for ACEs exist across a range of contexts – including home life, economic resources and societal conditions. Therefore, integrated, partnership and coordinated working is essential in order to provide an effective response to ACEs and their impact.

A range of publications have recognised the need for multi-sector working to prevent ACEs and reduce their impact, including the criminal justice system, social work, education systems and the health sector (2, 3, 15, 41).

Integrated working could also be usefully focussed on the risk factors for ACE, and on reducing the clustering of ACEs. In this way, a range of ACEs could be reduced and prevented simultaneously. The Early Intervention Foundation has found that integrated systems for families can create positive effects including in the areas of communication, responsiveness, cost-effectiveness and children's outcomes (168).

However it is also important that increasing awareness among a range of professionals, which may be leading to increasing investigation of abuse and neglect, is supported by sufficient budgets to support families once ACEs are identified. Integrated working is required not only to identify ACEs, but to then work to tackle the risk factors that contribute to ACEs such as poverty and social isolation.

12.c Proportionate universalism

Part C described the prevalence of ACEs, showing that while experiencing many ACEs simultaneously is not widely prevalent, much of the population will experience one or two ACEs. While poverty and deprivation are risk factors, child maltreatment and household adversity are not experienced only by the poorest or most deprived sections of our society. This creates a strong argument for an approach that is both universal but proportionate to need, in order to reduce inequalities in ACE prevalence – which will also contribute to reductions in health inequalities.

This strategy, 'proportionate universalism', is described in Fair Society, Healthy Lives (13), as a way to tackle the social gradient in health which results in health inequalities. In the context of ACEs, proportionate universalism might mean making parenting programmes universally available, but targeting them increasingly at families facing multiple deprivations, or where it is known that 'household adversities' are present (3, 148). The risk factors discussed in Part B can help policy makers, practitioners and local government understand where to focus their efforts, within a universal framework. Those families facing multiple risk factors (for example, a single mother living in poverty, who herself was the victim of abuse) should be of particular focus.

Areas for further research

13

Throughout the text of this report, we have raised areas where more research is needed. These are summarised below.

Further evidence and investigation is warranted to:

- provide further information from the English context on how parental material circumstances link to child welfare interventions such as being a looked-after child or on a child protection plan. Currently children's service statistics do not collect data on parents and there has been no representative study on this relationship since 1988.
- ascertain how the fact that a large proportion (approximately half) of the English population is exposed to one or more ACEs relates to child wellbeing and development more generally, and which ACEs are more damaging for health and wellbeing. It is likely that some, such as parental separation, are not always 'adverse'.
- build on current cost estimates in order to provide up to date and good quality information on the financial costs of current ACE prevalence and the benefits of investments in prevention, as well as which individual programmes or features of programmes are cost-effective.
- ascertain how the prevalence of ACEs varies by the age of the child or young person, and to investigate whether, and how, the health impacts of ACEs vary depending on the age of the person experiencing them.
- address how risk factors change depending on the age of the child or young person, and the role of risk factors outside the home.
- evaluate the impact on genetic, epigenetic and brain function of ACEs during later childhood and adolescence.
- identify which parenting programmes are most successful to reduce ACEs (and their risk factors), whether or not findings from other contexts (particularly the US) are applicable in the English context, which features of programmes work best, and what works for older children and young people.
- investigate what makes some children and young people resilient in the face of ACEs, and in which circumstances families 'break the cycle' of the intergenerational transmission of adversity.
- provide comparative data on the impact of different child protection systems internationally in order to ascertain which approaches are most successful.

CONCLUSION

Adverse childhood experiences, including abuse, neglect and household adversity (parental substance misuse, mental ill health, incarceration or separation, living in care or the presence of domestic violence) increase the risk of ill health, particularly in the case of multiple ACEs. Evidence shows that tackling the prevalence of ACEs is needed to reduce injury and death during childhood, premature mortality and suicide, disease and illness, and mental illness – as well as reducing inequalities in these outcomes. Taking action could also reduce the high economic costs associated with ACEs and their impacts, and to prevent the 'transmission' of adversity from parents to their children.

While it is complex to ascertain the causes of ACEs, and the pathways through which the risk of ACEs increases, some 'risk factors' are evident. These include household adversity, parenting and the context in which families live – including social isolation and the economic resources they have available.

