Public Health England

Protecting and improving the nation's health

No child left behind

Understanding and quantifying vulnerability

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing and reduce health inequalities. We do this through world-leading science, research, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000
www.gov.uk/phe
Twitter: @PHE_uk
Facebook: www.facebook.com/PublicHealthEngland

Published September 2020
PHE publications
gateway number: GW-1202

PHE supports the UN
Sustainable Development Goals

Contents

Executive summary

This report is intended for leaders and practitioners nationally, regionally and locally concerned with improving outcomes for children and young people.

It aims to support directors of public health, working with their local partners, to inform coordinated approaches to reduce the number of children who are vulnerable to poor health and wellbeing and to take action to mitigate risks of poor outcomes. It will be of interest to integrated care systems in planning services which are preventive and protective.

For the purposes of this report, ‘vulnerable children’ are defined as any children at greater risk of experiencing physical or emotional harm and/ or experiencing poor outcomes because of one or more factors in their lives.

The COVID-19 pandemic raises specific considerations which can be usefully understood in the broader context of childhood vulnerability. Current research suggests that, while children of all ages have been diagnosed with COVID-19, symptoms are generally mild and death very rare (1). PHE, NHS England and partners have developed a framework for vulnerability to support ‘child and young person-centred recovery’ for 3 broad groups which are:

- a group of children that may be more clinically vulnerable to COVID-19 because they have underlying health conditions or the pandemic has in some way delayed or curtailed their access to health services
- children and families who are at increased risk due to family and socially circumstances where there is a statutory entitlement for care and support (education, health and care plan and those with a social worker)
- children who may be at higher risk due to being negatively impacted through wider determinants of health and/or family stressors family and social circumstances and may not be known to services

Children may be in more than one group and children not previously identified as vulnerable may have become so as the economic and social impact of the pandemic are felt in the family.

Studies also indicate that children and young people are being affected by the changes the pandemic has brought to their lives, including to their education, time with family and to their emotional health and wellbeing (2). More generally, the underlying wider community and social conditions which can make children more vulnerable which existed before the pandemic are likely to remain; these are the focus of this report.

In this report, we summarise:

- the extent and nature of vulnerability in childhood
- the evidence of increased risk and impact, associated with factors at individual, family and community levels
- the protective factors which, where present, can mean that children go on to prosper even where they experience vulnerability or adversity

Alongside this report, No child left behind… a public health informed approach to improving outcomes for vulnerable children describes PHE's actions and resources to improve outcomes for children, young people and their families and how the work of public health and its partners can help children realise their full potential.

A narrative report on improving health outcomes for vulnerable children and young people is also available for each upper tier local authority, which gives an overview of relevant local data on risk and protective factors for children and young people which can be used to inform local planning and prioritisation.

What do we mean by vulnerability?

There is no commonly used definition of childhood vulnerability (3). A child can be vulnerable to risks and poor outcomes because of individual characteristics; the impact of action or inaction by other people; and their physical and social environment. Additional factors include:

- the child's physical, emotional, health and educational needs
- any harm the child has experienced or may be at risk of experiencing – these can include a specific set of childhood experiences known as 'adverse childhood experiences'
- the capability of the child's carers and wider family environment to meet the child's needs, or indeed to cause harm – these might include homelessness or poor housing conditions, the presence of adults in the home with mental health problems, alcohol and drug dependence, or contact with the criminal justice system, domestic abuse and poverty
- the absence of supportive relationships in a child's life
- the wider community and social conditions beyond the family including crime, the built environment, community cohesion and resilience

This list is not exhaustive, and children can experience one or several of these factors with different levels of consequences over the course of their lives including into adulthood. For the purposes of this report, 'vulnerable children' are defined as any children at greater risk of experiencing physical or emotional harm and/or experiencing poor outcomes because of one or more factors in their lives.

