Key Data on Adolescence 2013

The latest information and statistics about young people today

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The Association for Young People’s Health (AYPH)

AYPH brings together professionals and organisations working to improve young people’s health and wellbeing. By sharing learning and best practice we can promote and provide better services to meet young people’s particular health needs.

One of our central aims is to promote evidence-based practice by making research findings more accessible. The publication of the Key Data on Adolescence series forms a major part of this work alongside our quarterly thematic research updates. We also work to facilitate more effective communication between practitioners, to raise the profile and understanding of young people’s health needs, to improve access to information, resources, innovation and best practice, and to involve young people throughout our work.

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While this report has been developed in collaboration with PHE, the opinions and views expressed in it are those of the designated authors and do not necessarily reflect the opinions or views of PHE or any other part of government.
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The United Nations and World Health Organisation define adolescence as age 10-19.

The UK Government’s Children and Young People’s Health Outcomes Forum recommends that data on adolescence are presented in quinary age bands (10-14 years, 15-19 years, and 20-24 years).

The peak age for puberty in the UK is 12-13 years in girls and 13-14 years in boys.

Brain development can continue up to age 25.
Introduction

Adolescence is a fascinating, critical life stage. It is different from the childhood that comes before it and it has important repercussions for the adulthood that follows. Young people passing through adolescence need particular support and special services, especially those who may be in positions of vulnerability. Yet the data on adolescence are often bundled up with other age groups. The data are also frequently compartmentalised into topics such as youth justice, obesity, or mental health, which may present information in different ways or relate to different age breakdowns. Drawing connections between the topics may be challenging, yet we need to view adolescence holistically. This is the only way to get an overview of what young people need to reach their full potential and the services that need to be commissioned. Key Data on Adolescence (KDA) brings together all the robust and representative information we can find to get as full an impression as possible of the UK’s current adolescents.

The ‘Key Data on Adolescence’ series

The first edition of KDA was published in 1997 by the Trust for the Study of Adolescence. That first publication represented a groundbreaking attempt to pull together essential descriptive information about the lives and wellbeing of young people in the UK, separated out from the data on younger children or adults. It has been updated every two years since then and is now in its ninth edition. There is still a great need for up-to-date, adolescence-specific data to inform the development of appropriate services for this age group. In addition adolescent lives are constantly changing so we try to distil data on the longer-term trends as well as the current situation.

KDA is a collaborative exercise and all the volumes have involved contributions from a number of organisations. KDA is currently produced by the Association for Young People’s Health (AYPH), with support from the Child and Maternal Health Intelligence Network, Public Health England. New attention has been paid in this edition to the importance of the social determinants of health and to the relevant drivers in the Public Health Outcomes Framework (Viner et al, 2012; Department of Health, 2012). We have also been mindful of the main recommendations from the Children and Young People’s Health Outcomes Forum (2012), particularly the need to represent data in quinary age groups (10-14 years, 15-19 years, 20-24 years), although this is often beyond our control.

Adolescent development

The data presented in this publication relate primarily to young people in the second decade of their lives, aged between 10 and 20. However, with an increasingly elongated transition into adulthood and the challenge of transitions from children’s services into adult services, it has also been important for some topics to extend this range upwards to age 24. These age bandings map onto the United Nations General Assembly, Unicef, and World Health Organisation definitions of adolescence (10-19 years), youth (15-24 years) and young people (10-24 years) (Unicef 2011).

During this time of their lives, young people experience huge physical, psychological and behavioural changes as they mature from children to adults. All of the data in the following pages should be viewed through the lens of adolescent development. They all represent a snapshot for a group of people who are constantly changing. Some have support to help them make these transitions with ease – others are subject to social
determinants of health that may hinder their progress. The data tell us important things about the experience of adolescence in the UK today and suggest ways in which we can improve outcomes.

Development in adolescence takes place in the following domains:

- **Physical development.** The three or four years of pubertal development include a growth spurt, maturing of the reproductive organs, development of secondary sex characteristics and menarche in girls. There is wide individual variation in the timing of the start and completion of puberty. Generally, evidence suggests a peak age of puberty in the UK of around 12-13 years for girls, and 13-14 for boys (Patton and Viner, 2007).

- **Cognitive development.** Recent work has revealed that the brain undergoes a huge reorganisation and ‘fine tuning’ in the adolescent years. Changes in anatomy and functioning seem to result in a brain that is more efficient and more adapted to the surrounding environment. During their second decade, young people become better at weighing up risk, learning from experience, moral thinking, political thought and at controlling impulses (Coleman, 2011). There is evidence from MRI scans that brain development continues up to age 25 (Giedd, 2004).

- **Emotional development.** Key tasks of adolescence include firming up a sense of personal identity and self-esteem, developing autonomy and learning coping strategies for dealing with life events and challenges. Young people seek more independence and responsibility. Supporting the development of emotional health and wellbeing is a task for everyone who lives or works with young people.

- **Social development.** Peer groups become of paramount importance and peer influences are powerful, although families remain very significant. Young people start to develop a sexual identity and to seek more relationships outside the family.

- **Behavioural development.** Brain changes mean that adolescents are more likely than other age groups to seek out novel experiences and take risks. This can present some challenges in terms of taking care of their health, but is an important part of learning. Many life long health behaviours are set in train during adolescence.

**Overview of data sources**

There is a wealth of data about young people from decades of research around the world. The countries of the UK have undertaken national surveys such as the Census, the Health Survey for England, the Labour Force Survey, and the Annual Population Survey. But there are fewer large-scale data sets that tell us about adolescent experiences in all of the UK’s constituent countries.

