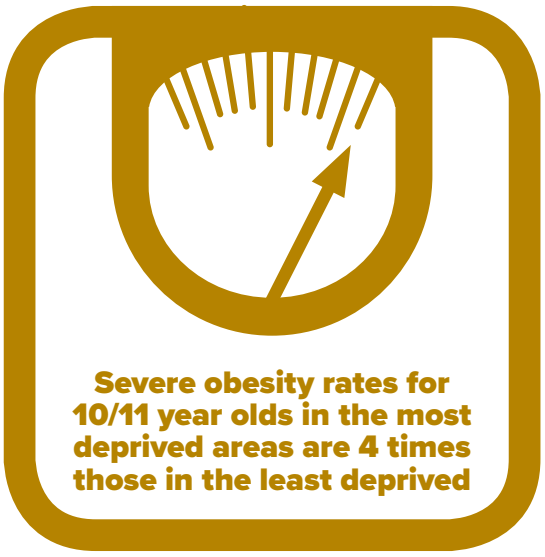
CHAPTER 9:
Inequalities in health outcomes

One in 7 secondary school children claim free school meals

10-14 year old pedestrians living in deprived areas are **2.6 times** more likely to be killed or seriously injured on the roads

The under-18 conception rate in the most deprived areas is double that in the least deprived

Young people living in socially deprived areas were more likely than other young people to be admitted to hospital with asthma



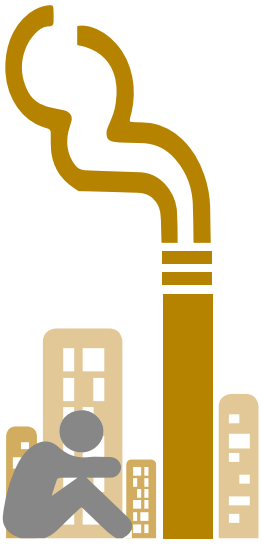
Severe obesity rates for 10/11 year olds in the most deprived areas are 4 times those in the least deprived

The gap between obesity levels of 10/11 year olds in the most and least deprived areas widened between 2006/07 and 2017/18

44% of LGBT+ young people aged 16-24 say they have had suicidal thoughts

11 year olds from the lowest income families are **4.5** times more likely to experience severe mental health problems than those from the highest income families

THE PROPORTION OF CHILDREN LIVING IN LOW AND MATERIAL DEPRIVATION ROSE FROM 11% TO 12% IN THE YEAR TO 2017/18



15 year olds in the most deprived areas are twice as likely to report that they smoked regularly than those in the least deprived areas

YOUNG ADULTS WITH FOUR+ ADVERSE CHILDHOOD EXPERIENCES ARE MORE FREQUENT USERS OF HEALTH SERVICES THAN THEIR PEERS

Inequalities in health outcomes

Social inequalities can lead to health inequalities (Marmot et al, 2012; Pearce et al, 2019). Although health is clearly influenced by genetics and health care, the wider social determinants of health, such as poverty, play a huge part. Estimates of the relative contribution of different factors to health outcomes suggest that the proportion determined by social factors is the largest, accounting for approximately half of the variation (Buck and Maguire, 2015).

Health inequalities happen across the whole life course, but there has been less attention looking specifically at the evidence on the social determinants of health for adolescents and young people as distinct from other age groups. Without equal access to resources and support, some young people are put at a disadvantage (Viner et al, 2012). Significant proportions of today's young people are experiencing disadvantage that is likely to be associated with longterm health outcomes (Hagell et al, 2018). This may set in motion inequalities that continue to play out across the rest of the life course. Understanding what those inequalities are helps to shape practice and policy interventions to improve health outcomes for the age group, both now and in their futures.

Inequalities related to deprivation

The proportion of children living in low and material deprivation **rose from 11% to 12%** in the year to 2017/18

Source: Department of Work and Pensions (2019) Households Below Average Income

Low income is the most salient social disadvantage. There is evidence that childhood poverty leads to premature mortality and poor health outcomes for adults (Marmot 2010). Government population surveys consistently show that compared to the overall population, children are more likely to be in low income households (Department for Work and Pensions, 2019). In 2017/18, a quarter of children were living in low income households, using a measure of absolute low income that takes housing costs into account. The proportion of children living in low and material deprivation (a more severe measure) rose from 11% to 12% in the year to 2017/18, a proportional increase of 9% (Department for Work and Pensions, 2019). In January 2018, for all school types, 13.6% of pupils were eligible for and claiming free school meals (Department for Education, 2018a).

The quality of the local environment is also an important social determinant of health. The latest English Index of Multiple Deprivation (IMD) indicated that over five million people lived in the most deprived areas of England. In these areas, 44% of the children were income deprived. Overall, the authors estimated that almost two in five children up to age 16 were living in families that were income deprived (Department for Communities and Local Government, 2015).

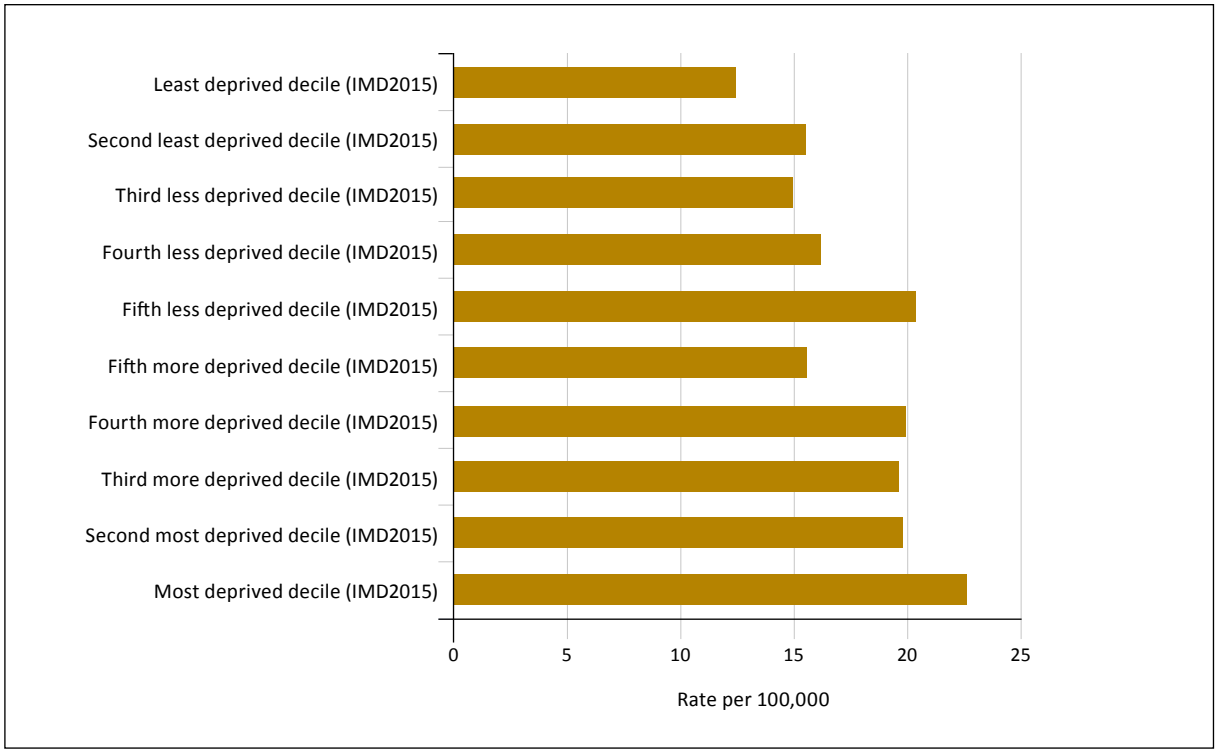
Death and accidents: There are very few data looking specifically at variations in different kinds of adolescent and young adult mortality in the UK in relation to deprivation. It is a difficult task due to the very low number of deaths in this age group. In addition, as Viner et al (2012) pointed out, most adolescent mortality is caused by social and environmental causes (such as self-harm, road traffic accidents and drowning) rather than by directly income related causes, although income may play a part in this list.

There would be around **810** fewer serious or fatal injuries to pedestrians annually if all children and young people had a risk of injury as low as those in the least deprived areas

Source: PHE (2018) Reducing unintentional injuries on the road among children and young people under 25 years

Chart 9.1 shows the variation in mortality for all children and young people up to age 16, by area deprivation. Child and adolescent mortality is higher in deprived areas. It has been estimated that there would be around 810 fewer serious or fatal injuries to pedestrians annually if all children and young people had a risk of injury as low as those in the least deprived areas (Public Health England, 2018).