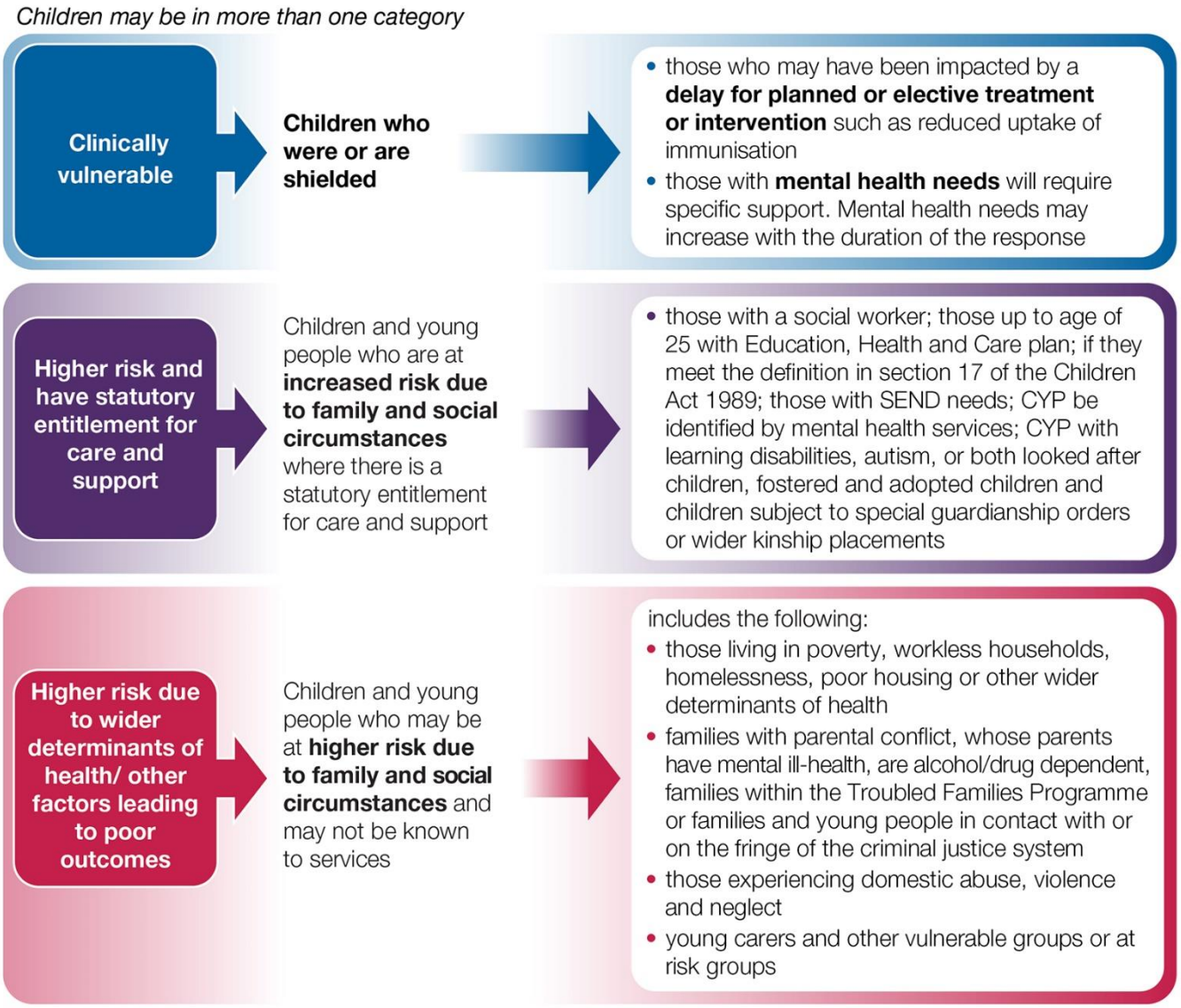
Some vulnerable children may also have adverse childhood experiences. These are a specific set of childhood experiences associated with negative outcomes in later life. Like other factors which make children more vulnerable, they do not inevitably lead to poorer outcomes, but their presence increases the risk of this happening.

The potential way in which the COVID-19 pandemic may have affected the vulnerability of children can be categorised into 3 groups (figure 1) which are:

- a group of children who may be more clinically vulnerable to COVID-19 because they have underlying health conditions, or the pandemic has in some way delayed or curtailed their access to health services
- children and families who are at increased risk due to family and socially circumstances where there is a statutory entitlement for care and support (education, health and care plan and those with a social worker)

- children who may be at higher risk due to being negatively impacted through wider determinants of health and/or family stressors and social circumstances and may not be known to services

Figure 1: childhood vulnerability and COVID-19



Source: PHE

Quantifying the number of vulnerable children

Children are exposed to a range of factors which make them more vulnerable to poorer outcomes. Children may fall into more than one group so, for example, some children living in homes where there is adult alcohol dependency may also experience domestic violence. This makes it difficult to offer exact figures on the number of children affected but the Office of the Children's Commissioner has estimated that overall there are 2.3 million children growing up with a vulnerable background, each of whom may have one or more risk factors (4).

Some groups of children are more likely to be vulnerable than others, often because of other risk factors. The Office of the Children's Commissioner categorised groups of vulnerable children into 9 domains based on the type of vulnerability which are:

- safeguarding concerns or in local authority care
- health and/or disability
- economic circumstances
- family circumstances and characteristics
- educational engagement
- involvement in offending and/or anti-social behaviour
- experience of abuse and exploitation
- and missing and absent children and minority populations (5)

Children in care

Of the 12 million children living in England just over 400,000 (3%) are in the social care system at any one time. More than 75,000 of these children are children in care (6). There were 399,500 children classified by social services as being in need at 31 March 2018, while the number of child protection plans at 31 March was 52,300 (7).

Many children in care are likely to have had experiences or been brought up in circumstances which make them more vulnerable and at risk of poorer outcomes than other children.

Studies have found that children in care are more likely to have lower educational attainment across all age groups as well as poorer mental and physical health (8). They are almost 4 times more likely to have a special education need than the child population overall (9). A review of national and international research on teenage pregnancy suggests that those in or leaving care are more likely to become teenage parents (10). There is also an association between children in care and offending, with

38% of children in Young Offender Institutions and 52% in Secure Training Centres having previously been in care (11).

The range of risk factors for children in care also highlights the complexity of issues which may make a child vulnerable. Risk factors are often interrelated, with many children being vulnerable as the result of more than one factor. For example, a child in care may have experienced violence and abuse which in turn may be associated with difficulties in forming relationships with others and behavioural problems. The narrative reports on improving health outcomes for vulnerable children and young people for upper tier local authorities contain more information about domestic violence and abuse within the household.