Approximately half the English population has experienced some type of adverse experience during childhood or adolescence. Prevalence has changed over time and depends on the local area and the age of the child or young

person. It is clear that those lower down the social gradient – whether this is measured by wealth, socioeconomic status or area deprivation – are more at risk of being exposed to ACEs than those higher up. Therefore those who are more disadvantaged are increasingly likely to be exposed to ACEs and their negative health impacts. For this reason, reducing the prevalence and the social gradient of ACEs could also help to reduce health inequalities.

There are some promising policy options, for both local and national actors, and across sectors, to prevent ACEs from occurring. These involve tackling the risk factors for ACE in order to reduce household adversity, improve parenting, and increase the economic, personal and social resources available to families at the lower end of the social gradient. These strategies involve acting early, working in multi-agency teams for shared goals and in a cooperative way, and acting universally, yet with intensity proportionate to need.

While more research is needed in some areas, the current evidence makes it clear that taking action to reduce the prevalence and inequalities in prevalence of ACEs across England is both necessary and possible.

REFERENCES

1. Bellis MA, Hughes K, Leckenby N, Perkins C, Lowey H. National household survey of adverse childhood experiences and their relationship with resilience to health-harming behaviors in England. *BMC medicine*. 2014;12:72.
2. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *American journal of preventive medicine*. 1998;14(4):245-58.
3. Bellis MA, Hughes K, Leckenby N, Hardcastle KA, Perkins C, Lowey H. Measuring mortality and the burden of adult disease associated with adverse childhood experiences in England: a national survey. *Journal of public health*. 2014.
4. Ippen CG, Harris WH, van Horn P, Lieberman AF. Traumatic and stressful events in early childhood: Can treatment help those at highest risk? *Child Abuse and Neglect*. 2011;35(7):504-13.
5. Kelly-Irving M, Lepage B, Dedieu D, Bartley M, Blane D, Grosclaude P, et al. Adverse childhood experiences and premature all-cause mortality. *European journal of epidemiology*. 2013;28(9):721-34.
6. Draper B, Pfaff JJ, Pirkis J, Snowdon J, Lautenschlager NT, Wilson I, et al. Long-Term Effects of Childhood Abuse on the Quality of Life and Health of Older People: Results from the Depression and Early Prevention of Suicide in General Practice Project. *Journal of the American Geriatrics Society*. 2008;56(2):262-71.
7. Bridgman A. How Abuse and Neglect Affect Children's Minds and Bodies. *Social Policy Report*. 2014;28(1).
8. Felitti VJ, Anda R. The relationship of adverse childhood experiences to adult medical disease, psychiatric disorders, and sexual behavior: Implications for healthcare. *The hidden epidemic: The impact of early life trauma on health and disease*: Cambridge University Press; 2009.
9. Kessler RC, McLaughlin KA, Green JG, Gruber MJ, Sampson NA, Zaslavsky AM. Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. 197. 2010;5(378-85).
10. Anda RF, Felitti VJ, Bremner JD, Walker JD, Whitfield C, Perry BD, et al. The enduring effects of abuse and related adverse experiences in childhood. A convergence of evidence from neurobiology and epidemiology. *European archives of psychiatry and clinical neuroscience*. 2006;256(3):174-86.
11. Anda RF, Butchart A, Felitti VJ, Brown DW. Building a framework for global surveillance of the public health implications of adverse childhood experiences. *American journal of preventive medicine*. 2010;39(1):93-8.
12. Crnic KA, Greenberg MT. Minor parenting stresses with young children. *Child development*. 1990;61(5):1628-37.
13. The Marmot Review Team. *Fair Society, Healthy Lives: Strategic review of health inequalities in England post-2010*. London: Marmot Review Team, 2010.
14. Commission on the Social Determinants of Health. *Closing the gap in a generation: health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health*. Geneva: World Health Organisation, 2008.
15. World health Organisation. *European report on preventing child maltreatment*. 2013.
16. Widom CS. The cycle of violence. *Science*. 1989;244(4901):160-6.