Chart 9.1: Children under the age of 16 killed or seriously injured on roads, by area deprivation, England, 2018

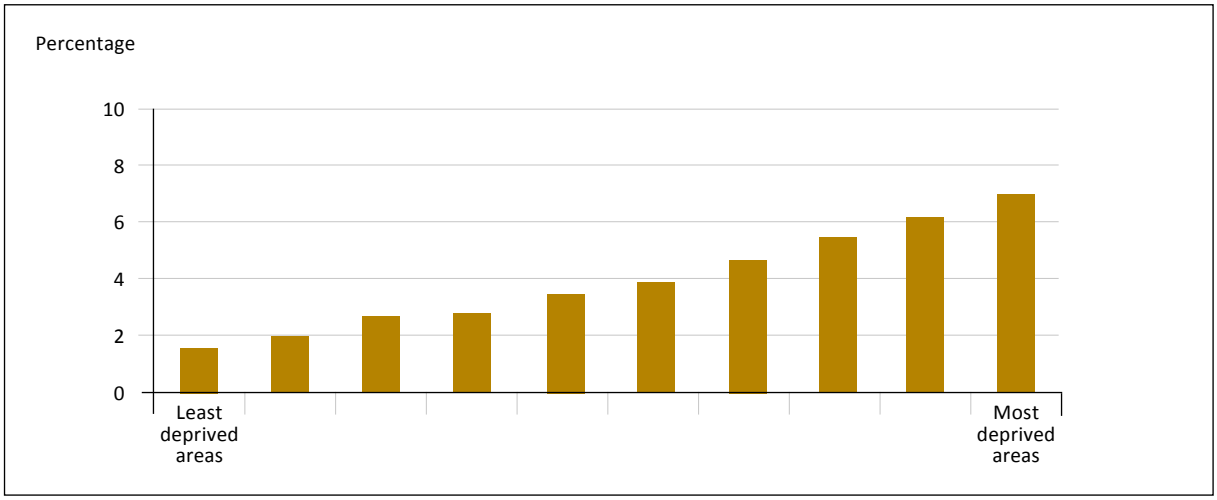


Source: Public Health Fingertips Tool (2018) > DOWNLOAD DATA

More detailed analyses by Public Health England have shown that among 10 to 14 year old pedestrians, those living in the 20% most deprived areas were 2.6 times more likely to be killed or seriously injured on the roads than those from the least deprived areas. Those aged 15-19 from the most deprived areas were twice as likely to be killed or seriously injured (Public Health England, 2018).

Obesity: There is good evidence that rates of obesity (a body mass index at or above the 95th percentile of weight distribution) in young people are higher for those living in deprived areas. This has been consistently demonstrated in the English National Child Measurement Programme (NCMP) for secondary pupils in Year 6 (age 10/11). Those living in the most deprived areas had a rate of obesity of 26.7%, double that of those in the least deprived areas (13.3% (NHS Digital, 2018). NCMP now includes a measurement of 'severe obesity', which is a body mass index at or above the 99.6% percentile of weight distribution. As **Chart 9.2** shows, rates of severe obesity are approximately four times as high in the most deprived areas as in the least deprived.

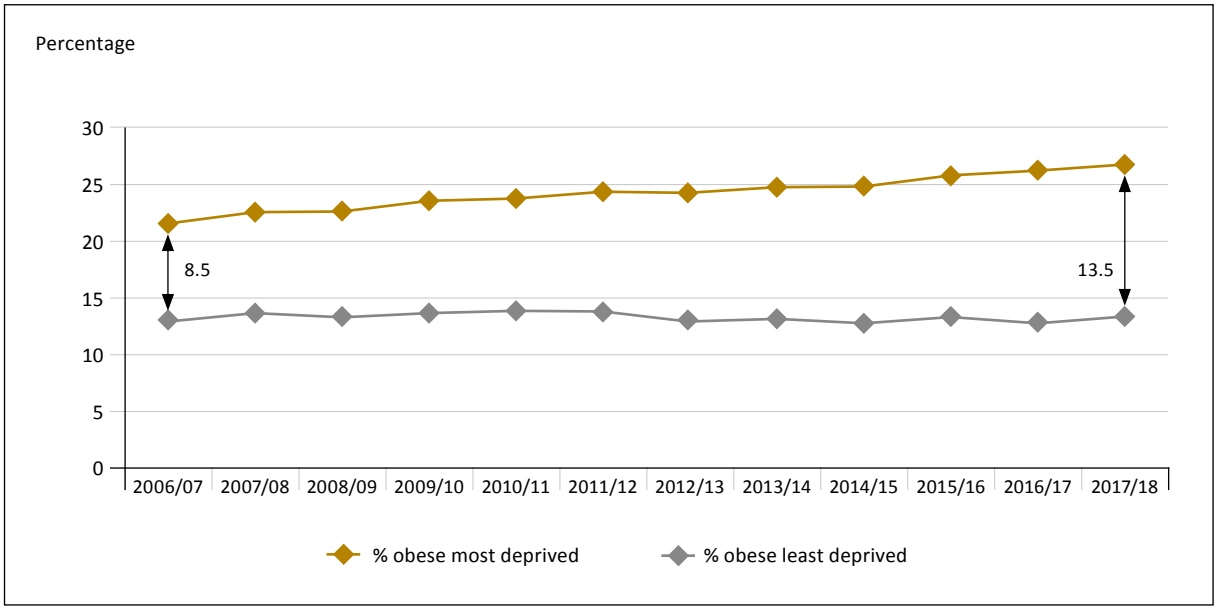
Chart 9.2: Prevalence of severe obesity in Year 6 (age 10/11) by area deprivation, England, 2017/18



Source: NHS Digital National School Measurement Programme, 2017/18 > DOWNLOAD DATA
Note: BMI centile of between 99.6 and 100 is classified as "Severely obese"

Over time, the gap between obesity levels of Year 6 children in the most and least deprived areas has widened. **Chart 9.3** shows the trends from 2006/07 to 2017/18, when the difference increased by 5%, largely due to obesity prevalence increasing in the most deprived areas.

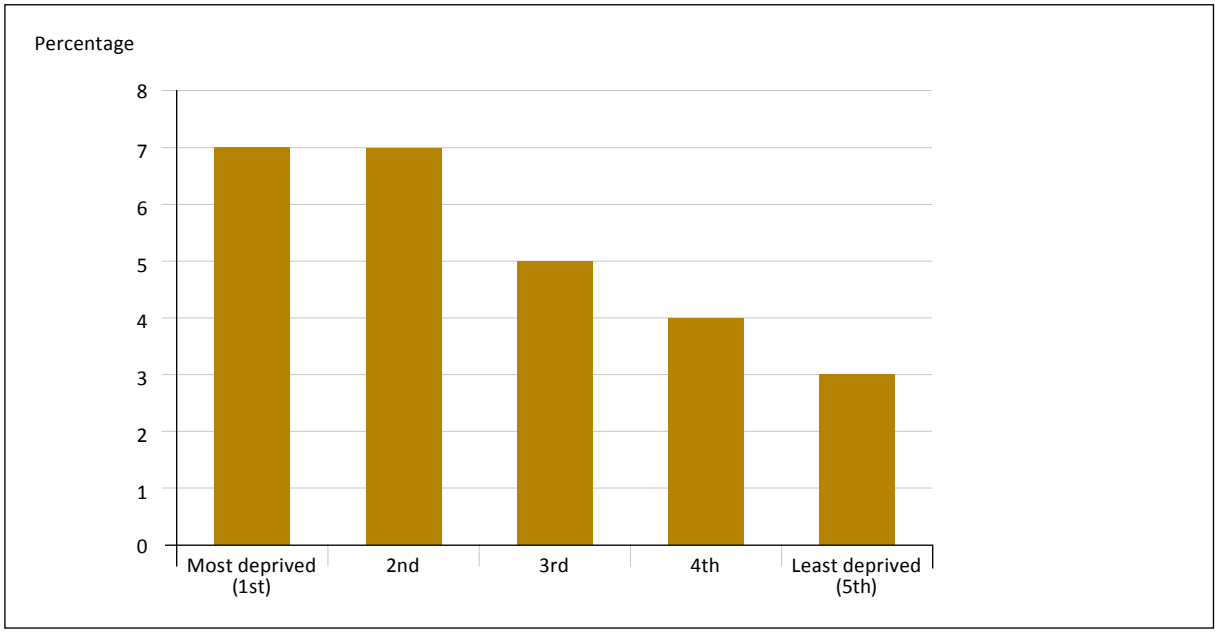
Chart 9.3: Time trends in gap between obesity prevalence for most and least deprived areas, Year 6 (age 10/11),England,2006/07 to 2017/18



Source: NHS Digital National Child Measurement Programme 2017/2018 > DOWNLOAD DATA

Smoking and drinking: Regular smoking by 15 year olds is related to whether young people live in an area of multiple deprivation as **Chart 9.4** illustrates, using data from the 2014 'What About YOUth' study. Those in the most deprived areas were more than twice as likely to report that they smoked regularly as those in the least deprived areas.