Young carers

A young carer is “a person under 18 years who provides or intends to provide care to another person” (12). The Office for the Children’s Commissioner estimated that there were 102,000 young unpaid carers in 2017/18 based on data from the Family Resources Survey (13). Most young carers support someone in their own home, usually a parent but sometimes another sibling or grandparents (14) who may have both physical and mental health issues. The care they give ranges from practical tasks like cooking and cleaning but can also include nursing care and emotional support (14). Being a carer can bring benefits for a young person, as they make a valued contribution to family life and develop life skills (14, 15). There are, however, sometimes negative outcomes for young carers, such as making it more difficult for them to participate fully in education (14). Being a young carer can have an adverse effect on development and outcomes, including giving rise to safeguarding issues where children experience abuse or neglect (15). There may also be implications for their mental health and young carers may feel lonely and isolated. Approximately a quarter of young carers may also have a disability themselves (16).

While many young carers will prioritise the support they give, the implications of such responsibilities can make children more vulnerable to poorer outcomes (15). A young carer becomes vulnerable when the level of care-giving and responsibility to the person in need of care becomes excessive or inappropriate for that child, risking impacting on his or her emotional or physical wellbeing or educational achievement and life chances (17). Under the Care Act 2014, local authorities are required to consider the needs of young carers if, during the assessment of an adult with care needs, or of an adult carer, it appears that a child is providing, or intends to provide, care. Children are also entitled to a carer’s assessment. Local authorities should ensure that adults’ and children’s services work together to offer young carers and their families an effective service and respond to the needs of a young carer, the person cared for, and others in the family. They are expected to take ‘reasonable steps’ to identify children in their area who are young carers. Research by the Office of the Children’s Commissioner suggests that

approximately four-fifths of young carers may not be receiving support from their local authority (16). School and public health nurses also play an important role in identifying and supporting young carers and their families in and out of school (15).

Teenage pregnancy

The issue of teenage pregnancy should consider both the potential vulnerability of the parents and also their children. Parents and baby may all be children in need. At an individual level, many teenage parents will be effective parents and raise healthy children, without negative outcomes. At a population level, however, teenage parents and their children are more vulnerable to poorer health and other outcomes. Teenage parents are more likely than other young people not to be in education, employment or training, and to experience unemployment later on in life as well as poverty (18). Their children are more likely to live in poverty and to experience developmental delays (18). It is estimated that preventing adverse childhood experiences would reduce levels of unintended teenage pregnancy by 44% (19). In 2018/19, 3,734 young women aged under 18 became mothers in England (20).

Children in the criminal justice system

Children who offend or are at risk of offending also experience disadvantage at multiple levels (21). Children and young people who offend are more likely not to be in education, employment or training (22). There is also an association between young people who have difficulties with communication and youth offending; 60% of young offenders have communication difficulties (23). The health and wellbeing needs of children and young people tend to be particularly severe by the time that they are at the risk of receiving a community sentence and more so when they receive custodial sentences (24). As young people are admitted to custody their needs (including health needs) are assessed. Through this process, young people entering youth custody have been found to have disproportionate health needs (often undiagnosed or untreated) when compared to the general population, including mental health (33%), substance misuse (including alcohol) (45%), and learning difficulties or disabilities (32%) (25).The evidence review: smoking, drinking and drug use among hard to reach children and young people (26) offers further information about this topic.

Violence and serious violence

Childhood exposure to violence in the form of physical, sexual, or emotional abuse, neglect, or even witnessing violence in the home has a significant effect on the wellbeing of children. It is a risk factor for a range of risk behaviours and disorders (for example smoking, obesity, high-risk sexual behaviour, and depression) that are, in turn, causally related to other major public health problems such as cancer, heart disease, sexually transmitted disease, and suicide (27).

Family violence is also a risk factor for children being in contact with the justice system which in itself is associated with poorer health outcomes than for the general population (28). The Children's Commissioner has estimated that 831,000 children were living in a household which reported domestic abuse in 2014 and that 29,000 children and young people were involved with or vulnerable to gangs in 2017/18 (13).

Early intervention to reduce childhood exposure to violence, and provide appropriate support where exposure has occurred, is key to reducing the far-reaching consequences of violence and its expression by children as they grow into adolescents and adults. Effective early intervention requires a multi-agency approach in which a range of partners across the local system work together.

Smoking, alcohol and drug use

Most parents who drink alcohol or take drugs do not cause harm to or neglect their children, but it is important to recognise that children living with parents with problem alcohol or drug use or both can be at greater risk (29).

It is estimated that around 220,000 children lived with an adult who was dependent on alcohol in 2014-15 (30). An estimated 93,000 children lived with female opiate users in 2014/15 and 48,000 with male opiate users. An individual child could be living with more than one opiate user and so it is not possible to combine these two figures to give an overall total estimate of the number who live with at least one opiate user (31). In 2018-19, 21% of adults who started treatment for alcohol or drugs were living with children at the time. One in 5 (20%) of the children of adults starting treatment were receiving early help or were in contact with children's social care (32). Analysis of Children in Need data found that, in the period 2014-15 to 2017-18, 15% of assessments recorded parental alcohol use as a factor, with 13% recording parental drug use (33).

Young people smoking and using alcohol and drugs themselves also places them at greater risk. Data from young people's specialist substance misuse services indicates that young people in contact with alcohol and drug services have a range of factors which make them more vulnerable and that the majority are using more than one drug ("poly-drug use"). In 2018, cannabis remained the most common substance (88%) that young people came to treatment for. Around 4 in 10 young people (44%) said they had problems with alcohol, 14% reported ecstasy and 10% reported powder cocaine problems. There was a 53% increase in young people reporting a problem with benzodiazepines from the previous year, and 3 times the reported number in 2016 to 2017 (34). Thirty-two percent of young people who started treatment during the year reported having had a mental health treatment need, 23% were affected by someone else's substance misuse, 21% had experienced domestic violence, 17% self-harmed, 4% experienced child sexual exploitation (34).