17. Department of Health. *Childhood Matters: Report Of The National Commission Of Inquiry Into The Prevention Of Child Abuse; Volume 1 The Report on Domestic Violence: Stationery Office Books*; 1996.
18. Walby S. *The cost of domestic violence: up-date 2009*. 2009.
19. Centre for Mental Health. *The economic and social costs of mental health problems in 2009/10*. London: 2010.
20. Comptroller and Auditor General of the National Audit Office. *The youth justice system in England and Wales: reducing offending by young people*. London: National Audit Office, 2010.
21. Bywaters P, Brady G, Sparks T, Bos E. Child welfare inequalities: new evidence, further questions. *Child & Family Social Work*. 2014.
22. Sunday S, Labruna V, Kaplan S, Pelcovitz D, Newman J, Salzinger S. Physical abuse during adolescence: Gender differences in the adolescents' perceptions of family functioning and parenting. *Child abuse & neglect*. 2008;1(5-18).
23. Buchholz ES, Korn-Bursztyn C. Children of adolescent mothers: Are they at risk for abuse? *Adolescence*. 1993;28(110):361-82.
24. Dunn MG, Tarter RE, Mezzich AC, Vanyukov M, Kirisci L, Kirillova G. Origins and consequences of child neglect in substance abuse families. *Clinical psychology review*. 2002;22(7):1063-90.
25. Radford L, Aitken R, Miller P, Ellis J, Roberts J, Firkic A. *Meeting the needs of children living with domestic violence in London*. London: 2011.
26. Local Government Association. *Troubled families 2015 [19/02/2015]*. Available from: http://www.local.gov.uk/community-budgets/-/journal_content/56/10180/3691966/ARTICLE.
27. Padley M, Valadez L, Hirsch D. *Households below a minimum income standard*. 2015.
28. CANparent. *Classes & Advice Network [31/3/2015]*. Available from: <http://www.canparent.org.uk/>.
29. UCL Institute of Health Equity. *Good quality parenting programmes and the home to school transition*. Public Health England, 2014.
30. NSPCC. *A child's legal rights: Legal Definitions [18/02/2015]*. Available from: <http://www.nspcc.org.uk/preventing-abuse/child-protection-system/legal-definition-child-rights-law/legal-definitions/>.
31. Guy J, Feinstein L, Griffiths A. *Early intervention in domestic violence and abuse*. 2014.
32. National Institute for Health and Care Excellence. *Domestic violence and abuse - how services can respond effectively: NICE; 2014 [updated 10/03/201407/04/2014]*. Available from: <http://guidance.nice.org.uk/PHG/Wave20/60>.
33. Meadows P, Tunstill J, George A, Dhudwar A, Kurtz Z. *The costs and consequences of child maltreatment*. 2011.
34. Ucl Institute of Health Equity. *Local action on health inequalities: Building children and young people's resilience in schools*. London: 2014.
35. Department of Health. *Annual Report of the Chief Medical Officer 2012 - Our Children Deserve Better: Prevention Pays*. 2013.
36. Farmer E, Lutman E. *Case management and outcomes for neglected children returned to their parents: a five year follow-up study*. London: 2010.
37. Thornberry TP, Henry KL, Ireland TO, A. Smith CA. The Causal Impact of Childhood-Limited Maltreatment and Adolescent Maltreatment on Early Adult Adjustment. *J Adolesc Health*. 2010;46(4):359-65.
38. Jutte S, Bentley H, Miller P, Jetha N. *How safe are our children? 2014*. London: NSPCC, 2014.
39. Office for National Statistics. *Reference tables for suicides in the United Kingdom, 2013 Registrations 2015 [16/04/2015]*. Available from: <http://www.ons.gov.uk/ons/datasets-and-tables/index.html?pageSize=50&sortBy=none&sortDirection=none&newquery=suicide&content-type=Reference+table&content-type=Dataset>.
40. Geoffroy MC, Gunnell D, Power C. Prenatal and childhood antecedents of suicide: 50-year follow-up of the 1958 British Birth Cohort study. *Psychological medicine*. 2014;44(6):1245-56.
41. Bellis M. Adverse childhood experiences and associations with health-harming behaviours in young adults: surveys in the European Region. *Bulletin of the World Health Organization*. 2014;92:641-55.
42. Brown DW, Anda RF, Felitti VJ, Edwards VJ, Malarcher AM, Croft JB, et al. Adverse childhood experiences are associated with the risk of lung cancer: a prospective cohort study. *BMC public health*. 2010;10:20.
43. Gateway CWI. *Long-Term Consequences of Child Abuse and Neglect*. 2013.
44. Higgins DJ, McCabe MP. Maltreatment and long-term adjustment of adults. *Child Abuse Review*. 2000;9:6-18.
45. Gruber JE, Fineran S. The Impact of Bullying and Sexual Harassment on Middle and High School Girls. *Violence Against Women*. 2007;13(6):627-43.