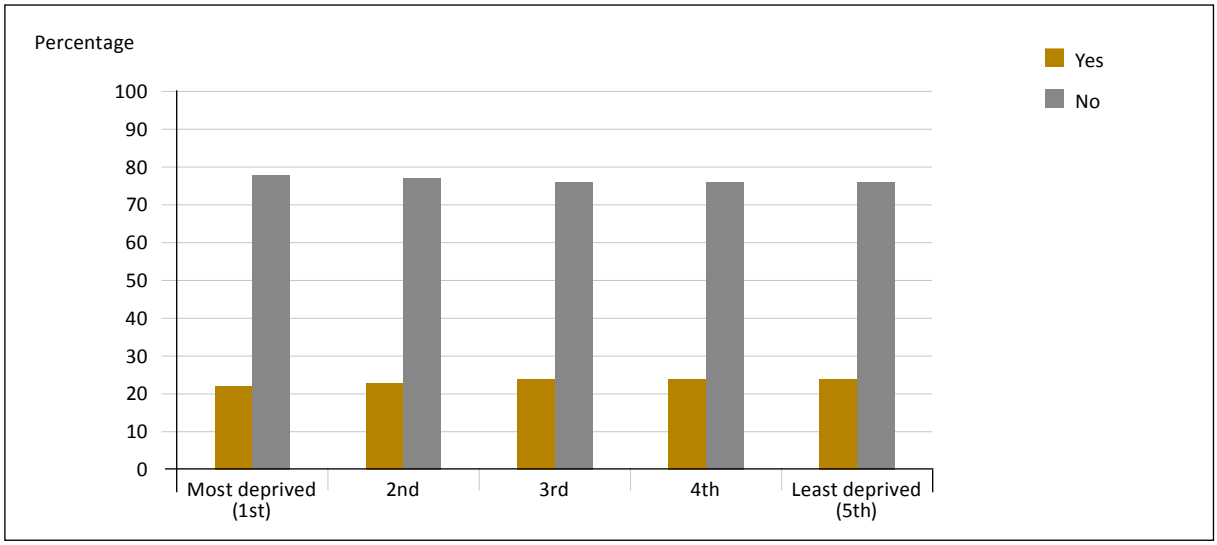
Chart 9.4: Regular smoking in 15 year olds by Index of Multiple Deprivation quintiles, England, 2014



Source: NHS Digital (2015) What About YOUth? Survey 2014 > DOWNLOAD DATA

The relationship of deprivation to teenage drinking is less clear, as **Chart 9.5** shows. There is no discernible relationship between the proportion of 15 year olds who have been drunk in the last four weeks by whether they live in an area of deprivation or not.

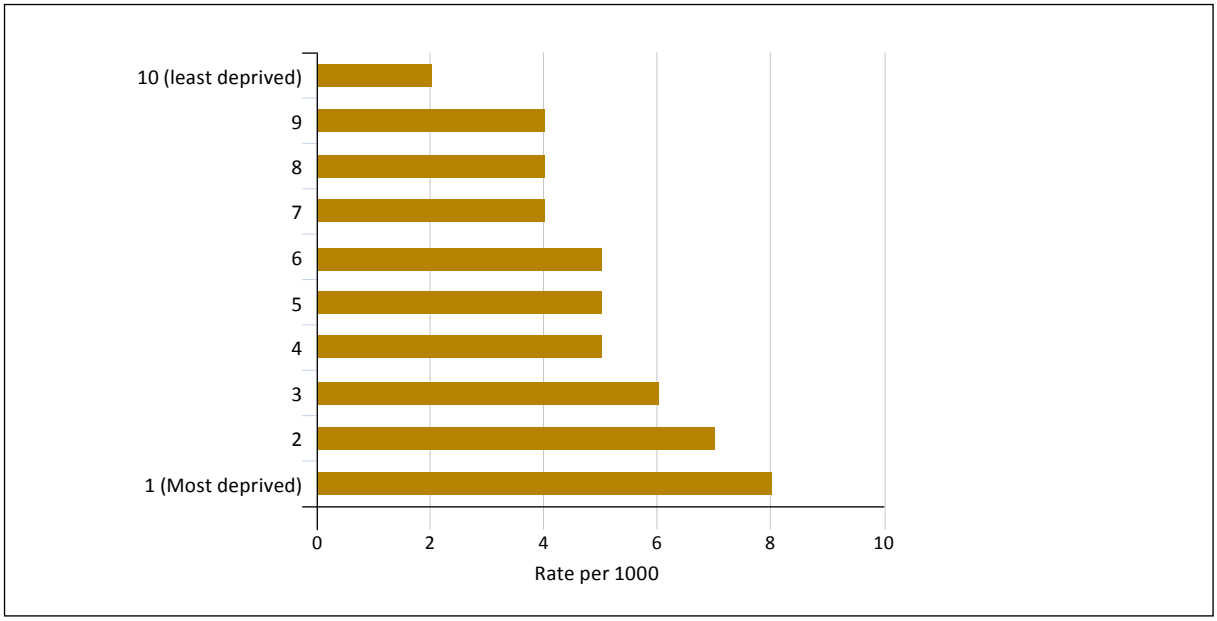
Chart 9.5: Percentage of 15 year olds who have been drunk in the last four weeks by Index of Multiple Deprivation (those who have had an alcoholic drink), England, 2014



Source: NHS Digital (2015) What About YOUth? Survey 2014 > DOWNLOAD DATA

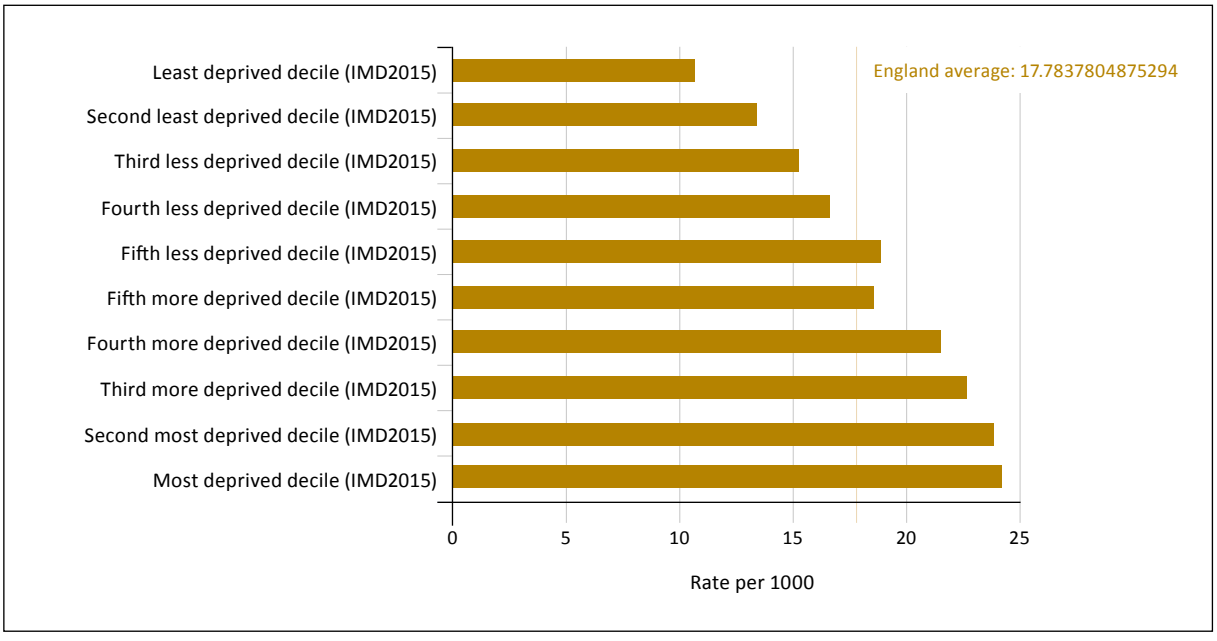
Conceptions, pregnancy and sexual health: Young women in deprived areas are more likely to be provided with emergency contraception (**Chart 9.6**), and to become pregnant (**Chart 9.7** for England, and **Chart 9.8** for Scotland).

Chart 9.6: Girls aged 13-15 provided with emergency contraceptives by Index of Multiple Deprivation, England, 2017/18



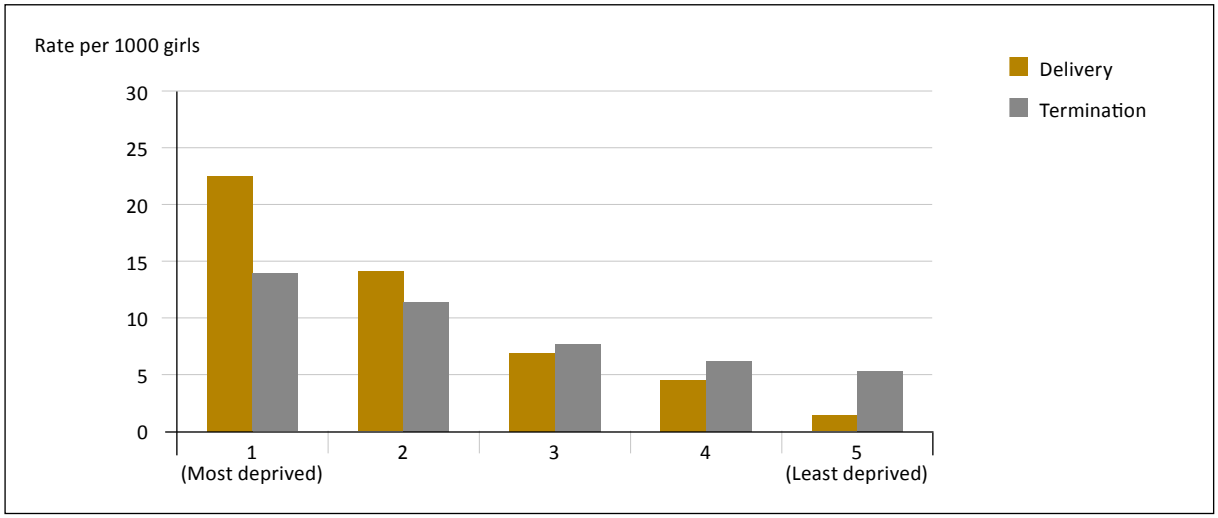
Source: NHS Digital 2019. Statistics on Sexual and Reproductive Health 2017/18 > DOWNLOAD DATA