The main sources we rely on have had to meet some quality criteria. They need to draw on a significant sample size, resulting in generalised results to a known population, using reliable and valid survey instruments, and they need to adhere to the standards of ethical research methods. Where there are gaps in published data we have occasionally drawn on research undertaken with smaller sample sizes or in limited geographical areas. The text makes clear the sources in all cases and we make it clear if we have reservations about generalising from data.
Unfortunately, despite efforts to fill the gaps, the data on many aspects of adolescent health are inadequate. Statistics are frequently recorded in ways that make it impossible to draw sensible conclusions by, for example, reporting data on those between the ages of 0-19 years, or from 16-59 years. Once again we wish to express our concern over this limitation and to emphasise that good commissioning must depend on the availability of data relevant to the age group. In the current climate, when public health is undergoing radical change in England, we urge the collection of more useful and useable data. Hopefully the emphasis from the Children and Young People’s Health Outcomes Forum on quinary age bandings will help, otherwise it will be difficult to introduce improvements in services for young people. Finally, KDA has always had a strong emphasis on health. Due to pressures on space and limitations in the data, there are inevitably aspects of young people’s lives that are not covered. Perhaps most noticeable among the omissions are young people’s leisure activities and use of technology. We hope to develop these aspects in future editions.

References


There are 7.4 million 10-19 year olds currently living in the UK, accounting for 12% of the population.

One in five are from ethnic minorities.

They live in 4.8 million households, mainly with married parents (59%), cohabiting parents (8%) or lone parents (26%).

A total of 37,808 young people aged 11-15 years had parents who divorced in 2011.

By age 20 years, 60% of young people are still living at home.

Young men die more frequently than young women and the major external, preventable cause of death in this age group is road traffic accidents.
Demographics

Adolescent population in the UK

Young people form a significant proportion of the population. Chart 2.1 shows that there are approximately 7.4 million 10-19 year olds currently living in the UK. These data, from the 2011 census, show that there are currently slightly more 10-19 year olds than 0-9 year olds (7.4 million compared with 7.2 million).

As Chart 2.2 illustrates, young people aged 10-19 years old represent 12% of the total population of the UK, almost exactly the same as the proportion aged 0-9 (just under 12%). The proportion of the population accounted for by both groups together (a quarter) is typical of the pattern in higher income countries. In low and middle income countries children and adolescents are likely to represent closer to half of the population. We hear a lot about the increasing numbers of elderly people in the UK but the proportion of over-70s is 12% – the same as 10-19s.
There are always fluctuations in the population and Britain has seen several ‘baby booms’. The most pronounced bulge is the 1960s’ babies, now the 40-50 age group in the 2011 data. Chart 2.3 presents the recent historical trend in population of England and Wales, plotting the 2001 population figures against the current population pyramid from the 2011 census. The earlier baby boomers, for example, are represented by the spike in those now in their mid-60s. Concentrating on the adolescent population, we can see that an increase in those aged 10-14 in 2001 has turned into an increase in those aged 20-24 in 2011. We can also see another bump coming up behind, among those currently aged 0-4 years, who will lead to a spike in those aged 10-14 by 2021. Adolescents may currently represent a falling proportion of the whole population because of extended longevity in older groups. But it is important to note there are still as many of them in absolute numbers as there were 10 years ago and there will be similar numbers in the next 10 years. This has clear implications for service delivery.

Chart 2.3 also shows the population distribution separately by gender. In the 10-19 age group there are 95 girls for every 100 boys. By the time the population is aged 70 and above, this has shifted to 122 women for every 100 men.
In the population as a whole there are more adolescents from ethnic minority groups than older people from these groups. Overall, the proportion of the population of England and Wales who classify themselves in a group other than white British is 19.5% (ONS, 2012a).

**Chart 2.4** shows the ethnic group of all those aged 10-19 in England and Wales from the 2011 census. Overall, the proportion of this age group who classified themselves as not being white British was 21.5%.

Source: Office for National Statistics, Census data 2011 » Download data
Data in Chart 2.5 shows there are wide variations in the age distribution of different ethnic groups. The proportion of adolescents is much larger in the mixed group, and in Pakistani, Bangladeshi and some Black groups. In all of these, the proportions of under-16s is higher than in the White British group.

![Chart 2.5 Population age distribution in Great Britain, by ethnic group, 2008-2010 (combined)](source)

**Family structure**

Chart 2.6 shows there were 26.4 million households in the UK in 2012, of which 4.8 million contained at least one person aged 10-19.

![Chart 2.6 Number of households in the UK with a 10-19 year old, 2012](source)
Chart 2.7 shows where all those aged 10-19 were living. The majority (59%) are with their married parents. An additional 8% are living with cohabiting parents and 26% with lone parents. However, 7% live in other situations, including in halls of residence (2%) or in their own newly constructed families (1.5% cohabiting or married and 0.5% are lone parents themselves). The 3% who are coded as ‘other’ are in local authority care, hospitals, prisons, or are living as lodgers, in house-shares, or with other family members such as siblings or cousins.

The structure of families has changed in the UK over the last three or four decades. Chart 2.8 shows the gradual reduction in children living with married/cohabiting couples and the rise of those living with just one parent. Overall, the number of lone parents with dependent children (under 16 years, or 16-18 and in full time education) has more than doubled since the early 1970s, to 21% in 2010. The highest level was reached in 2005 when 25% of families were headed by a lone parent, but this figure has fallen back over recent years. The reason for this change is not yet clear but it is evident that these figures tell an important story about the changing structure of families.
Another part of the story is told in Chart 2.9. Here the number of marriages and divorces in England and Wales from 1931 to 2011 are shown. Marriage peaked with the outbreak of the World War II, and then rose again in the 1960s, but has been declining since then. This may be due to increasing numbers of couples choosing to cohabit (ONS 2012b). The more recent fall in divorces may reflect the slightly earlier fall in marriages. In 2011 the number of divorces was down to 117,558 compared with 119,589 the previous year.
A significant number of young people are still experiencing their parents getting divorced, although this is declining. Chart 2.10 shows that in 2011 a total of 37,808 young people aged between 11-15 had parents who divorced. However, this is down from 49,790 the previous year and is in fact at its lowest for 20 years.