The latest estimates from the Smoking, drinking and drug use among young people in England survey, 2018 shows that 44% of 11- to 15-year-old pupils have ever had an alcoholic drink with 6% drinking at least weekly, 16% have ever smoked cigarettes and 24% have ever taken drugs (35). Alcohol and drug use which affects, impairs, interrupts or hinders young people in their physical, emotional, social or academic development is harmful. The most recent advice from the Chief Medical Officer is that an alcohol-free childhood is the healthiest and best option and that if children do drink alcohol it should not be until at least the age of 15 years (36).

Housing

Unhealthy housing, such as homes which are cold and damp, can affect health. According to work by the Marmot Review Team, children in cold homes are more than twice as likely to suffer some form of respiratory condition than those in warm homes (37). Cold housing also increases the likelihood of minor illnesses such as colds and flu as well as more serious illnesses which result in hospital admission (37). Poor housing more generally also has a negative effect on mental health (37). A longitudinal population-based study considered the impact of persistent poor housing conditions on mental health. The research found that poor housing in childhood was predictive of worse mental health, irrespective of current housing conditions (38).

Access to outdoor play areas and green spaces

Evidence indicates that the most deprived areas tend to have less available good quality public green space (39). People exposed to poor quality environments are more likely to experience poorer health outcomes than people who enjoy good quality environments (40).

While studies show that there are more outdoor play areas in deprived areas, their quality is generally poorer. Vandalism, litter and lack of maintenance can act as deterrents to using what otherwise might be good facilities (41). Consequently, children growing up in these areas have less opportunity to benefit from the physical and mental health opportunities which good quality green space, including playgrounds, can bring. Local authority planning, housing, public health, parks and regeneration departments are critical in ensuring safe, equitable and accessible play areas and other green space. Working in consultation with the local community will help to identify specific needs and opportunities for action.

Worklessness

Worklessness not only reduces family income but it can also damage families' resilience, health and stability, and have adverse effects on child development (42).

Workless families where people are economically inactive or unemployed are more likely to experience problem debt, drug and alcohol dependency, and homelessness. The evidence suggests that parental worklessness often overlaps with other disadvantages such as parental conflict and poor parental mental health which can have a long-term impact on children's development. Children growing up in workless families are almost twice as likely as children in working families to do less well at all stages of their education. In workless families, 37% of children in England did not reach the expected level at key stage 1 (aged 7) compared with 19% in lower-income working families. 75% of children in workless families did not reach the expected level at key stage 4 (when children take GCSEs or equivalent), compared to 52% in lower-income working families (43). Although some of these differences can be explained by the associated disadvantages faced by workless families, some specific outcomes such as behavioural difficulties have an independent and negative association over and above other factors (43, 44).

The negative impact on development and education often experienced by children growing up in workless families can impact on their future employment prospects (44, 45). The Children's Commissioner estimates that 1,113,028 children and young people live in workless households in England (13).

Poverty

In 2016, approximately 1.7 million children were living in low income families in England (46). Child poverty is associated with poorer health, educational outcomes and adverse long-term social and psychological outcomes, leading to poor health and life chances in adulthood (47). Child poverty can mean that children are less ready to get the most from school; in 2018/19, 67.2% of children from the most deprived areas compared with 75.9% from the least deprived had a good level of development at the end of reception (48). By Key Stage 4 (GCSEs) the pupils from the most deprived areas have an average Attainment 8 score of 43.5 compared with 50.4 in the least deprived areas (49), demonstrating how this gap remains throughout education.

While deprivation is a strong predicator of health-harming behaviour, the association does not mean that all children living in low income families will experience poorer outcomes throughout life. Instead other factors can also affect susceptibility or resilience to developing health-harming behaviours (50, 51).

Adverse childhood experiences

In recent years, there has been considerable interest in a specific set of adverse childhood experiences and how these can be associated with negative outcomes later in life.

Work on adverse childhood experiences originated from a study carried out in the US at Kaiser Permanente in the mid-1990s (52). Since then, studies on the topic have been conducted across the world, including by the World Health Organization (WHO) (53) and in the US by the Centers for Disease Control and Prevention (54). The studies looked at health histories of adults and their reported childhood experiences of abuse (physical, emotional and sexual); neglect (physical and emotional); and family circumstances (domestic violence, parental substance abuse, parental mental illness, separation and incarceration).