Chart 9.7: Under 18 conception rate by area deprivation deciles, England, 2017



Source: Public Health England Fingertips 2017 > DOWNLOAD DATA

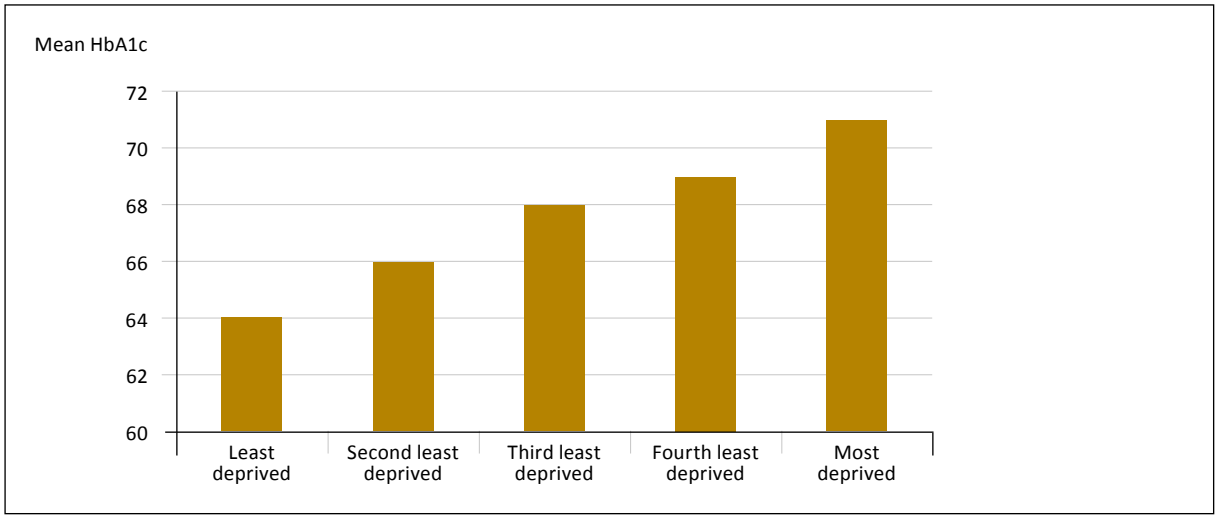
Chart 9.8: Under 18 conceptions, by area deprivation deciles, Scotland 2016



Source: Scottish Government National Statistics (2019) Teenage Pregnancy Year of conception ending 31 December 2016
> DOWNLOAD DATA

Longterm conditions: The National Paediatric Diabetes Audit undertaken by the Royal College of Paediatrics and Child Health has provided data on the management of Type 1 diabetes in young people and its association with area deprivation. HbA1c is the average blood glucose (sugar) level, and is a widely used index of diabetic management. A high HbA1c suggests poorer health outcomes. The HbA1c levels of young patients in more deprived areas are higher than those in less deprived areas (RCPCH, 2019).

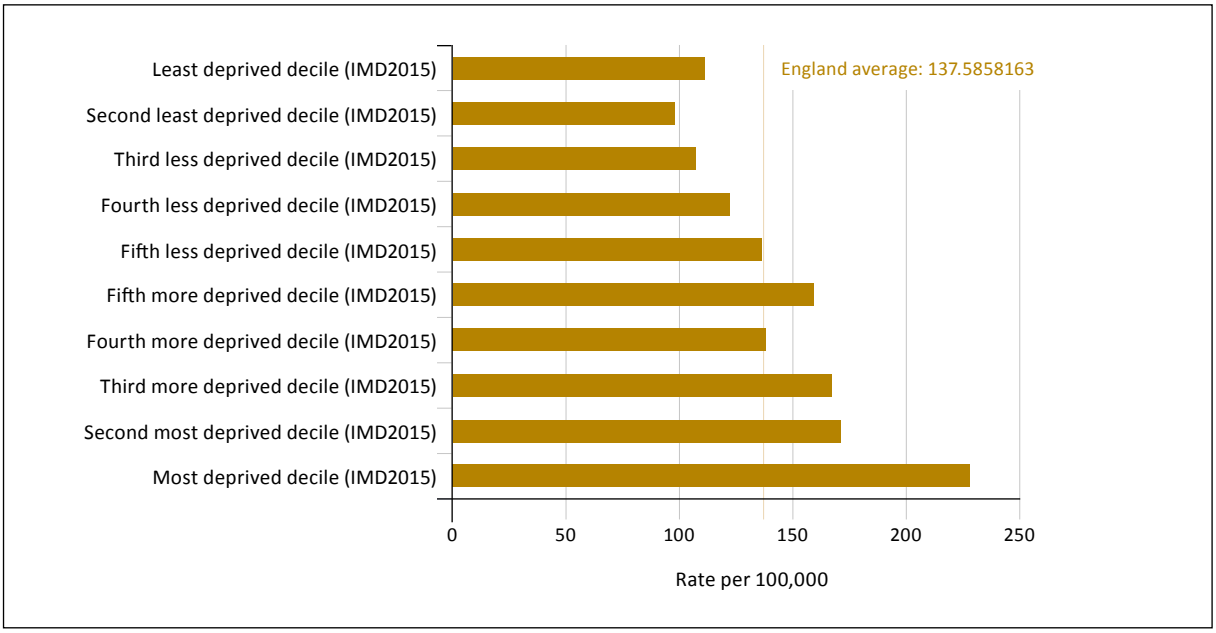
Chart 9.9: Mean HbA1c for young people 10-19 with Type 1 diabetes, by deprivation quintile, England, 2017/18



Source: National Paediatric Diabetes Audit (2018) RCPCH and HQIP > DOWNLOAD DATA

There are also relationships with deprivation for indices of asthma. **Chart 9.10** presents hospital episode statistics on admission to hospital for asthma among those aged 10-18 in England in 2016/17, demonstrating a clear association. Young people living in socially deprived areas were more likely than other young people to be admitted to hospital with asthma. Whether this is because there was a higher prevalence of asthma in the first place, more passive smoking, or poorer treatment in those areas is not clear.

Chart 9.10: Hospital admissions for asthma for those aged 10-18 by Index of Multiple Deprivation, England, 2016/17



Source: Public Health England Fingertips tool: Hospital Episode Statistics > DOWNLOAD DATA

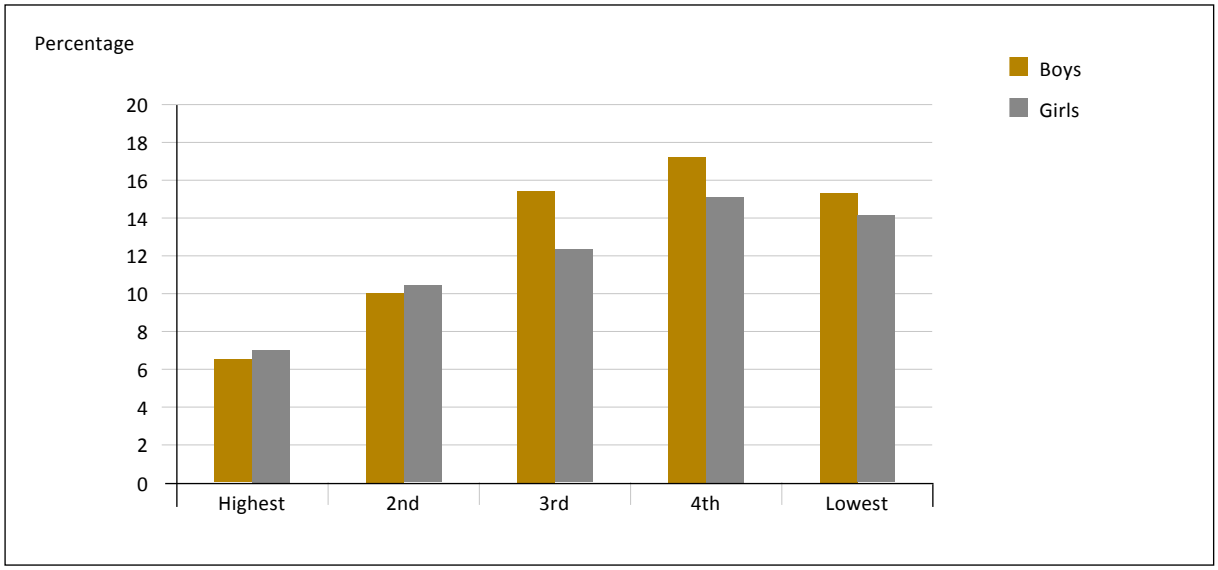
Mental health: The 2017 Mental Health of Children and Young People Survey did not break down mental health by age and levels of household income, instead presenting the association for the whole age group from 5-19. However, the majority of disorders are in the older age groups, and these are unusual data for their robustness and representativeness, so they are presented in **Chart 9.11**. This shows that prevalence of mental health disorders generally increases with deprivation in children and young people.