46. Dregan A, Brown J, Armstrong D. Do adult emotional and behavioural outcomes vary as a function of diverse childhood experiences of the public care system? *Psychological medicine*. 2011;41(10):2213-20.
47. Dregan A, Gulliford MC. Foster care, residential care and public care placement patterns are associated with adult life trajectories: population-based cohort study. *Social psychiatry and psychiatric epidemiology*. 2012;47(9):1517-26.
48. Clark C, Caldwell T, Power C, Stansfeld SA. Does the influence of childhood adversity on psychopathology persist across the lifecourse? A 45-year prospective epidemiologic study. *Annals of epidemiology*. 2010;20(5):385-94.
49. Anda RF, Croft JB, Felitti VJ, Nordenberg D, Giles WH, Williamson DF, et al. Adverse childhood experiences and smoking during adolescence and adulthood. *Jama*. 1999;282(17):1652-8.
50. Thomas C, Hypponen E, Power C. Obesity and type 2 diabetes risk in midadult life: the role of childhood adversity. *Pediatrics*. 2008;121(5):e1240-9.
51. McGloin JM, Spatz Widom C. Resilience among abused and neglected children grown up. *Development and Psychopathology*. 2001;12:1021-38.
52. Gilbert R. Burden and consequences of child maltreatment in high-income countries. *Lancet*. 2009;373:68-81.
53. Olson S, Stroud C. Child maltreatment research, policy, and practice for the next decade: workshop summary. Washington, D.C: The National Academies Press; 2012.
54. Cahill LT, Kaminer RK, Johnson PG. Developmental, cognitive, and behavioral sequelae of child abuse. *Child and Adolescent Psychiatric Clinics of North America*. 1999;8(4):827-43.
55. Gibby-Smith BM. Correlations of grade point averages at a rural college with reports of abuse in rural families. *Psychological Reports*. 1995;77(2):619-21.
56. Kinard EM. Psychosocial resources and academic performance in abused children. *Children and Youth Services Review*. 1999;21:351-76.
57. Solomon CR, Serres F. Effects of parental verbal aggression on children's self-esteem and school marks. *Child abuse & neglect*. 1999;23(4):339-51.
58. Colton M, Heath A, Aldgate J. Factors which influence the educational attainment of children in foster family care. *Community Alternatives: International Journal of Family Care*. 1995;7:15-36.
59. Eckenrode J, Laird M, Doris J. School performance and disciplinary problems among abused and neglected children. *Developmental Psychology*. 1993;29:53-62.
60. Perez CM, Widom CS. Childhood victimization and long-term intellectual and academic outcomes. *Child abuse & neglect*. 1994;18(8):617-33.
61. Johnston DW, Schurer S, Shields MA. Exploring the intergenerational persistence of mental health: evidence from three generations. *Journal of health economics*. 2013;32(6):1077-89.
62. Fang X, Brown DS, Florence CS, Mercy JA. The economic burden of child maltreatment in the United States and implications for prevention. *Child abuse & neglect*. 2012;36(2):156-65.
63. Walby S. *The cost of Domestic Violence*. 2004.
64. National institute for Health and Care Excellence. Costing statement: When to suspect child maltreatment [31/3/2015]. Available from: <https://www.nice.org.uk/guidance/cg89/resources/cg89-when-to-suspect-child-maltreatment-costing-statement2>.
65. Patrick ME, Maggs JL, Greene KM, Morgan NR, Schulenberg JE. The link between mother and adolescent substance use: inter-generational findings from the British Cohort Study. 2013. 2013;5(1):8.
66. Coid J, Petruckevitch A, Feder G, Chung W, Richardson J, Moorey S. Relation between childhood sexual and physical abuse and risk of revictimisation in women: a cross-sectional survey. *Lancet*. 2001;358(9280):450-4.
67. Milner JS, Robertson KR, Rogers DL. Childhood history of abuse and adult child abuse potential. *Journal of Family Violence*. 1990;5:15-34.