A UK study in a relatively deprived and ethnically diverse population reported that almost 50% of people surveyed had at least one adverse childhood experience and 12.3% reported 4 or more (55). A similar study found that at least 4 in 10 (44.4%) adults had experienced one or more adverse childhood experiences (19). In examining the relationship to other outcomes, people who have experienced 4 or more adverse childhood experiences when compared to another person who has no such experiences were found to be:

- almost 4 times more likely to smoke
- almost 4 times more likely to drink heavily
- almost 9 times more likely to experience incarceration
- some 3 times more likely to be morbidly obese (55)

Those with higher adverse childhood experience scores have also been found to be at greater risk of:

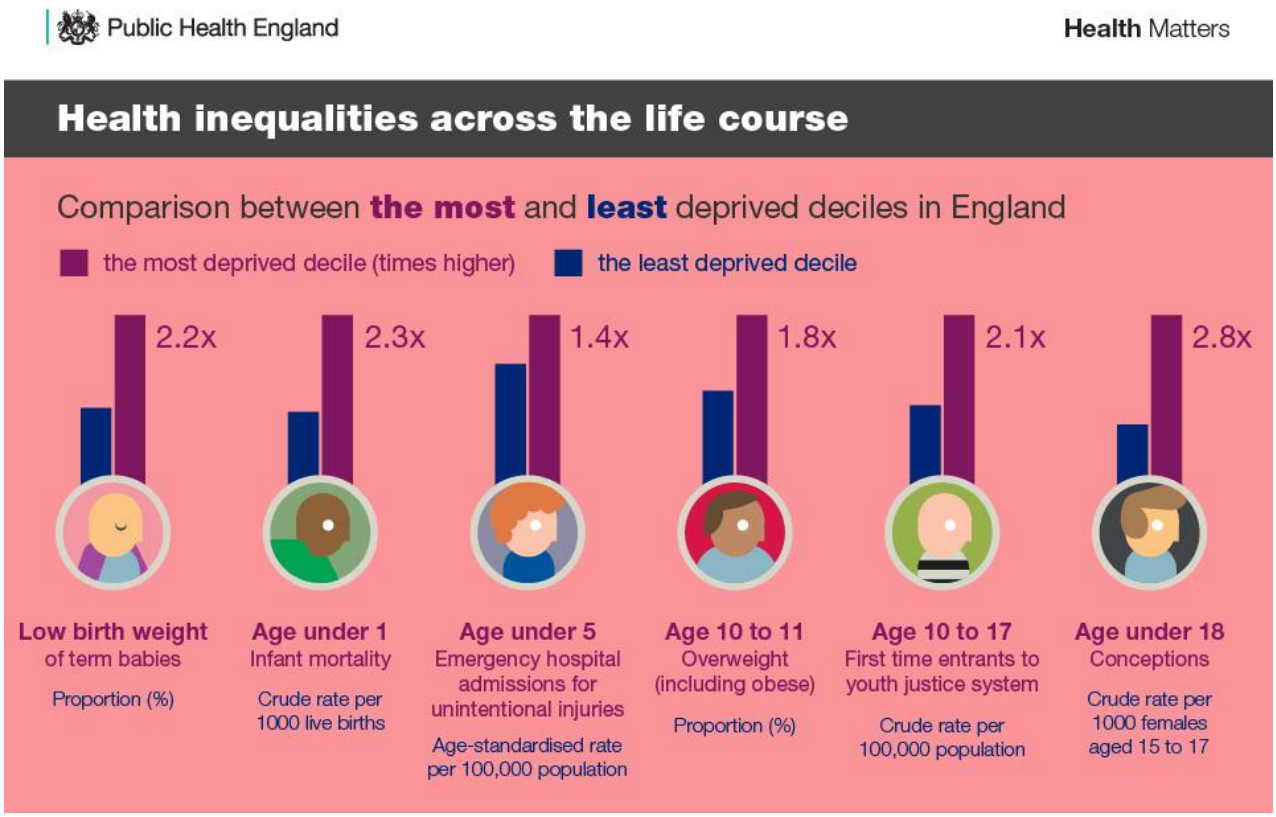
- poor educational and employment outcomes (56)
- low mental wellbeing and life satisfaction (19) – adults with 4 or more have been found to be 6.1 times more likely to have had treatment for mental illness than those who had experienced none (57)
- recent violent involvement, whether as a victim, perpetrator or more often both (58)
- chronic health conditions (59) – people with 4 or more were twice as likely to be diagnosed with high blood pressure compared with people with no adverse childhood experience; for cancer and stroke it was almost 3 times higher; and for respiratory disease and liver and digestive conditions it was more than 3 times higher (19)
- having or causing an unplanned pregnancy when younger than 18 years, becoming homeless (57) and experiencing family breakdown (60)

The experiences children have early in life may influence their brain development (61-63). At a physiological level, the stress which can result from adverse childhood experiences may not only impact on the development of that child but may persist in future generations (63, 64).

Health inequalities and adverse childhood experiences

In England there is evidence that those in more deprived sections of the population are more likely to experience 4 or more adverse childhood experiences (55). They are also more likely to experience several adverse childhood experiences at the same time (55). While such experiences are more likely to occur in poorer communities, a correlation between the number of adverse childhood experiences and worse health, criminal justice, employment and educational outcomes over the life course also exists which is independent of deprivation (55). Adverse childhood experiences are associated with a multiplicity of circumstances and their presence cannot be said to result from one cause alone nor do they exist in isolation from other risk factors (65). These health inequalities can be seen across the life course (figure 2).

Figure 2: health inequalities across the life course



Source: PHE (66)

The impact of early adversity can have an intergenerational effect (67, 68). Its impact on outcomes including criminality, violence, early unplanned pregnancy and remaining in poverty may explain why it is more likely that, left unaddressed, there is a cycle that exposes subsequent children in the same family to similar experiences (55). 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 poor outcomes across generations (40).

Conclusions

There is no commonly used definition of ‘vulnerable children’ but, for the purposes of this report, they are defined as any children at greater risk of experiencing physical or emotional harm and/ or experiencing poor outcomes because of one or more factors in their lives.