The Millennium Cohort Study is a longitudinal study, following a sample of children born in the United Kingdom between September 2000 and January 2002. The age 11 sweep of the study was carried out in 2012 and included 13,287 parent interviews and cognitive assessments of cohort members. This showed that the 11 year olds from the lowest income families were more than 4 times as likely to experience severe mental health problems when compared to those from the highest income families (Guttman et al, 2015).

11 year olds from the lowest income families are **4.5 times** more likely to experience **severe mental health problems** when compared to those from the highest income families.

Source: Gutman et al (2015) Millennium Cohort Study 2012

Chart 9.11: Any mental disorder by equivalised household income quintiles, age 5-19, by gender, England, 2017



Source: NHS Digital (2018) Mental Health of Children and Young People Survey 2017 > DOWNLOAD DATA

The 2015 Adult Psychiatric Morbidity Survey looked at social determinants of mental health problems but did not separate these out for those aged 16-24. Generally it was reported that mental health disorders were more common in people living alone, those in poor physical health and those unemployed. The pattern for socioeconomic inequalities in treatment provision was less clear, although it was noted that adults living in the lowest income households were more likely to have sought help for mental health problems but not have received treatment (McManus et al, 2016).

Serious youth violence: Serious youth violence has devastating consequences for the victims, perpetrators and broader communities at large, and is a public health issue. The government produced a Serious Violence Strategy in 2018, which analysed a number of factors that influenced whether young people are likely to be perpetrators of serious violence (HM Government, 2018). This concluded that there are strong links between deprivation and serious youth violence. Data from a review of the gangs matrix in London provided evidence that young people living in the top 10% most deprived areas in London were six times more likely to become victims of knife crime than the 10% of young people living in the least deprived and vulnerable areas (Mayor's Office for Policing and Crime, 2018).

Targeting particularly vulnerable groups

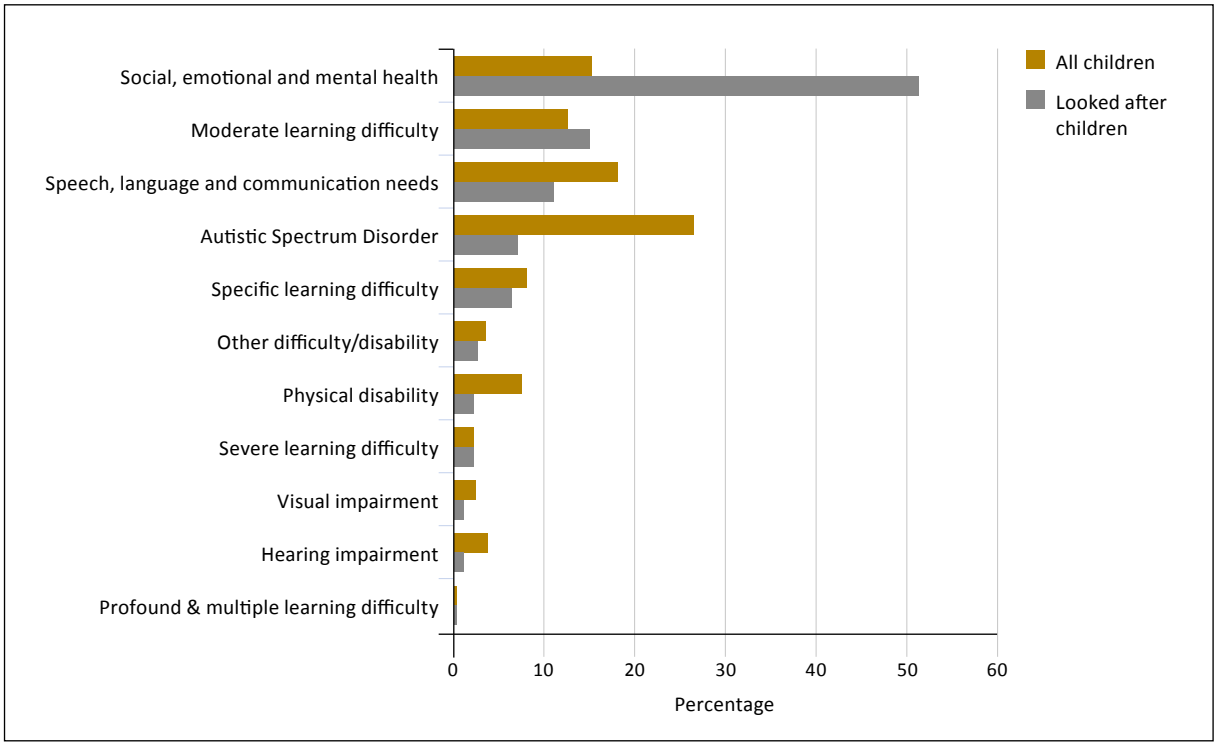
As well as health inequalities that are directly associated with deprivation, some groups of young people experience health inequalities as a result of other social circumstances and the environment in which they live.

Looked after children: Children who are under the care of the Local Authority face a number of inequalities that may have consequences for their health. In England all looked after children should complete a Strengths and Difficulties Questionnaire (SDQ) once a year, to keep track of rates of emotional difficulties. A higher score on the SDQ indicates more emotional difficulties. A score of 0-13 is considered the norm, a score of 14-16 indicates cause for concern, as a score of 17 and over is likely to indicate mental health problems.

Department for Education statistics on looked after children show that, on average, throughout their teens looked after children score above the norm on the SDQ, indicating higher rates of mental health problems in the looked after population. More than a third of looked after young people aged between 10 and 16 meet the criteria for concern (a score of 14 or more) (Department for Education, 2018b). This compared with 8% of the general population aged 11-15.

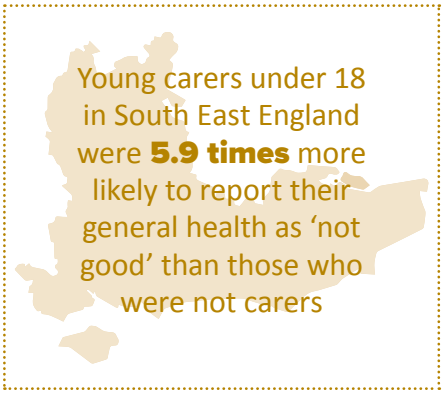
Looked after children are also likely to have different special educational needs than their peers. **Chart 9.12** shows the special educational needs of looked after children compared with their peers at secondary school in England in 2018. Looked after children of this age tend to have more social, emotional and mental health problems. Their peers are more usually experiencing problems associated with autism and speech and language.

Chart 9.12: Different kinds of special educational needs in looked after children compared with their peers at secondary school, England, 2018



Source: Department for Education, (2018) Outcome of Looked After Children 2016 Special Educational Needs in England, 2018
> DOWNLOAD DATA

Young carers: Young people with caring responsibilities for others are often hidden, falling under the radar with respect to additional support. Young carers are at increased risk of missing out on education and social opportunities, and may be carrying a significant emotional burden. The Office for National Statistics concluded from the 2011 census that there were 177,918 children and young people under 18 helping to look after someone in their family who was ill, disabled or misusing drugs or alcohol (Office for National Statistics, 2013), although estimates can go up to 700,000 (Carers' Trust, 2017a). The Carers' Trust has estimated that this may represent as many as 1 in 12 secondary school aged pupils (Carers' Trust, 2017b). Many miss school due to caring duties, and as many as half of young carers 10-15 (46%) report being bullied at school (Carers' Trust, 2017a). Evidence suggests they may have higher levels of education need or disability (Hounsell, 2013), and mental health problems (Sempik and Becker, 2013).

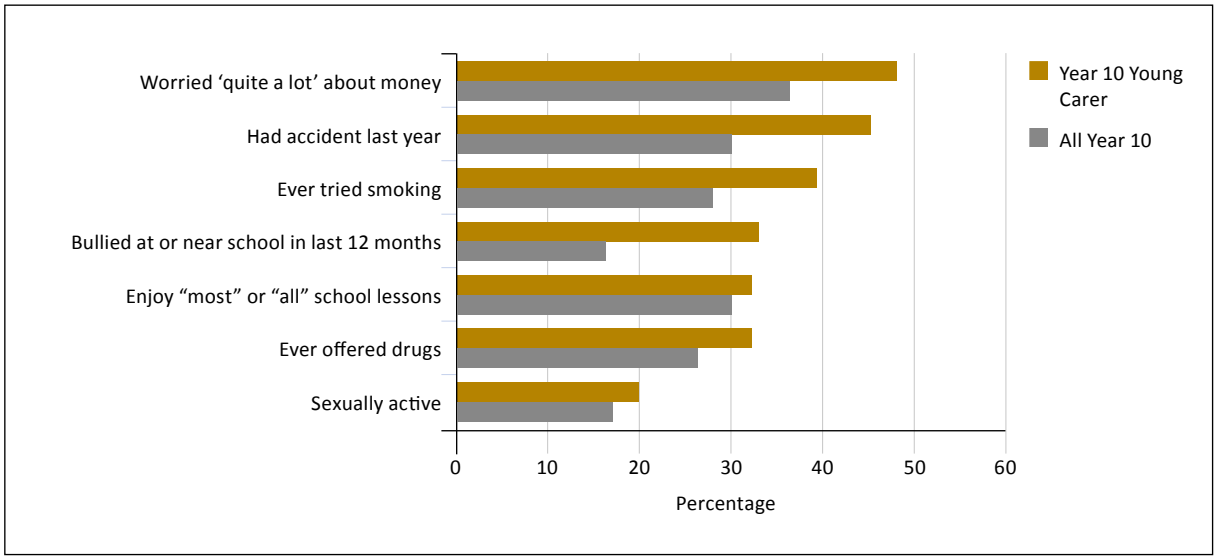


Source: Office for National Statistics (2013)

Young unpaid carers in English regions and Wales who were providing care for 50 or more hours a week have been found to be between 4.4 (in Wales) and 5.9 times (in the South East of England) more likely than those providing no care to report their general health as 'not good' (Office for National Statistics, 2013).