![Chart 2.10](chart.png)

**Chart 2.10**
Children aged 11-15 whose parents divorce in England and Wales, 1990-2011

Source: Office for National Statistics

NB Children of the family include those born to the couple divorcing, those born outside marriage, children of previous marriages and adopted children (providing they are treated by both partners as children of the family).

Statistics on the proportion of young people provide a final part of the picture. Chart 2.11 presents the proportion of young women and young men still in the family home from ages 15 to 34 years, by gender. Overall young men are more likely still to be at home at any age. At age 20, 60% of all young people are still living at home. This falls to 27% by age 25. By age 30 it has fallen to 10%.

![Chart 2.11](chart.png)

**Chart 2.11**
Young people and adults aged 15-34 years living with parents in the UK, by age and gender, UK 2012

Source: ONS, Labour Force Survey

NB University students are coded as not living with their parents, and young people in prison are not part of the survey.
Whilst the proportion of 15-19 year olds living with parents has stayed stable over the past 10 years, there has been an increase among the over-20s. Chart 2.12 presents a comparison between the overall rates in 2002 compared with 2012. It will be interesting to see what happens in coming years due to the effects of recession with youth unemployment, welfare cuts and rising rent and house prices.

Adolescent mortality

Adolescence is generally a healthy life stage but those aged 10-24 do die, often from preventable causes. Death in these age groups is more common than in younger children if those under one are excluded (Viner et al 2012). Chart 2.13 shows the death rate per 1,000 population for children and young people in England and Wales. The rates are lowest for those aged 5-14, but higher in those aged 15-24. The highest mortality rate is in the under-4s, mostly accounted for by those under one (infant and peri-natal mortality combined).
Chart 2.14 shows the causes of death by age groups 10-14, 15-19 and 20-24 in England for deaths registered in 2011. Causes of death were defined using the International Classification of Diseases tenth revision. In total, there were 981 deaths among those aged 10-19. The main causes of death in this age group were external causes rather than disease, followed by neoplasms (cancer).

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>10-14</th>
<th>15-19</th>
<th>20-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>External causes of mortality</td>
<td>60</td>
<td>396</td>
<td>719</td>
</tr>
<tr>
<td>Neoplasms</td>
<td>66</td>
<td>99</td>
<td>167</td>
</tr>
<tr>
<td>Diseases of the nervous system</td>
<td>33</td>
<td>70</td>
<td>103</td>
</tr>
<tr>
<td>Diseases of the circulatory system</td>
<td>19</td>
<td>46</td>
<td>89</td>
</tr>
<tr>
<td>Endocrine, nutritional and metabolic diseases</td>
<td>17</td>
<td>25</td>
<td>47</td>
</tr>
<tr>
<td>Diseases of the respiratory system</td>
<td>22</td>
<td>24</td>
<td>33</td>
</tr>
<tr>
<td>Congenital malformations, deformations &amp; chromosomal abnormalities</td>
<td>17</td>
<td>23</td>
<td>28</td>
</tr>
<tr>
<td>Diseases of the digestive system</td>
<td>6</td>
<td>13</td>
<td>24</td>
</tr>
<tr>
<td>Infectious parasitic diseases</td>
<td>3</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Diseases of the musculoskeletal system &amp; connective tissues</td>
<td>2</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Diseases of the blood &amp; blood-forming organs/immune mechanism</td>
<td>6</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Mental and behavioural disorders</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Diseases of the genitourinary system</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Certain conditions arising in the perinatal period</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Office for National Statistic » Download data
**Chart 2.15** gives the rate of mortality per 100,000 of the population for three important and potentially preventable external causes of death – traffic accidents, self-harm and violence. The rise in traffic accidents between the younger and older adolescents is very striking. Despite media focus on violence among young men, in fact traffic accidents and self-harm are significantly more common causes of death. The disparity of rates between genders is also very striking. Young men are far more likely to die from any external cause than young women.

![Chart 2.15](source)
References


Chapter 3 | Social determinants of health

- More than a fifth (22%) of young people in the UK aged 11-15 years were living in families with the lowest levels of income in 2010/11.

- In 2012, 37,730 young people in England aged over 10 were being looked after by local authorities, usually for reasons of neglect or abuse.

- Educational qualifications and ways of reporting their attainment vary within the UK, but all the constituent countries now report between 50% and 60% of their young people achieving the equivalent of five or more A*-C grade GCSEs including English and maths. Clearly, between a third and a half do not achieve these grades and may have difficulty accessing further and higher education.

- GCSE results are strongly linked to social-economic determinants with, for example, only 14.5% of looked after young people achieving five or more A*-C grade GCSEs.

- Rates of participation in further and higher education have increased in recent years, with 47% of those aged 18 or over years in the UK taking part by the age of 30.

- Rates of youth unemployment have risen. On average, 21.4% of those aged under 25 years in the European Union were unemployed in 2011. Rates were much worse for some countries than others, but the UK’s level was close to the average (21.1%).
Social determinants of health

Health is affected by a wide range of social, economic and environmental factors. From the Black Report (DHSS, 1980) to the recent World Health Organisation review of the social determinants of health (Marmot et al, 2012), there has been ongoing debate about reducing health inequalities and creating more equality of access to services. Adolescence is a key period for establishing life-long health behaviours and these develop in the context of family, school and community. In addition, inequalities may function differently for adolescents than for children and adults. Without equal access to resources and support, some young people are put at a disadvantage. In this chapter we look at data on some of the social determinants of health for this age group.

In a landmark report for the World Health Organisation ten years ago, the social factors affecting health were identified as family assets, housing, social exclusion, lack of education during adolescence and unemployment (Wilkinson and Marmot, 2003). This chapter summarises the best available representative data on these topics for this age group.