68. Kaufman J, Zigler E. The intergenerational transmission of abuse is overstated. In: Cicchetti D, Carlson C, editors. *Child Maltreatment: Theory and research on the causes and consequences of child abuse and neglect United Kingdom: Cambridge University Press*; 1993.
69. Tomison AM. Intergenerational transmission of maltreatment. *NCPC Issues No 6*. 1996.
70. Brown MJ, Perera RA, Masho SW, Mezuk B, Cohen SA. Adverse childhood experiences and intimate partner aggression in the US: Sex differences and similarities in psychosocial mediation. *Social science & medicine*. 2015;131:48-57.
71. Mensah F, Kiernan K. Parents' mental health and children's cognitive and social development. *Social psychiatry and psychiatric epidemiology*. 2010;45(11):1023-35.
72. Pelton L, Milner JS. Is poverty a key contributor to child maltreatment? In: Stein EGTJ, editor. *Controversial issues in child welfare*. Boston1994. p. 16-28.
73. Bifulco A, Moran P. *Wednesday's child: research into women's experience of neglect and abuse in childhood and adult depression*. London: Routledge; 1998.
74. Sedlak AJ, Broadhurst DD. Executive summary of the third national incidence study of child abuse and neglect. Washington D.C: National Center on Child Abuse and Neglect, 1996.
75. Pelton LH. The continuing role of material factors in child maltreatment and placement. *Child abuse & neglect*. 2015;41:30-9.
76. Cancian M, Yang M-Y, Slack KS. The Effect of Additional Child Support Income on the Risk of Child Maltreatment. *Social Service Review*. 2013;87:417-37.
77. Sidebotham P, Heron J, Team AS. Child maltreatment in the "children of the nineties": a cohort study of risk factors. *Child abuse & neglect*. 2006;30(5):497-522.
78. Ross DP, Roberts P. *Income and Child Well-being: A New Perspective on the Poverty Debate*. Ottawa: Canadian Council on Social Development; 1999.
79. Cicchetti D, Manly JT, Lynch M. *An Ecological Developmental Perspective on the Consequences of Child Maltreatment (1995-1996)* Washington, D.C.: 1998.
80. Whitney DM, Morello LM, Reed AK, Urquiza AJ. Depression, distress, and social isolation in physically abusive and nonabusive parents. Paper presented at the meeting of the American Professional Society on the Abuse of Children, San Antonio, TX.: 1999.
81. Marryat L, Martin C. *Growing up in Scotland: Maternal mental health and its impact on child behaviour and development*. . Edinburgh: 2010.
82. Harrington D, Dubowitz H. Preventing child maltreatment. In: Hampton RL, editor. *Family violence: Prevention and treatment (2nd Edition)*: Sage; 1999. p. 122-47.
83. Garnezy N. *Children in Poverty: Resilience Despite Risk*. *Psychiatry: Interpersonal and Biological Processes*. 1993;56(1):127-36.
84. Gutman LM, Brown J, Akerman R. *Nurturing parenting capability: the early years*. London: Centre for Research on the Wider Benefits of Learning, Institute of Education, 2009.
85. Bifulco A, Moran P, Jacobs C, Bunn A. Problem partners and parenting: exploring linkages with maternal insecure attachment style and adolescent offspring internalizing disorder. *Attachment & human development*. 2009;11(1):69-85.
86. Garbarino J. *What Have We Learned About Child Maltreatment? Perspectives on Child Maltreatment in the Mid '80s*. Washington, D.C: U.S. Department of Health and Human Services, National Center on Child Abuse and Neglect.; 1984. p. 6-8.
87. Trickett PK, Kuczynski L. Children's misbehaviors and parental discipline strategies in abusive and nonabusive families. . *Developmental Psychology*. 1986;22(1):115-23.
88. Twentyman CT, Plotkin RC. Unrealistic expectations of parents who maltreat their children: An educational deficit that pertains to child development. *Journal of Clinical Psychology*. 1982;38:407-503.
89. Larrance DT, Twentyman CT. Maternal attributions and child abuse. *Journal of Abnormal Psychology*. 1983;94(4):449-57.