Chart 9.13 compares a range of health behaviours as reported by young carers and all Year 10 children (11/12 year olds) in one local authority. This demonstrates the elevated risk of reporting certain health behaviours in the young carers' group. Clearly this is not representative of young carers in the country as a whole, but in the absence of more data, it is an indicator that this is a group at risk of significant health inequalities as they go through their teens and into early adulthood.

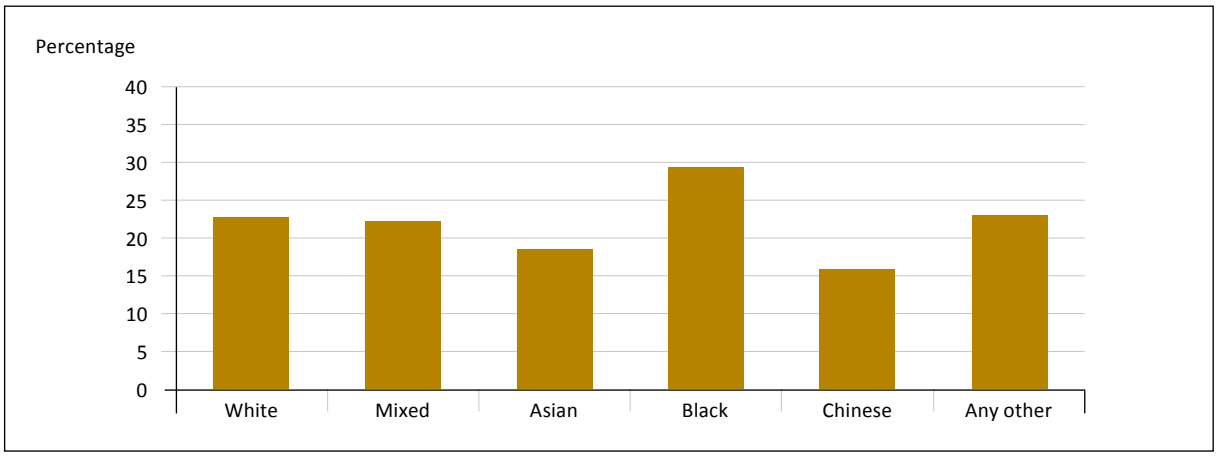
Chart 9.13: Comparison of health behaviours between young carers and all Year 10 pupils (aged 14-15) in one local authority, 2016



Source: Balding and Regis (2016) Young people into 2016 > DOWNLOAD DATA

Ethnicity: Analyses of the National Child Measurement Programme (NCMP) data have demonstrated that the obesity prevalence of 10 to 11 year olds in England varies by ethnic group. The prevalence for different groups is presented in **Chart 9.14**. In Public Health England's analyses of these data, ethnicity had a statistically significant independent effect on obesity prevalence after pupil age in months, area deprivation, height and region were taken into account. Ethnic disparities in obesity prevalence were in general greater in Year 6 than in Reception (Public Health England, 2019). Other data show that Black and Asian children have a higher incidence of Type 2 diabetes and worse glycaemic control in Type 1 and Type 2 diabetes (RCPCH, 2019).

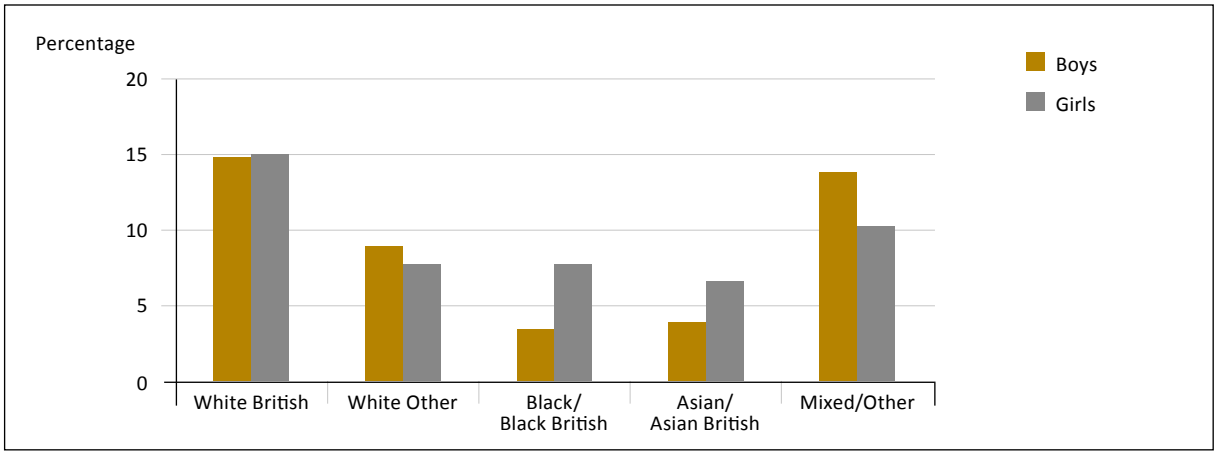
Chart 9.14: Prevalence of obesity by ethnic category, Year 6 (10/11 years), England, 2016/17



Source: NHS Digital (2017) National Child Measurement Programme > DOWNLOAD DATA

Inequalities based on ethnicity are also seen in the data on prevalence of mental health in young people. Again the 2017 Mental Health of Children and Young People Survey does not break down mental health by age and ethnicity, instead presenting the patterns for the whole age group from 5-19. **Chart 9.15** shows that rates of mental health problems were higher in white British groups than other ethnic groups of this age.

Chart 9.15: Percentage with any mental disorders by ethnic group and sex, 5-19 year olds, England, 2017

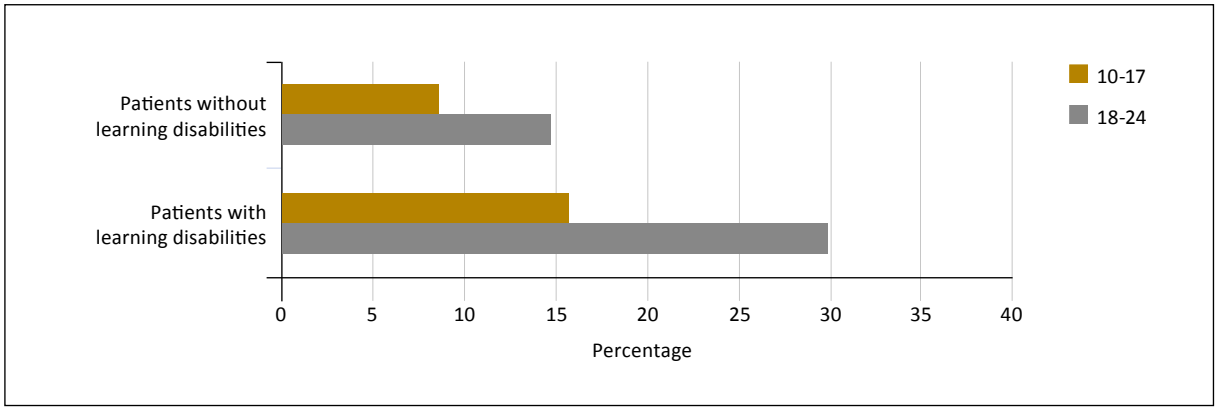


Source: NHS Digital (2018) Mental Health of Children and Young People Survey 2017 > DOWNLOAD DATA

There is also evidence that young people from Black and ethnic minority groups are over represented both as victims and perpetrators of serious youth violence (GLA Strategic Crime Analysis Team, 2019). Inequalities may be further compounded by other factors. For example, young carers are 1.5 times more likely to be from ethnic minority backgrounds and more likely to speak English as a second language (Hounsell, 2013) than their peers. Black and ethnic minority young people who identify as lesbian, gay, bisexual or transgender (LBGT) are another minority within a minority. They report worse mental health and sexual health outcomes when compared to white LGBT young people (Public Health England, 2016).