Family assets: Income

The root causes of health inequality are bound up with economic factors including family income and other resources. Living in stressful economic and social circumstances is not good for either physical or mental health. Overall, more children are likely to be living in households with lower incomes than in households with higher incomes. Chart 3.1 demonstrates this. For example, 22% of young people in the UK aged 11-15 were living in families with the lowest levels of income in 2010/11, compared with 15% who were living in families with the maximum levels of income. There was, however, little variation between the age groups and the pattern holds for younger children as well as for adolescents.

![Chart 3.1 Quintile distribution of income for children in the UK, 2010/11](chart)

Source: Department for Work and Pensions, Households below average income 2010/11 » Download data

NB 16-19 year olds are those not married, living with parents, in f/t ed & training

NB Figures Before Housing Costs
Taking a more specific measure of income inequality, we can see in Chart 3.2 that, in 2010/11, 14% of children and young people in the UK aged 0-19 years were living in households classified as low income and materially deprived. This indicates that they did not have many of the basics regarded as standard and had a household income of below 70% of contemporary median income before housing costs. A smaller proportion (4%) was living in severe low income and material deprivation, where the household income had dropped below 50% of median income.

Income is closely related to family structure. In all families with dependent children, 20% have a gross weekly income of £300 or less. Chart 3.3 shows how this varies by family structure in Great Britain as a whole, with the lowest incomes in lone parent families, where 51% have incomes of £300 or less, compared with 17% of cohabiting couples with children and 9% of married couples with children.

**Chart 3.2**
Children (0-19) falling below thresholds of low income and material deprivation in the UK, 2010/11

**Chart 3.3**
Gross weekly income of families with dependent children in GB, by family type, 2010

**NB** Dependent children are aged under 16 years, or 16-18 years and in full-time education, in the family unit, and living in the household.
Chart 3.4 shows the proportion of children and young people in the UK where there is no parent at work. The number of such families fell between 1997 and 2007, but rose again in 2009-2010, presumably reflecting the impact of the UK’s 2008 economic downturn. These data are not available separately for adolescents, but this age group will be affected by family poverty as much as younger children.

The UK has a relatively high proportion of children aged up to 17 living in households where no-one works. Chart 3.5 presents the European comparisons in 2011, drawing on data from Eurostat (note that the measurement of jobless households here is slightly different from the ONS measurements used in Chart 3.4, thus the overall level in the UK in Charts 3.4 and 3.5 do not quite match).
As Chart 3.3 highlighted, in spite of many government schemes encouraging parents back to work, there still remains a large income gap between parents in different family structures. Chart 3.6 shows that 68.4% of lone mothers with 11-15 year olds were working compared with 79.7% of those living with a partner. The differences are more notable for the younger age groups, but still occur for mothers of adolescents in the 11-15 and 16-18 age groups. More needs to be done to support lone and unemployed parents to prevent young people being adversely affected by poverty.

The most recent survey of child wellbeing in OECD countries (Unicef, 2013) presented international comparisons of relative child poverty, based on the percentage of children aged 0-17 living in households with equivalent incomes below 50% of the national median. Chart 3.7 shows that there were 15 countries where up to 10% of children were living in poverty; the UK was 14th out of 15.
### Chart 3.7
Relative child poverty rates in OECD countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>1</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2</td>
</tr>
<tr>
<td>Denmark</td>
<td>3</td>
</tr>
<tr>
<td>Iceland</td>
<td>4</td>
</tr>
<tr>
<td>Norway</td>
<td>5</td>
</tr>
<tr>
<td>Slovenia</td>
<td>6</td>
</tr>
<tr>
<td>Sweden</td>
<td>7</td>
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<tr>
<td>Austria</td>
<td>8</td>
</tr>
<tr>
<td>Ireland</td>
<td>9</td>
</tr>
<tr>
<td>Switzerland</td>
<td>10</td>
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<tr>
<td>Germany</td>
<td>11</td>
</tr>
<tr>
<td>France</td>
<td>12</td>
</tr>
<tr>
<td>Czech Republic</td>
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</tr>
<tr>
<td>United Kingdom</td>
<td>14</td>
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<tr>
<td>Hungary</td>
<td>15</td>
</tr>
<tr>
<td>Belgium</td>
<td>16</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>17</td>
</tr>
<tr>
<td>Estonia</td>
<td>18</td>
</tr>
<tr>
<td>Slovakia</td>
<td>19</td>
</tr>
<tr>
<td>Poland</td>
<td>20</td>
</tr>
<tr>
<td>Canada</td>
<td>21</td>
</tr>
<tr>
<td>Portugal</td>
<td>22</td>
</tr>
<tr>
<td>Greece</td>
<td>23</td>
</tr>
<tr>
<td>Italy</td>
<td>24</td>
</tr>
<tr>
<td>Lithuania</td>
<td>25</td>
</tr>
<tr>
<td>Spain</td>
<td>26</td>
</tr>
<tr>
<td>Latvia</td>
<td>27</td>
</tr>
<tr>
<td>United States</td>
<td>28</td>
</tr>
<tr>
<td>Romania</td>
<td>29</td>
</tr>
</tbody>
</table>


NB % of children aged 0-17 living in households with equivalent incomes below 50% of national median.
Housing and living circumstances

Chart 3.8 presents the housing tenure of people in England with dependent children, comparing those living as couples with those living as lone parents. Owner/occupier and mortgaged status are more common to couples with dependent children, whereas various kinds of rental are more common in lone parent families. Nearly three-quarters of couple families live in owner occupied homes, compared with under a third of lone parents.

![Chart 3.8 Housing tenure of people in England with dependent children 2010-11](source: DCLG English Housing Survey, full household sample » Download data)

The UK Government reported there were 52,960 households in temporary accommodation on 30 September 2012, 8% higher than at the same date in 2011 (Department for Communities and Local Government (DCLG), 2012a). Of these, 40,090 included dependent children and/or a pregnant woman. In total 75,350 children were living in temporary accommodation. The majority of these households with dependent children were in self-contained premises, with 5% in bed and breakfast accommodation. In addition, at the end of September 2012, there were 120 households in England headed by 16 and 17 year olds in bed and breakfast accommodation, half of whom had been there for six weeks or more (DCLG 2012b).