90. Rees G, Gorin S, Jobe A, Stein M, Medforth R, Goswami H. Safeguarding Young People: Responding to young people aged 11 to 14 who are maltreated. 2010.
91. Connelly CD, Straus MA. Mother's Age and Risk for Physical Abuse. *Child Abuse and Neglect*. 1992;16(5):709-18.
92. Brown J, Cohen P, Johnson JG, Salzinger S. A longitudinal analysis of risk factors for child maltreatment: findings of a 17-year prospective study of officially recorded and self-reported child abuse and neglect. *Child abuse & neglect*. 1998;22(11):1065-78.
93. Polansky NA, Gaudin Jr. JM, Ammons PW, Davis KB. The psychological ecology of the neglectful mother. *Child abuse & neglect*. 1985;9(2):265-75.
94. Brandon M, Sidebotham P, Bailey S, Belderson P, Hawley C, Ellis C, et al. New learning from serious case reviews: a two year report for 2009-2011. University of East Anglia & University of Warwick, 2012.
95. Nunno MA. Factors Contributing to Abuse and Neglect in Out of Home Settings. 1992.
96. National Crime Agency. The Foundations of Abuse: A thematic assessment of the risk of child sexual abuse by adults in institutions 2013 [20/02/2015]. Available from: <http://www.nationalcrimeagency.gov.uk/publications/49-ceop-institutions-thematic-assessment/file>.
97. Office For national Statistics. Crime in England and Wales, Year Ending September 2013. 2014 [19/02/2015]. Available from: <http://www.ons.gov.uk/ons/rel/crime-stats/crime-statistics/period-ending-september-2013/stb-crime-in-england-and-wales--year-ending-sept-2013.html#tab-Sexual-offences>.
98. Office For national Statistics. Focus on: Violent Crime and Sexual Offences, 2011/12, appendix tables 4.08 2013 [31/3/2015]. Available from: http://www.ons.gov.uk/ons/dcp171778_298904.pdf.
99. Uk Government. Children Act 1989 [Legislation]. [20/02/2015]. Available from: <http://www.legislation.gov.uk/ukpga/1989/41/contents>.
100. Office for National Statistics. Children looked after in England (including adoption and care leavers) year ending 31 March 2014. England: 2014.
101. Public Health England. National Child and Maternal Health Intelligence Network [20/02/2015]. Available from: <http://www.chimat.org.uk/>.
102. Public Health England. Prevention of ill health: Hospital admissions caused by injuries in children (0-14 years) (2012/13) [19/02/2015]. Available from: <http://atlas.chimat.org.uk/IAS/dataviews/report?reportId=327&viewId=447&geoReportId=4136&geold=4&geoSubsetId=>.
103. Public Health England. Key risk factors indicating harm or poorer developmental outcomes in children [19/02/2015]. Available from: <http://atlas.chimat.org.uk/IAS/dataviews/tabular?viewId=318&geold=4&subsetId=>.
104. Cawson P, Wattam C, Brooker S, Kelly G. Child Maltreatment in the United Kingdom: A Study of the Prevalence of Child Abuse and Neglect. London: 2000.
105. Roberts I, Li L, Barker M. Trends in intentional injury deaths in children and teenagers (1980-1995). *Journal of public health medicine*. 1998;20(4):463-6.
106. Marryat L, Martin C. Growing Up in Scotland: Maternal mental health and its impact on child behaviour and development. Edinburgh: 2010.
107. World Health Organisation. Child Abuse and Neglect: Factsheet 2002 [19/02/2015]. Available from: http://www.who.int/violence_injury_prevention/violence/world_report/factsheets/en/childabusefacts.pdf.
108. Goldman J, Salus MK, Wolcott D, Kennedy KY. A Coordinated Response to Child Abuse and Neglect: The Foundation for Practice. 2003.
109. Sethi D, Hughes K, Bellis M, Mitis F, Racioppi F. European report on preventing violence and knife crime among young people. 2010.
110. Sacks V, Murphey D, Moore K. Adverse Childhood Experiences: National and State-level Prevalence. 2014.
111. OECD. SF3.4: Family violence 2013 [20/02/2015]. Available from: http://www.oecd.org/els/soc/SF3_4_Family_violence_Jan2013.pdf.
112. UNICEF. A league table of child maltreatment deaths in rich nations. Florence: Innocenti Research Centre, 2003.
113. Department for Communities and Local Government. Financial framework for the expanded Troubled Families programme 2014 [31/3/2015]. Available from: <https://www.gov.uk/government/publications/financial-framework-for-the-expanded-troubled-families-programme>.