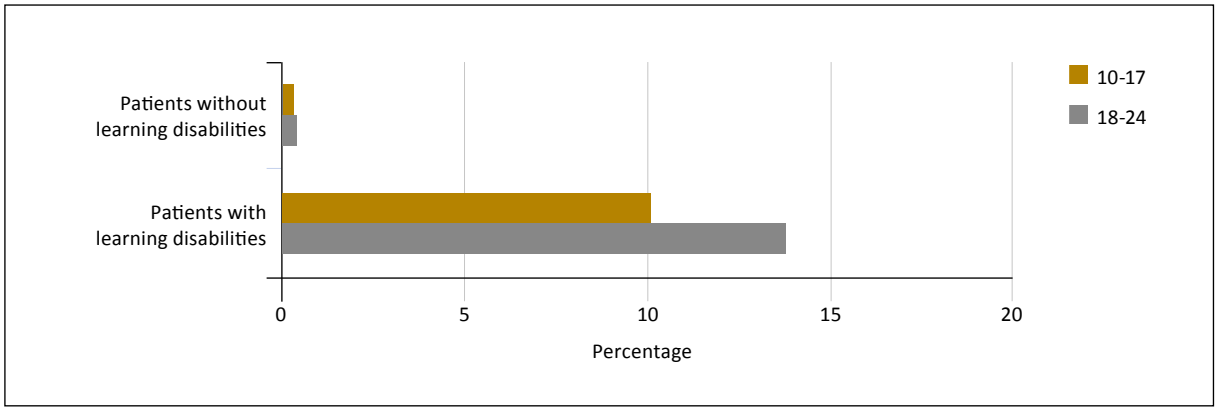
Young people with learning disabilities: Having learning disabilities may also contribute to health inequalities for young people. Drawing on GP data, evidence suggests that young patients with learning disabilities are more likely than other young patients to have a higher body mass index (BMI) than their peers (**Chart 9.16**), to be on drug medication for epilepsy (**Chart 9.17**) and to have asthma (**Chart 9.18**).

Chart 9.16: Prevalence of BMI over 30 in young people age 10-24 with learning disabilities, England, 2017/18



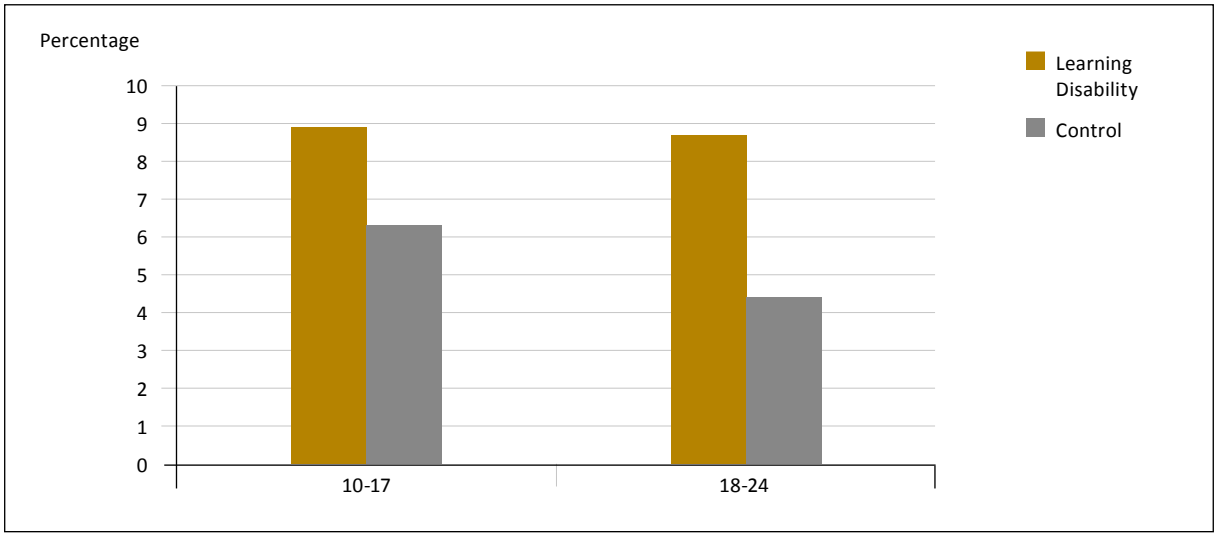
Source: NHS Digital (2018) Health and care of people with learning disability > DOWNLOAD DATA

Chart 9.17: Percentage of young GP patients aged 10-24 with learning disabilities on drug treatment for epilepsy, England, 2017/18



Source: NHS Digital (2018) Health and care of people with learning disability > DOWNLOAD DATA

Chart 9.18: Percentage of GP patients aged 10-24 with learning difficulties who have asthma, England, 2017/ 2018

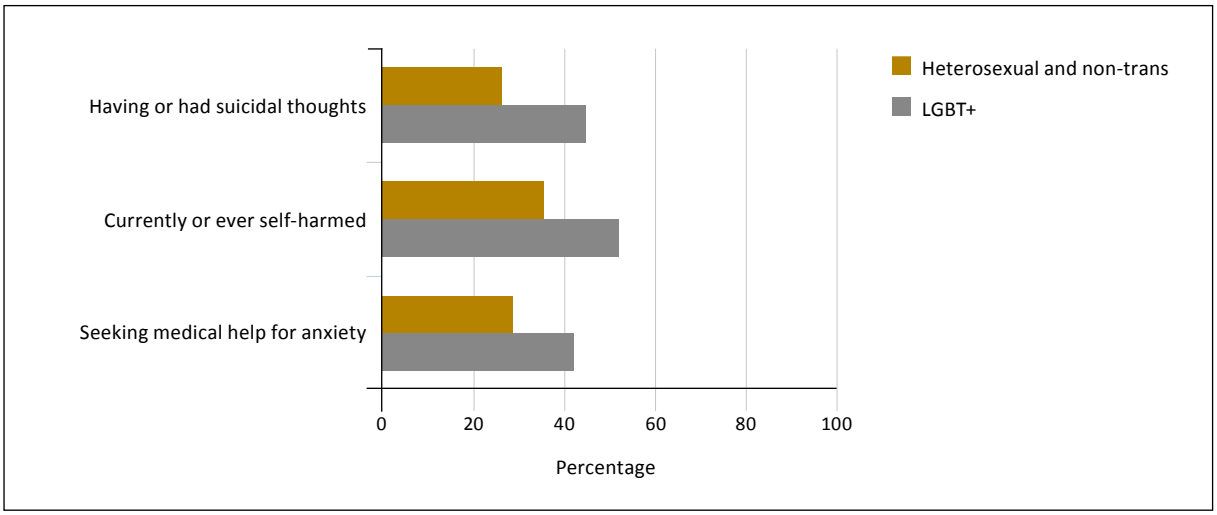


Source: NHS Digital (2018) Health and care of people with learning disability > DOWNLOAD DATA

Lesbian, gay, bisexual, transgender and other groups (LGBT+): Over recent years there has been a growing body of evidence that LGBT+ young people face significant social and health inequalities. This can start at school; many children begin to identify as LGBT+ in school and there is evidence that nearly half of LGBT+ pupils are bullied because of their sexual or gender identity, and many report missing school because of this (Stonewall, 2017). The numbers of recorded transgender young people in schools is very low, and obtaining reliable statistics on their experiences is difficult, but a 2013 Ofsted report concluded that one in four had experienced physical abuse by other pupils (Ofsted, 2013).

LGBT+ young people may also face mental health inequalities. The Metro Charity's Youth Chances survey in 2016 included over 6,000 young people who self-classified as LGBT+. **Chart 9.19** shows the rates of self-reported symptoms of anxiety and depression in this group compared with their peers, demonstrating elevated levels of seeking help for anxiety, self-harming, or having suicidal thoughts.

Chart 9.19: Anxiety and depression symptoms in lesbian, gay, bisexual and questioning young people aged 16-26, England, 2016



Source: Metro Charity: Youth Chances: Integrated report 2016 > DOWNLOAD DATA

45%

of transgender young people report that they have attempted to take their own life

Source: Stonewall (2017)

Rates of mental health problems may be particularly high in transgender young people. The charity Stonewall has reported very high rates of self-harm (84%) and suicide attempts (45%) amongst transgender students (Stonewall, 2017). Rates were still high, but not as high, for lesbian, gay and bisexual young people who were not transgender; three in five (61%) reported self-harming and one in five (22%) reported that they had attempted to take their own life. Similarly high estimates of mental health problems are found other surveys (National LGB&T Partnership, 2017).

LGBT+ young people are also more likely to perform risk-taking behaviours such as smoking and recreational drug use. In a longitudinal study of young adults in England carried out by Hagger-Johnson et al (2013) lesbian, gay and bisexual young adults were twice as likely to have a history of cigarette smoking as those reporting a heterosexual identity at age 18/19. Lesbian, gay and bisexual young people aged 16-24 are also more likely to report recreational drug use when compared to the general population of the same age (Buffin et al, 2011).

LGBT+ young people may also experience inequalities related to sexual health and screening. In one survey only 20% of LGBT+ pupils reported that they had learned about safe sex in relation to same sex relationships at school (Stonewall, 2017). A systematic review carried out by the Royal College of Obstetricians and Gynaecologists found that the rates of teenage pregnancy and terminations were slightly higher in lesbian and bisexual adolescents when compared to the general population (Hodson et al, 2017). However more data are needed in this area, including in relation to sexually transmitted infections and cervical cancer screening in LGBT+ groups.