Children may fall into more than one group so, for example, some children living in homes where there is alcohol dependency may also experience domestic violence. This makes it difficult to offer exact figures on the number of children who are vulnerable. The COVID-19 pandemic raises specific considerations which can be usefully placed in the broader context of childhood vulnerability discussed in this paper. Children may be in more than one group of those identified in the context of the pandemic and children not previously identified as vulnerable may have become so as the economic and social impact of the pandemic are felt in the family.

Adverse childhood experiences are a specific set of adverse childhood experiences which can be associated with negative outcomes later in life. This body of research has galvanised action to address vulnerability in childhood and enabled collaboration at a local level. It should, however, be considered in the wider context of childhood vulnerability more generally.

Alongside this report, No child left behind… a public health informed approach to improving outcomes for vulnerable children describes PHE’s actions and resources to improve outcomes for children, young people and their families and how the work of public health and its partners can help children realise their full potential. A narrative report on improving health outcomes for vulnerable children and young people is also available for each upper tier local authority which gives an overview of relevant local data on the risk and protective factors for children and young people discussed in this report which can be used to inform local planning and prioritisation.

Glossary

Adverse childhood experiences
A specific set of childhood experiences associated with negative outcomes in later life.

Asset and **asset-based**
Health assets contribute to the positive health and wellbeing of the members of a community. Recognising assets helps value community strengths and ensure everyone has access to them. It builds on the positives and ensures that health action is co-produced equally between communities and services. Assets could include:

- the skills, knowledge, social competence and commitment of individual community members
- friendships, inter-generational solidarity, community cohesion and neighbourliness
- local groups and community and voluntary associations, ranging from formal organisations to informal, mutual aid networks such as babysitting circles
- physical, environmental and economic resources
- assets brought by external agencies including the public, private and third sector (69)

Child abuse
Child abuse is when “a person – adult or child – harms a child. It can be physical, sexual or emotional, but can also involve a lack of love, care and attention.” (70).

Child sexual exploitation
A form of child sexual abuse which occurs where an individual or group takes advantage of an imbalance of power to coerce, manipulate or deceive a child or young person under the age of 18 into sexual activity (a) in exchange for something the victim needs or wants, and/or (b) for the financial advantage or increased status of the perpetrator or facilitator. The victim may have been sexually exploited even if the sexual activity appears consensual. Child sexual exploitation does not always involve physical contact; it can also occur through the use of technology (71).

Community
The term is used as shorthand for the relationships, bonds, identities and interests that join people together or give them a shared stake in a place, service, culture or activity (72).

Life course
Instead of focusing on a single condition at a single life stage, a life course approach considers the critical stages, transitions and settings where large differences can be made in promoting or restoring health and wellbeing. In doing so, it emphasises

minimising risk factors and enhancing protective factors through evidence-based interventions at important life stages (66).

Perinatal
The period of time coming both before (antenatal) and after (postnatal) birth. The term is often used when talking about mental health.

Preconception health
This relates to the health behaviours, risk factors and wider determinants for women and men of reproductive age which impact on maternal, infant and child outcomes (73).

Prenatal
The period of time before a baby is born, most commonly used when talking about the later stages of pregnancy when the birth is becoming more imminent.

Place-based
Place-based working is a person-centred, bottom-up approach used to meet the unique needs of people in one given location by working together to use the best available resources and collaborate to gain local knowledge and insight. By working collaboratively with the people who live and work locally, it aims to build a picture of the system from a local perspective, taking an asset-based approach that seeks to highlight the strengths, capacity and knowledge of all those involved (74).

Postnatal
The period of time following birth, usually considered to refer to the first year after childbirth.

Public health
Public health includes but is not limited to preventing disease through immunisation and screening, improving health through education and intervention and responding to hazards and dangers to health. It can refer to professionals and services who use formal and established principles and standards to understand and improve the health of the overall population. In the context of this report, public health is understood more broadly and to apply to any individual, organisation or service which has the potential to protect and improve the health of the population.

Resilience
The ability to manage and recover from adversity in a way that strengthens wellbeing in the long term.

Trauma-informed
An approach to care which looks to provide support or onward referral and avoid the potential for re-traumatisation by recognising when people may have experienced trauma or adverse childhood experiences.

Vulnerable children and vulnerability
For the purposes of this report, vulnerable children are taken to be any children at greater risk of experiencing physical or emotional harm and experiencing poor outcomes because of one or more factors in their lives when compared with children who do not have such factors.