114. Ecorys UK. National Evaluation of the Troubled Families Programme. 2014.
115. Department for Communities and Local Government. Press release: More than 105,000 troubled families turned around saving taxpayers an estimated £1.2bn. 2015 [30/04/2015]. Available from: <https://www.gov.uk/government/news/more-than-105000-troubled-families-turned-around-saving-taxpayers-an-estimated-12-billion>.
116. Family Nurse Partnership [19/02/2015]. Available from: <http://www.fnp.nhs.uk/about>.
117. Family Nurse Partnership. Research and Development [19/02/2015]. Available from: <http://www.fnp.nhs.uk/research-and-development>.
118. Department of Health. Family Nurse Partnership programme to be extended 2013 [19/02/2015]. Available from: <https://www.gov.uk/government/news/family-nurse-partnership-programme-to-be-extended>.
119. Department for Education. Family intervention projects and services: Children's Minister Tim Loughton comments on official statistics on families receiving support from family intervention services in England up to March 2011. 2011 [19/02/2015]. Available from: <https://www.gov.uk/government/news/family-intervention-projects-and-services>.
120. Department for Education. Evaluation of the family and young carer pathfinders programme 2011 [19/02/2015]. Available from: <https://www.gov.uk/government/publications/evaluation-of-the-family-and-young-carer-pathfinders-programme>.
121. Shribman S, Billingham K. Healthy Child Programme: Pregnancy and the first five years of life. 2009.
122. Department for Education. Improving the adoption system and services for looked-after children: Evidence-based interventions for vulnerable children 2013 [19/02/2015]. Available from: <https://www.gov.uk/government/policies/improving-the-adoption-system-and-services-for-looked-after-children/supporting-pages/evidence-based-interventions-for-vulnerable-children>.
123. HUB Evidence Based Interventions Programme. National Implementation Service [19/02/2015]. Available from: <http://evidencebasedinterventions.org.uk/about/national-implementation-service>.
124. Pordes-Bowers A, Strelitz J, Allen J, Donkin A. An Equal Start: Improving outcomes in Children's Centres. London: UCL Institute of Health Equity, 2012.
125. UK Government. Free early education and childcare 2014 [19/02/2015]. Available from: <https://www.gov.uk/free-early-education>.
126. 4Children. Sure Start Children's Centres Census 2014: A national overview of Sure Start Children's Centres in 2014. 2014.
127. Home Office. Ending violence against women and girls in the UK 2013 [19/02/2015]. Available from: <https://www.gov.uk/government/policies/ending-violence-against-women-and-girls-in-the-uk>.
128. O'Hara M. Legal aid cuts are devastating to women, especially those suffering abuse. *the Guardian*. 2013.
129. Hirst A, Rinne S. The impact of changes in commissioning and funding on women-only services. Research report 86. Manchester: Equality and Human Rights Commission; 2012.
130. Towers J, Walby S. Measuring the impact of cuts in public expenditure on the provision of services to prevent violence against women and girls. Report for Northern Rock Foundation and Trust for London.: Lancaster University; 2012.
131. Local Government Association. Early Intervention Grant 2012 [19/02/2015]. Available from: http://www.local.gov.uk/briefings-and-responses/-/journal_content/56/10180/3736125/ARTICLE.
132. Royston S. Breaking Barriers: The funding challenge: The Children's Society; 2013 [19/02/2015]. Available from: <http://www.childrenssociety.org.uk/news-and-blogs/our-blog/breaking-barriers-funding-challenge>.
133. Russell V. Extra cuts to early intervention funds enrage councils: Public Finance; 2013 [19/02/2015]. Available from: <http://www.publicfinance.co.uk/news/2013/01/extra-cuts-to-early-intervention-funds-enrage-councils/>.
134. Department of Health. Reducing drugs misuse and dependence 2013 [19/02/2015]. Available from: <https://www.gov.uk/government/policies/reducing-drugs-misuse-and-dependence>.