Figures for Scotland show that on 31 December 2012, 3,080 households with children were living in temporary accommodation, representing a total of 5,034 children (Scottish Government, 2013a).

As well as adolescents living in temporary accommodation, groups potentially living in vulnerable circumstances include those looked after by the local authority. This group does poorly on almost all outcomes measures including school performance, mental health, involvement with the criminal justice system and employment. Governments have recognised this and attempted to address some of the challenges. However the problems are not easy to overcome and research outcomes today do not look encouraging.
The figures for looked after children are based on a snapshot over a census week and do not reflect the numbers in care during an entire year. In England in 2012, 24,150 young people aged 10-15 years and 13,580 young people aged 16 and over, were in the looked after category at the time of the census.

**Chart 3.9** shows the ages of all looked after children in England in 2012, with adolescent age groups (10-15 and 16 or over) accounting for the majority. Reasons for being looked after most commonly include neglect or abuse, family dysfunction, family acute stress, parental illness or disability and absent parenting.

There had been a steady reduction in the mid 1990s, but as the figures in **Chart 3.10** reflect, the numbers for 10-15 year olds have remained fairly constant throughout the 2000s, with increases in those aged 16 and over. This may be partly because of a growing recognition that this age group does continue to require considerable support.
Chart 3.11 shows that boys have always outnumbered girls in the care system and that there appears to be a slight trend towards greater gender inequality in recent years.

![Chart 3.11](chart.tensor)

Source: Department for Education, SFR 20/2012, Children looked after in England (including adoptions and care leavers) year ending 31 March 2012) and earlier releases » Download data

Chart 3.12 shows that the majority of looked after children are from white British backgrounds, but there are also many from other ethnic groups.

![Chart 3.12](chart.tensor)

Source: Department for Education, SFR 20/2012, Children looked after in England (including adoptions and care leavers) year ending 31 March 2012) and earlier releases » Download data
There are differences in how the constituent countries of the UK place children in their care. Chart 3.13 shows that in Scotland, the majority of those legally looked after by the local authority are in fact still living with parents and relatives, with the bulk of the remainder living in foster care. Chart 3.14 demonstrates that in Wales the majority were fostered, with a smaller group placed with parents.

**Chart 3.13**
Looked after children in Scotland by placement at 31 July 2011

- With parents/relatives: 58%
- Fostered: 33%
- In Local Authority home: 4%
- Other home/school/secure accommodation: 4%
- Other: 1%


**Chart 3.14**
Looked after children in Wales by placement at 31 March 2011

- Placed for adoption: 77%
- Fostered: 4%
- Private/other home: 2%
- Placed with parents: 3%
- Living independently: 9%
- Absent/other: 1%

Source: statswales.wales.gov.uk; ‘Children looked after at 31 March by local authority and placement type’ (Local Authority not shown in chart) » Download data
As well as those looked after children who are in local authority children’s homes, adolescents can also be in the criminal justice system. Chart 3.15 illustrates that the numbers in youth custody in England and Wales rose in the early 2000s but are now at their lowest level since 2000, with 2,034 young people in custody in April 2012. Again, this is a snapshot of the situation during one month. As the average custodial sentence served for young people is much less than one year, many more young people will pass through custody over the course of a 12 month period. However, the general trend downwards is to be welcomed.

![Chart 3.15](image)

Source: Youth Justice Board for England and Wales

Different countries have different youth justice systems. In Scotland, for example, no young people under the age of 16 are detained. A total of 569 young offenders aged 16 and over were in custody in Scotland in May 2013 (Scottish Prison Service, 2013).

Asylum seekers form another group in vulnerable living circumstances. Figures illustrated in Chart 3.16 indicate that among those under 18, the highest numbers are among the 16 and 17 year olds.

![Chart 3.16](image)

Source: Home Office: Control of Immigration Quarterly Statistical Supplementary Tables June-March 2011

NB Data only for first quarter of 2011
Area based deprivation

The quality of the local environment is an important part of the social determinants of health. There is a strong link between social deprivation and a number of important health indicators for young people, including sexually transmitted infections, teenage conceptions and obesity.

Deprivation is a multi-dimensional construct, which includes income, health, education, crime and availability of local services. The four nations of the UK have each derived their own index of multiple deprivation (IMD) based on methods developed at the Oxford Social Disadvantage Research Centre (Noble et al, 2006). The domains used vary by country. The unit of analysis for IMD is usually ‘Layer Super Output Areas’, which are small geographical locations of consistent size, with stable boundaries, containing a population of around 1,500 people. The average score can provide a useful indicator of widespread problems of deprivation within areas. However the deprivation figures have not been calculated since 2007 and there may have been significant changes following the economic downturn of 2008.

<table>
<thead>
<tr>
<th>Ten local authorities with lowest proportion of deprived areas</th>
<th>Ten local authorities with highest proportion of deprived areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hart</td>
<td>Liverpool</td>
</tr>
<tr>
<td>Wokingham</td>
<td>Middlesborough</td>
</tr>
<tr>
<td>Surrey Heath</td>
<td>Manchester</td>
</tr>
<tr>
<td>Elmbridge</td>
<td>Knowsley</td>
</tr>
<tr>
<td>Waverley</td>
<td>Kingston upon Hull</td>
</tr>
<tr>
<td>Chiltern</td>
<td>Hackney</td>
</tr>
<tr>
<td>St Albans</td>
<td>Tower Hamlets</td>
</tr>
<tr>
<td>Epsom and Ewell</td>
<td>Birmingham</td>
</tr>
<tr>
<td>Mole Valley</td>
<td>Hartlepool</td>
</tr>
<tr>
<td>Rushcliffe</td>
<td>Blackburn</td>
</tr>
</tbody>
</table>

Source: Department for Communities and Local Government, Indices of Deprivation 2010 - Download data

NB Based on the Proportion of Layer Super Output Areas (LSOAs) in the most deprived decile of IMD 2010
The last English IMD indicated that over five million people lived in the most deprived areas in England and that 38% of these were poor. Based on the fact 12% of the population is aged 10-19, there could be approximately 600,000 adolescents living in the most deprived areas in England, with around a third of those living in poverty. From the 2008/9 data, the Scottish Public Health Observatory (ScotPHO, 2010) estimated that 9% of young people aged 0-24 years lived in areas that were among the 15% most income deprived in Scotland.