References

1. Ladhani S, Amin-Chowdhury Z, Davies H, Aiano F, Hayden I, Lacy J, et al. COVID-19 in children: analysis of the first pandemic peak in England. Archive of Disease in Childhood. 2020;12 August 2020.
2. Royal College of Paediatrics and Child Health. COVID-19 - research studies on children and young people's views 2020 [Available from: www.rcpch.ac.uk/resources/covid-19-research-studies-children-young-peoples-views.
3. Children's Commissioner. Constructing a Definition of Vulnerability – Attempts to Define and Measure. London; 2017.
4. Children's Commissioner for England. Childhood vulnerability in numbers. London: Children's Commissioner for England; 2019.
5. Cordis Bright. Defining child vulnerability: Definitions, frameworks and groups: Technical Paper 2 in Children's Commissioner project on vulnerable children. London; 2017.
6. Ofsted. Children's social care in England, 2018-19. London: Ofsted; 2019.
7. Department for Education. Characteristics of Children in Need 2018 to 2019. London: Department for Education; 2019.
8. Rahilly T, Hendry E. Promoting the wellbeing of children in care: messages from research. London: NSPCC; 2014.
9. Department for Education. Outcomes for children looked after by LAs: 31 March 2017 London: Department of Education; 2018 [Available from: www.gov.uk/government/statistics/outcomes-for-children-looked-after-by-las-31-march-2017
10. Fallon D, Broadhurst K. Preventing Unplanned Pregnancy and Improving Preparation for Parenthood for Care-Experienced Young People. London; 2016.
11. Taylor C. Review of the youth justice system in England and Wales. London: Minstry of Justice; 2016.
12. HM Government. Children and Families Act 2014 legislation.gov.uk: HM Government; 2014 [Available from: https://www.legislation.gov.uk/ukpga/2014/6/contents/enacted.
13. Children's Commissioner for England. Vulnerable groups and latest data: summary table. London; 2019.
14. Cheesbrough S, Harding C, Webster H, Taylor L, Aldridge J. The lives of young carers in England. London: Department of Education; 2017.
15. Department of Health. Supporting the health and wellbeing of young carers. London: Department of Health; 2012.
16. Children's Commissioner for England. The support provided to young carers in England. London; 2016.
17. Association of Directors of Children's Services. No wrong doors: working together to support young carers and their families2015. Available from: https://adcs.org.uk/early-help/article/no-wrong-doors-working-together-to-support-young-carers-and-their-families.
18. Public Health England. A framework for supporting teenage mothers and young fathers London: Public Health England; 2016.
19. Ford K, Butler N, Hughes K, Quigg Z, Bellis M. Adverse childhood experiences (ACEs) in Hertfordshire, Luton and Northamptonshire. Liverpool: Centre for Public Health, Liverpool John Moores University
2016.
20. Public Health England. Public health profiles - child and maternal health based on data from Hospital Episode Statistics (HES) Copyright © 2020, Re-used with the permission of

NHS Digital. All rights reserved. https://fingertips.phe.org.uk/profile/child-health-profiles2020.
21. Children's Commissioner for England. On measuring the number of vulnerable children in England. London; 2017 July 2017.
22. Audit Commission. Against the odds: re-engaging young people in education, employment or training. London: Audit Commission; 2010.
23. Newman R, Talbot J, Catchpole R, Russell L. Turning young lives around: How health and justice services can respond to children with mental health problems and learning disabilities who offend. London: Prison Reform Trust; Young Minds; 2012.
24. HM Government. Healthy children, safer communities. London: HM Government; 2009.
25. Youth Justice Board; Ministry of Justice. Key Characteristics of Admissions to Youth Custody April 2014 to March 2016: England and Wales. London; 2017.
26. Public Health England. Smoking, drinking and drug use among hard to reach children and young people; an evidence synthesis report. London: Public Health England; 2018.
27. Krug EG, Dahlberg TT, Mercy JA, Zwi AB, Lozano R. The world report on violence and health. The Lancet Public Health,. 2002;360(9339):1083-8.
28. Public Health England. Guidance: Collaborative approaches to preventing offending and re-offending by children (CAPRICORN): summary. London; 2019.
29. Public Health England. Guidance: Parental alcohol and drug use: understanding the problem. London: Public Health England; 2018.
30. Pryce R, Buykx P, Gray L, Stone T, Drummond C, Brennan A. Estimates of alcohol dependence in England based on APMS 2014, including estimates of children living in a household with an adult with alcohol dependence: prevalence, trends, and amenability to treatment. Sheffield: University of Sheffield; 2017.
31. Hay G. Estimates of the number of children who live with opiate users, England 2014/15. Liverpool: Public Health Institute, Liverpool John Moores University; 2018.
32. Public Health England. Adult substance misuse treatment statistics 2018 to 2019: report London: Public Health England; 2019 9 November 2019.
33. Department for Education. Children in need of help and protection: data and analysis : Analysis of the characteristics, experiences and outcomes of children in need. London: Department for Education; 2018.
34. Public Health England. National Statistics, substance misuse treatment for young people: statistics 2018 to 2019 : Alcohol and drug treatment data for under-18s from PHE's National Drug Treatment Monitoring System (NDTMS). London: Public Health England; 2019.
35. NHS Digital. Smoking, drinking and drug use among young people in England - 2018 London: NHS Digital; 2019 [Available from: https://digital.nhs.uk/data-and-information/publications/statistical/smoking-drinking-and-drug-use-among-young-people-in-england/2018.
36. Donaldson L. Guidance on the consumption of alcohol by children and young people. London; 2009.
37. Institute for Health Equity. The health impacts of cold homes and fuel poverty: Marmot Review Team. London; 2011.
38. Harker L. Chance of a lifetime - The impact of bad housing on children's lives. London; 2006.
39. Schüle SA, Hilz LK, Dreger S, Bolte G. Social Inequalities in Environmental Resources of Green and Blue Spaces: A Review of Evidence in the WHO European Region. International journal of environmental research and public health. 2019;16(7):1216.