Adverse childhood experiences

Young adults (18-29) with four+ adverse life experiences (ACEs) in childhood are

3 times more likely

to have seen the GP in the last 12 months than those with no ACEs

Source: Bellis et al (2017)

Adverse childhood experiences (ACEs) are stressful events that occur in childhood and that may contribute to later health outcomes (Bellis et al, 2014). They include being a victim of abuse and/or living with adults with serious problems of their own. In their review of the impact of ACEs on health, Hughes et al (2017) found the ACEs that had been most studied included childhood physical abuse, household substance abuse, childhood sexual abuse, household mental illness, exposure to domestic violence, or emotional, psychological or verbal abuse.

The longterm effects of adverse childhood experiences such as these have been studied for some time, and there is growing evidence to show impacts on both physical and mental health as an adult. Individuals with at least four ACEs in childhood have been shown to be at particular risk of later sexual risk taking, mental ill health, problematic alcohol use, and suicide (Hughes et al, 2017). In a study undertaken with 7,414 adults in England and Wales, Bellis et al (2017) reported that for those now aged 18-29, people with four or more ACEs in childhood were three times more likely to have seen the GP recently, and more than twice as likely to have been to the accident and emergency department or had an overnight stay in hospital.

References

Bellis M, Lowey H, Leckenby N, Hughes K and Harrison D (2014). Adverse childhood experiences: retrospective study to determine their impact on adult health behaviours and health outcomes in a UK population. *Journal of Public Health* 36(1), 81-91
https://www.ncbi.nlm.nih.gov/pubmed/23587573

Bellis M, Hughes K, Hardcastle K, Ashton K, Ford K, Quigg Z and Davies A (2017) The impact of adverse childhood experiences on health service use across the life course using a retrospective cohort study. *Journal of Health Services Research and Policy*, *22*(3),168-177
https://journals.sagepub.com/doi/full/10.1177/1355819617706720

Buffin, J, Roy A, Williams H and Winter A (2011) *'Part of the Picture: lesbian, gay and bisexual people's alcohol and drug use in England (2009-2011*), Manchester: Lesbian and Gay Foundation
http://clok.uclan.ac.uk/9598/

Buck D and Maguire D (2015) *Inequalities in life expectancy Changes over time and implications for policy.* London: Kings Fund
https://www.kingsfund.org.uk/sites/default/files/field/field_publication_file/inequalities-in-life-expectancy-kings-fund-aug15.pdf

Carers' Trust (2017a) *Protecting Young Carers from Bullying A Guide for Schools, Community Groups and Policy Makers* London: Carer's Trust
https://www.anti-bullyingalliance.org.uk/sites/default/files/field/attachment/Carers%20Trust%20%282016%29%20protecting%20young%20carers%20from%20bullying.pdf

Carers' Trust (2017b) *About young carers*.
https://carers.org/about-us/about-young-carers

Department for Communities and Local Government (2015) *The English Indices of Deprivation 2015: Research report*. London: DCLG
https://www.gov.uk/government/publications/english-indices-of-deprivation-2015-research-report

Department for Education (2018a) *Schools, pupils and their characteristics: January 2018*
London: DfE
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/719226/Schools_Pupils_and_their_Characteristics_2018_Main_Text.pdf

Department for Education (2018b) *Children looked after in England (including adoption) year ending 31 March 2018* London: DfE
https://www.gov.uk/government/statistics/children-looked-after-in-england-including-adoption-2017-to-2018

Department for Work and Pensions (2019) *Households below average income 1994/95 to 2016/17*
https://www.gov.uk/government/statistics/households-below-average-income-199495-to-201718

GLA Strategic Crime Analysis Team (2019) *A public health approach to serious youth violence* London: GLA

Gutman L, Joshi H, Parsonage M, and Schoon I (2015) *Children of the new century: Mental health findings from the Millennium Cohort Study*. London: Centre for Mental Health https://www.centreformentalhealth.org.uk/sites/default/files/2018-09/newcentury.pdf

Hagell A, Shah R, Viner R, Hargreaves D, Varnes L and Heys M (2018) *The social determinants of young people's health: Identifying the key issues and assessing how young people are doing in the 2010s.* Health Foundation Working Paper. London: Health Foundation https://www.health.org.uk/sites/default/files/The-social-determinants-of%20-young-peoples-health_0.pdf

Hagger-Johnson G, Taibjee R, Semlyen J, Fitchie I, Fish J, Meads C and Varney J (2013) Sexual Orientation Identity in Relation to Smoking History and Alcohol Use at Age 18/19: Cross-Sectional Associations from the Longitudinal Study of Young People in England (LSYPE)". [Online*]. British Medical Journal Open*. 3. http://bmjopen.bmj.com/content/3/8/e002810.full.pdf+html

HM Government (2018) *Serious Violence Strategy*. London: Home Office https://www.gov.uk/government/publications/serious-violence-strategy

Hodson K, Meads C, Bewley S (2017) Lesbian and bisexual women's likelihood of becoming pregnant: a systematic review and meta-analysis*. British Journal of Obstetrics and Gynaecology* 124, 393–402. https://www.ncbi.nlm.nih.gov/pubmed/27981741

Hounsell D (2013) *Hidden from view: The experiences of young carers in England.* London: The Children's Society https://www.childrenssociety.org.uk/sites/default/files/tcs/report_hidden-from-view_young-carers_final.pdf

Hughes K, Bellis M, Hardcastle K, Sethi D, Butchart A, Mikton C, Jones L and Dunne M (2017) The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. *Lancet Public Health* 2: e356-66 https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(17)30118-4/fulltext

Mayor's Office for Policing and Crime (MOPAC), (2018) *Review of the Metropolitan Police Service Gangs Matrix* London: Mayor of London https://www.london.gov.uk/sites/default/files/gangs_matrix_review_-_final.pdf

Marmot M, Allen J, Goldblatt P et al (2010) *Fair society, healthy lives: strategic review of health inequalities in England post 2010*. London: Marmot Review Team https://www.parliament.uk/documents/fair-society-healthy-lives-full-report.pdf

Marmot M, Allen J, Bell R, Bloomer E, and Goldblatt P (2012) WHO European Review of social determinants of health and the health divide. *Lancet*, 380, 1011-29
https://qmplus.qmul.ac.uk/pluginfile.php/158355/mod_book/chapter/3300/Marmot%20Lancet%20Sept%202012%20health%20inequities%20Europe.pdf

McManus S, Bebbington P, Jenkins R and Brugha T. (Eds) (2016) *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014.* London: NHS Digital.
https://digital.nhs.uk/data-and-information/publications/statistical/adult-psychiatric-morbidity-survey/adult-psychiatric-morbidity-survey-survey-of-mental-health-and-wellbeing-england-2014

National LGB&T Partnership (2017) *The Mental Health of Young LGB&T People.*
National LGB&T Partnership
https://nationallgbtpartnershipdotorg.files.wordpress.com/2017/08/lgbt-ypmh.pdf

NHS Digital (2018) *National School Measurement Programme*, 2017/18.
https://digital.nhs.uk/services/national-child-measurement-programme

NHS England (2014*) Five year forward view. NHS England*.
https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf

Office for National Statistics (2013) *Providing unpaid care may have an adverse effect on young carers' general health.*

Ofsted (2013) *The framework for school inspection.*
http://www.educationengland.org.uk/documents/pdfs/2013-ofsted-inspection-framework.pdf

Pearce A, Dundas R, Whitehead M, and Taylor-Robinson D (2019) Pathways to inequalities in child health *Arch Dis Child* Epub ahead of print
https://www.ncbi.nlm.nih.gov/pubmed/30798258

Public Health England (2016) *The Lesbian, Gay, Bisexual and Trans Public Health Outcomes Framework Companion Document*
https://www.london.gov.uk/sites/default/files/LGBT%20Public%20Health%20Outcomes%20Framework%20Companion%20Doc.pdf

Public Health England (2018) *Reducing unintentional injuries on the roads among children and young people under 25 years*. London: PHE
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/695781/Reducing_unintentional_injuries_on_the_roads_among_children_and_young_people_.pdf

Public Health England (2019) *Differences in child obesity by ethnic group*
https://www.gov.uk/government/publications/differences-in-child-obesity-by-ethnic-group

RCPCH (2019) *National Paediatric Diabetes Audit* London: RCPCH
https://www.rcpch.ac.uk/resources/npda-annual-reports

Sempik J, and Becker S (2013) *Young Adult Carers at School Experiences and Perceptions of Caring and Education. Carers Trust*.
https://professionals.carers.org/sites/default/files/media/young_adult_carers_at_school_-_summary.pdf

Stonewall (2017) *The School Report: The experiences of lesbian, gay, bi and trans pupils in Britain's schools*
http://www.stonewall.org.uk/school-report-2017

Viner R, Ozer E, Denny S, Marmot M, Resnick M, Fatusi A and Currie C (2012) Adolescence and the social determinants of health. *Lancet,* 379, 1641-1652.
https://www.ncbi.nlm.nih.gov/pubmed/22538179