Chart 3.17 gives an overview of the ten most deprived areas in England and the 10 least deprived, using the old primary care trust (PCT) boundaries and drawing on the layer super output scores. The areas with the least deprivation include the relatively wealthy areas of Surrey, Buckinghamshire, Richmond and Twickenham in Southwest London and South Gloucestershire. Those with most deprivation included Birmingham, Liverpool, Newham and Hackney in East London. There is a considerable range in the deprivation score, from 8.81 to 45.31.

In England the 2010 index of multiple deprivation has also been used to derive a new index called the Income Deprivation Affecting Children Index (IDACI), published by the DCLG. This ranks geographical areas on the number of children aged 0-15 living in income-deprived households as a percentage of all children in the area. Across all of England, 21.8% of this age group live in income-deprived households. The rates by local authority range from 2.7% on the Isles of Scilly to 59% in Tower Hamlets, East London (APHO, 2012).

The Welsh Index of Multiple Deprivation has been used to derive the Child Index 2011, which looks at indicators most relevant to children’s lives, such as school absence rates, air quality, youth offenders, proximity of libraries, etc. Chart 3.18 lists the ten most deprived areas in Wales as determined by the 2011 Child Index.

More specific area-based deprivation data tailored to adolescents (rather just all children), would be useful in understanding the social determinants of health and commissioning services.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Powys</td>
</tr>
<tr>
<td>2</td>
<td>Ceredigion</td>
</tr>
<tr>
<td>3</td>
<td>Monmouthshire</td>
</tr>
<tr>
<td>4</td>
<td>Carmarthenshire</td>
</tr>
<tr>
<td>5</td>
<td>Gwynedd</td>
</tr>
<tr>
<td>6</td>
<td>Conwy</td>
</tr>
<tr>
<td>7</td>
<td>Flintshire</td>
</tr>
<tr>
<td>8</td>
<td>Isle of Anglesey</td>
</tr>
<tr>
<td>9</td>
<td>Vale of Glamorgan</td>
</tr>
<tr>
<td>10</td>
<td>Torfaen</td>
</tr>
</tbody>
</table>

NB Ranked on % of LSOAs in most deprived 10%, out of a total of 22 Local Authority areas

Source: Welsh Index of Multiple Deprivation, Child Index 2011 » Download data
Education to age 16

Education is also an important variable in health outcomes. There have been rapid changes in education systems, especially in England with the growth of the academy programme, the introduction of ‘free schools’ and the increasing diversity of provision at secondary level. University tuition fees are also impacting on young people and the policy debate about the future of education provision is set to continue.

There are various different ways of assessing the level of education achieved by adolescents. Chart 3.19 shows the proportions managing different levels of achievement at GCSE and equivalent at the end of Key Stage 4 in England, 2011/12, when they are 15/16 years old. These range from the broad aim of five or more GCSEs or equivalents at grades A*-G including maths and English, which is achieved by 94.2% of the population, to indicators only achieved by a minority. When GCSE passes are confined to grade C or above, then 83% achieve five passes in any subject. Looking just at English and maths, 59.3% achieve A*-Cs, a similar proportion to those achieving five or more A*-C grades including English and maths (58.8%), often now used as the standard measure of achievement for this age group.

Some of the qualifications included in these summary measures so far include GCSE equivalents. If the equivalents are excluded, then the proportion of pupils in England achieving five A*-C grades including English and maths drops to 51.9%. Only 29% achieve this level of pass in a foreign language.

Chart 3.19
Achievements at GCSE and equivalent at the end of Key Stage 4 in England, 2011/12

Source: Department for Education: SFR 04/2013 Statistical First Release: GCSE and equivalent attainment by pupil characteristic in England, 2011/12 » Download data

Generally, examination attainment has been rising in the UK. For example, Chart 3.20 shows a continued increase in the numbers of pupils achieving five or more GCSE grades A*-C in England from the early 1990s to 2010. In the 20 year period from 1990 to 2010 the proportion obtaining this level more than doubled. This is true for both boys and girls although overall girls perform better than boys at this age. At the time these
examinations were taken in 2011/12, the school leaving age in England was 16, but this rises to 17 in 2013 and then to 18 by 2015. It will be interesting to see the impact of the raised participation age on attainment and on the broader issue of reducing young people not in education, employment or training (NEET).

Comparing the countries of the UK is fairly challenging, given the different education systems and different ways of reporting the relevant statistics. In Scotland pupils sit ‘Standard grade’ or ‘Intermediate’ exams at the age of 15/16 years, as part of the Scottish Credit and Qualification Framework (SCQF). This covers eight subjects including English and maths, a language and sciences. Standard grades are in fact due to be replaced by a new system in 2014. In 2010/11, 36% of pupils achieved five or more awards at SCQF level 5 or above by the time they were 15/16 years old and 53% did so by the time they were 17/18 (Year 6 in the Scottish system). The Scottish Credit and Qualifications Framework (SCQF) suggests that level 5 is equivalent to a GCSE A*-C grade, so if English and maths and a modern language are included in these statistics, this would make the SCQF level 5 qualification similar to the English Baccalaureate.