135. Home Office. The Government's Alcohol Strategy 2012 [19/02/2015]. Available from: <https://www.gov.uk/government/publications/alcohol-strategy>.
136. Spielhofer T, Corlyon J, Durbin B, Smith M, Stock L, Gieve M. Relationship Support Interventions Evaluation. 2014.
137. Department of Health. Closing the gap: priorities for essential change in mental health 2014 [19/02/2015]. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/281250/Closing_the_gap_V2_-_17_Feb_2014.pdf.
138. Butchart A, Phinney A. Preventing child maltreatment: a guide to taking action and generating evidence. 2006.
139. The Telegraph. Fifth of child deaths are preventable. 2014.
140. OECD. Public spending on family benefits 2014 [19/02/2015]. Available from: http://www.oecd.org/els/soc/PF1_1_Public_spending_on_family_benefits_Oct2013.pdf.
141. Bradshaw J. Does cash or services have the biggest impact on child poverty? *NewStatesman*. 2012.
142. UNICEF Office of Research. Children of the Recession: The impact of the economic crisis on child well-being in rich countries. Innocenti Report Card 12. Florence: UNICEF Office of Research; 2014.
143. The Children's Society. The Good Childhood Report 2014. 2014.
144. Reed H, Portes J. Cumulative Impact Assessment: A Research Report by Landman Economics and the National Institute of Economic and Social Research (NIESR) for the Equality and Human Rights Commission. 2014.
145. Daro D, Dodge KA. Creating community responsibility for child protection: possibilities and challenges. *The Future of children / Center for the Future of Children, the David and Lucile Packard Foundation*. 2009;19(2):67-93.
146. Olds DL, Eckenrode J, Henderson CR, Jr., Kitzman H, Powers J, Cole R, et al. Long-term effects of home visitation on maternal life course and child abuse and neglect. Fifteen-year follow-up of a randomized trial. *Jama*. 1997;278(8):637-43.
147. Bywaters P. Cumulative jeopardy? A response to Brown and Ward. *Children and Youth Services Review*. 2015;52:68-73.
148. Morrison J, Pikhart H, Ruiz M, Goldblatt P. Systematic review of parenting interventions in European countries aiming to reduce social inequalities in children's health and development. *BMC public health*. 2014;14:1040.
149. Hurlburt MS, Nguyen K, Reid J, Webster-Stratton C, Zhang J. Efficacy of the Incredible Years group parent program with families in Head Start who self-reported a history of child maltreatment. *Child abuse & neglect*. 2013;37(8):531-43.
150. Bodenmann G, Cina A, Ledermann T, Sanders MR. The efficacy of the Triple P-Positive Parenting Program in improving parenting and child behavior: a comparison with two other treatment conditions. *Behaviour research and therapy*. 2008;46(4):411-27.
151. Prinz RJ, Sanders MR, Shapiro CJ, Whitaker DJ, Lutzker JR. Population-based prevention of child maltreatment: the U.S. Triple p system population trial. *Prevention science : the official journal of the Society for Prevention Research*. 2009;10(1):1-12.
152. Reynolds AJ, Temple JA, Ou SR, Robertson DL, Mersky JP, Topitzes JW, et al. Effects of a school-based, early childhood intervention on adult health and well-being: a 19-year follow-up of low-income families. *Archives of pediatrics & adolescent medicine*. 2007;161(8):730-9.
153. Cass R, Fernandes P. Evaluation of FED UP. 2014.
154. Action for Children. Intensive family support: The evidence. 2011.
155. Dixon J, Schneider V, Lloyd C, Reeves A, White C, Wojtek T, et al. Monitoring and evaluation of family interventions: information on families supported to March 2010. 2010.
156. Markowitz S, Grossman M. Alcohol regulation and domestic violence towards children. *Contemporary Economic Policy*. 1998;16(309-320).
157. Purshouse R, Brennan A, Latimer N, Meng Y, Rafia R. Modelling to assess the effectiveness and cost-effectiveness of public health related strategies and interventions to reduce alcohol attributable harm in England using the Sheffield Alcohol Policy Model version 2.0. University of Sheffield, 2009.
158. Taylor L, Taske N, Swann C, Waller S. Public health interventions to promote positive mental health and prevent mental health disorders among adults. 2007.
159. Improving Access to Psychological Therapies [19/02/2015]. Available from: <http://www.iapt.nhs.uk/>.
160. Department of Health. Improving Access to Psychological Therapies (IAPT). 2012.
161. National Institute for Health and Care Excellence. Behaviour change: the principles for effective interventions 2007 [19/02/2015]. Available from: <https://www.nice.org.uk/guidance/ph6>.
162. National Institute for Health and Care Excellence. Alcohol-use disorders: preventing harmful drinking 2010 [19/02/2015]. Available from: <https://www.nice.org.uk/guidance/ph24>.
163. National Institute for Health and Care Excellence. Drug misuse – psychosocial interventions 2007 [19/02/2015]. Available from: <https://www.nice.org.uk/guidance/cg51>.
164. National Institute for Health and Care Excellence. Looked-after children and young people 2010 [19/02/2015]. Available from: <https://www.nice.org.uk/guidance/ph28/chapter/scope-and-purpose-of-this-guidance>.
165. Bancroft A, Wilson S, Cunningham-Burley S, Backett-Milburn K, Masters H. Parental drug and alcohol misuse: Resilience and transition among young people. 2004.
166. Sidebotham P. Patterns of child abuse in early childhood, a cohort study of the children of the nineties. *Child Abuse review*. 2000;9:311-32.
167. Krug EG, Mercy JA, Dahlberg LL, Zwi AB. The world report on violence and health. *Lancet*. 2002;360(9339):1083-8.
168. Messenger C, Molloy D. Getting it right for families: A review of integrated systems and promising practice in the early years. 2014.