40. Marmot M, Allen J, Goldblatt P, Boyce T, McNeish D, Grady M, et al. Fair society, healthy lives - The Marmot Review : strategic review of health inequalities in England post-2010. London; 2010.
41. McCormack GR, Rock M, Toohey AM, Hignell D. Characteristics of urban parks associated with park use and physical activity: A review of qualitative research. Health & Place. 2010;16(4):712-26.
42. Department for Work and Pensions. Improving lives: helping workless families. London: Department for Work and Pensions; 2017.
43. Department for Work and Pensions. Improving Lives: helping workless families indicators 2017 and evidence base. London: Department for Work and Pensions; 2017.
44. Schoon I, Barnes M, Brown V, Parsons S, Ross A, Vignoles A. Intergenerational transmission of worklessness: Evidence from the Millennium Cohort and the Longitudinal Study of Young People In England. London; 2012.
45. Gregg P, Jerrim J, Macmillan L, Shure N. Children in jobless households across Europe: Evidence on the association with medium-and long-term outcomes. London; 2017.
46. HM Revenue and Customs. Personal tax credits: Children in low-income families local measure: 2016 snapshot as at 31 August 2016. London: HM Revenue and Customs; 2018.
47. Wickham S, Anwar E, Barr B, Law C, Taylor-Robinson D. Poverty and child health in the UK: Using evidence for action. Archives of Disease in Childhood. 2016;101(8):759-66.
48. Public Health England. Public Health Outcomes Framework - School Readiness: the percentage of children achieving a good level of development at the end of reception. London: Public Health England; 2019.
49. Department for Education. Key stage 4 performance 2019 (revised). London: Department for Education; 2020.
50. Couper S, Mackie P. 'Polishing the Diamonds': addressing adverse childhood experiences in Scotland. Glasgow: Scottish Public Health Network; 2016.
51. Public Health England and UCL Institute of Health Equity. Building children and young people's resilience in schools. Health Equity Evidence Review 2. London: Institute of Health Equity; 2014.
52. Felitti V, Anda R, Nordenberg D, Williamson D, Spitz A, 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.
53. World Health Organization. Adverse Childhood Experiences International Questionnaire (ACE-IQ) Rationale for ACE-IQ. Geneva: World Health Organization; 2018.
54. Centers for Disease Control and Prevention. The CDC-Kaiser Permanente Adverse Childhood Experiences (ACE) Study.: US Department of Health and Human Studies; 2019.
55. Bellis M, Lowey H, Leckenby N, Hughes K, Harrison D. Adverse childhood experiences: Retrospective study to determine their impact on adult health behaviours and health outcomes in a UK population. Journal of Public Health (United Kingdom). 2013;36(1):81-91.
56. Metzler M, Merrick MT, Klevens J, Ports KA, Ford DC. Adverse childhood experiences and life opportunities: Shifting the narrative. Children and Youth Services Review. 2017;72:141-9.
57. Hughes K, Ford K, Davies A, Homolova L, Bellis M. Sources of resilience and their moderating relationships with harms from adverse childhood experiences. Report 1: mental illness. Wrexham: Public Health Wales; 2018.
58. Bellis M, Ashton K, Hughes K, Ford K, Bishop J, Paranjothy S. Adverse Childhood Experiences and their impact on health-harming behaviours in the Welsh adult population. Cardiff: Public Health Wales NHS Trust; 2015.

59. Hughes K, Bellis M, Hardcastle K, Sethi D, Butchart A, Mikton C, et al. The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. The Lancet Public Health. 2017;2(8):e356-e66.
60. European Federation of National Organisations Working with the Homeless. Recognising the link between trauma and homelessness. Brussels: FEANTSA; 2017.
61. Meaney M. Epigenetics and the biological definition of gene× environment interactions. J Child development. 2010;81(1):41-79.
62. Szyf M. Early life, the epigenome and human health. Acta Paediatrica. 2009;98(7):1082-4.
63. National Scientific Council on the Developing Child. Early experiences can alter gene expression and affect long-term development. Cambridge, MA: Center on the Developing Child, Harvard University; 2010.
64. Shonkoff J, Boyce W, McEwen B. Neuroscience, molecular biology, and the childhood roots of health disparities: Building a new framework for health promotion and disease prevention. JAMA - Journal of the American Medical Association. 2009;301(21):2252-9.
65. Kimple K, Kansagra S. Responding to Adverse Childhood Experiences: It Takes a Village. North Carolina medical journal. 2018;79(2):95-8.
66. Public Health England. Health matters: Prevention - a life course approach. London: Public Health England; 2019.
67. Merrick M, Leeb R, Lee R. Examining the role of safe, stable, and nurturing relationships in the intergenerational continuity of Child Maltreatment - Introduction to the special issue. Journal of Adolescent Health. 2013;53(4 SUPPL):S1-S3.
68. Schofield T, Lee R, Merrick M. Safe, stable, nurturing relationships as a moderator of intergenerational continuity of Child Maltreatment: A meta-analysis. Journal of Adolescent Health. 2013;53(4 SUPPL):S32-S8.
69. Public Health England. Health matters: community-centred approaches for health and wellbeing. London: Public Health England; 2018.
70. NSPCC. Definitions and signs of child abuse. London; 2017.
71. Department for Education. Child sexual exploitation: Definition and a guide for practitioners, local leaders and decision makers working to protect children from child sexual exploitation. London; 2017.
72. Public Health England. Guidance: Health matters: community-centred approaches for health and wellbeing. London: Public Health England; 2018.
73. Public Health England. Making the Case for Preconception Care: Planning and preparation for pregnancy to improve maternal and child health outcomes. London; 2018.
74. Institute for Research and Innovation in Social Services. Place Based Working. Glasgow; 2015.