The Welsh Government releases slightly different statistics, giving the results of external examinations taken by pupils aged 15 at the beginning of the academic year. The key marker is a ‘Level 2 achievement’, equivalent to five GCSEs A*-C grade. In 2010/11, 50% achieved this threshold including English or Welsh and mathematics. Northern Ireland reports differently again, giving the proportion of ‘school leavers’ – who could be over 16 – achieving at least five GCSEs A*-C including English and maths by the time they leave, which in 2010/11 stood at 59.5% (Northern Ireland Statistics and Research Agency, 2012).
Chart 3.21 illustrates regional variations in GCSE attainment within England. There is only a small variance between the lowest levels of achievement in the South West (79.8% five or more GCSEs at grades A*-C) and the highest in the North East (88%).

Achievements at this age vary by a range of social and economic factors. Children who are looked after by the local authority, or are from certain minority ethnic groups, or who are living in families with very low incomes, may all fare worse. The achievement of looked after children has long been cause for concern and the latest data do not suggest any great improvement. Chart 3.22 shows that only 14.5% of looked after young people achieve five GCSEs at grades A*-C including English and maths, compared with 58% of their peers. These are the results for young people who have been continuously looked after for at least 12 months, in Year 11, compared with young people who are not in the care of the local authority. Despite a slight increase in overall attainment for the age group as a whole, the gap between the two groups was 36% in 2008 and had only improved to 34% by 2012.
With respect to ethnicity, we have already seen that 19.5% of this age group are from ethnic minorities and as Chart 3.23 shows, achievement varies considerably by group. On average, the lowest levels of GCSE attainment are for young people from Black Caribbean and Pakistani groups. The highest levels are for those from Indian and Chinese groups.

Across the country, 16% of young people at state funded secondary schools are eligible to receive free school meals (DfE, 2011), a proxy measure for low income. Young people in receipt of free school meals have lower levels of GCSE attainment. In 2011/12, a third of them achieved five A*-C grades including maths and English, compared to 58.8% of all pupils at school at that time (DfE, 2013a). Not surprisingly, there is a significant attainment gap between schools with high and low proportions of disadvantaged pupils. Chart 3.24 shows that in schools with the most disadvantaged pupils only 44% achieve the level of five A*-C grades at GCSE (including English & maths), compared with 81% of those in schools with few disadvantaged pupils. There is much more variation here than was evident when comparing the achievements of large geographical regions (Chart 3.21 above). It is important, however, not to judge a school from its GCSE results, but to look at the ‘value added’ score which charts the attainment of a pupil from arrival to departure.
The main vocational qualification for this age group is the National Vocational Qualification (NVQ) or the Scottish Vocational Qualification (SVQ), which can be taken separately or combined with GCSEs. NVQ subjects include retail and commercial enterprise, health and social care and construction, planning and the built environment. **Chart 3.25** shows a steady increase in the number achieving vocational qualifications in the UK from around 2001 to 2010, followed by a significant drop in 2011 to 63,000.

![Chart 3.25](image_url)

A final important feature in secondary education is the rate of exclusions, particularly permanent ones. Being excluded from school clearly impacts on educational attainment and acts as a marker for a range of problems. Over the years, successive governments have made strenuous attempts to keep the figures down. **Chart 3.26** shows the trends since 2000, reflecting a slight rise to the middle of the 2000s and then a fall, with the lowest levels for a decade witnessed in 2010/11.
Chart 3.26 presents more detail on the 4,370 permanent exclusions in 2010/11, showing that many more boys than girls are excluded and that those aged 13 and 14 (that is, in the school years 8 to 10) are most likely to be excluded.

**NB** Some of the zeros are actually very low numbers, suppressed to preserve identity.
Education, training and employment 16-18 years

There have been significant policy changes affecting this age group. As we have noted, young people in England can no longer leave compulsory education at age 16. The participation age is being raised, placing a legal requirement (from 2015) for all young people to stay in education or training until they are 18. In Scotland the school leaving age remains at 16 years. A number of choices are open to 16 year olds in the UK at this stage, depending on their examination achievements. The majority remain in full-time education, but others move into flexible pathways including various combinations of education, training and employment. Chart 3.28 shows that participation in education and training of 16-18 year olds in England rose substantially between the mid 1980s and early 1990s, levelled out and then crept up again from the turn of the millennium. By 2011 82% of males and 84% of females were participating in education and/or training at this age.

Chart 3.29 breaks down the activities of all 16-18 year olds in England in 2011, separating out full-time education, work based learning, employer funded training, other types of training, employment and ‘none of the above’ (not in education, employment or training, NEET). There are a number of things to note from this chart. The first is that the proportion in employment is only 7%. Employment does not feature as a common source of activity for this age group any more, representing a shift from the situation in, say, the 1960s and 1970s. The chart shows that the proportion in employment is exceeded by the proportion who are NEET, which stood at 10% in 2011. Finally, we can see that 68% of the age group were in full-time education.

Scottish statistics are presented differently, giving destinations for all school leavers in a given year, who may be 16, 17 or 18 and over at the point of leaving. The most recent data suggest that the majority of pupils were staying on at school until 17 (63% in 2010/11) and around half were staying until the end of S6, the equivalent to the end of English A levels (Scottish Government, 2012).
For those in full-time education, the majority were studying for Level 3 qualifications; in England these are the GCE Advanced levels and their equivalents. Chart 3.30 illustrates the various types of schools and colleges where young people were studying. Similar numbers were in further education colleges (nearly 180,000 young people) and in the sixth forms of state funded schools (170,000 young people). The first two bars demonstrate that of those at state schools, about 100,000 were in local authority maintained institutions, with approximately 70,000 at academies and free schools. The smallest proportion (36,000) were studying at independent schools.

Fewer young people study for A levels (or for Highers and Advanced Highers in Scotland) than studied for GCSEs. The number of students entered for at least one A level or equivalent Level 3 qualification in England in 2011/12 was 384,299. This represented an
increase of 3.3% on the previous year (DfE, 2013b). Compared with the numbers doing A levels, the numbers doing apprenticeships is very low. Chart 3.31 compares the rates from 2007/8 to 2011/12, showing a slight rise over this period although 2011/12 represented a fall on the previous year, down to 77,900 apprenticeships achieved in total.

There is continued concern over the proportion of NEETs and Chart 3.32 portrays the trends from the mid 1990s to 2011. Despite numerous government initiatives, figures have stayed fairly static. They stood at 9.2% in 1995 and in 2011 were at 9.9%. However, the NEETs definition masks a number of different reasons for opting out. These could include being a young carer or unwell or reflect disaffection or low qualifications preventing progression to the next stage. In addition, young people will move in and out of the definition; being NEET is not a fixed state.

NEET figures for Scotland are published for 16-19 year olds and the most recent figures suggest rates of 15% for young men and 12% for young women (Scottish Government, 2013b).
Participation in education, training and employment, 18 and over

Increased participation can be seen in higher education as well (post 18). Comparisons across time are set out for higher education in Chart 3.33. Approximately 1.5 million young people were studying at UK Higher Education Institutions (largely universities) in 1996/7, a figure that had increased to over two million by 2011/12.

The Higher Education Initial Participation Rate (HEIPR) is used to measure progress towards the target of 50% of 18-30s taking up higher education. In 2010/11 the target was achieved by women aged 17-30, but averages out at 47% when young men are included. Chart 3.34 indicates that the estimates are lower if we just look at the 17-20 age group rather than the 17-30 age group; clearly some young people do not go to university until they reach their 20s.
Not everyone goes on to further education or training. Evidence from Eurostat makes it possible to compare the rate of early leavers from education and training across the European Union. **Chart 3.35** shows the percentage of the population aged 18-24 with, at most, lower secondary education and who were not in further education or training in 2011. The average for the EU as a whole was 13.5%; the UK has a relatively high rate of 15%.

![Chart 3.35](image)

**Chart 3.35**
Early leavers from education and training in the EU: % population 18-24 years with, at most, lower secondary education and not in further education or training, 2011

A very small proportion of 16-18 year olds are in employment; the proportions are higher after the age of 18 years but are still very low. This is not the activity of the majority until they are some way into their 20s. Changes in the labour market over recent decades have impacted particularly heavily on young people and the economic downturn of 2008 has worsened the situation. Evidence for this can be seen in **Chart 3.36**, which shows youth unemployment rates have significantly increased from 2008 onwards.

![Chart 3.36](image)

**Chart 3.36**
Longterm (12m and over) youth unemployment (15-24 yrs) as % of total unemployment in the UK, 2000-2011
Chart 3.37 presents the European comparisons, again drawing on Eurostat data, demonstrating that in 2011 the UK had an under-25 employment rate very similar to the EU average of 21.4%. The average had increased from 19.7% in 2009.

Source: EUROSTAT, Dashboard on indicators of Youth » Download data
References


Department for Communities and Local Government (2012b) *Statutory homelessness: July to September Quarter 2012 England* London: DCLG


Relatively small proportions of young people meet recommended levels of physical activity. Surveys suggest that in Scotland, in 2010, 19% of boys aged 11-15 and 11% of girls aged 11-15 met the targets. The proportions for England were 28% and 15%.

Public transport and walking have a big role to play in daily physical activity for this age group. Over a third of 11-16 year olds walk to school.

Consumption of ‘five a day’ portions of fruit and vegetables is low for 11-18 year olds who, on average, only eat three portions. There is particular concern about young women’s nutrition.

31% of young men and 37% of young women aged 11-18 years old are overweight or obese.

In 2011, approximately one in ten 15 year olds were regular smokers. This doubles to one in five of those aged 16-24.

Among 15 year olds, 29% report drinking in the previous week. The proportions are the same for young women and young men.

Experimentation with illegal drugs remains common, but proportions have fallen in recent years to a quarter of 15 year old boys and a fifth of 15 year old girls.

Deaths caused by road traffic (either as driver, passenger or pedestrian) are the largest cause of injury-related deaths in 10-19 year olds.

A quarter of secondary school children report they do not get enough sleep.
Health behaviour

Promoting healthy lifestyles is very important in adolescence. This age marks the beginning of risk-taking behaviour and is a time when life-long health behaviours are set in place. Health behaviours can directly affect health outcomes. In the longterm these may include cancer, heart disease and Type 2 diabetes. Prevention and early intervention are not just relevant for young children; they are equally possible in adolescence. Understanding patterns of adolescent health behaviour informs health promotion and health care commissioning and can prevent longterm difficulties from arising or escalating. The key topics of adolescent health behaviour include physical activity, nutrition and obesity, substance use, risky behaviour and accidents and sleep. Sexual health is also critically important and is the subject of the next chapter.

Physical activity

Young people’s physical activity levels are critical to their overall health (Department of Health, 2011a). Current UK guidelines for children and young people recommend at least one hour of moderate-to-vigorous physical activity every day (Department of Health, 2011b). The Health Behaviour in School Aged Children surveys in England and Scotland indicated that, overall, the proportions of young people aged 11-15 who were meeting the recommendation were 28% of males and 15% of females in England and 19% of males and 11% of females in Scotland. Chart 4.1 compares the rates for the two countries by age and gender.

Other surveys have inevitably produced slightly different estimates. The Health Survey for England (HSE) 2008, for example, included a module on physical activity (not since repeated) and reported that the proportions of young people aged 10 to 15 achieving one hour a day or more of physical activity was around 30% for boys and less than 20% for girls in this age group, slightly higher than the estimates in the HBSC for England (Craig and Mindell, 2012).
Objective measurement of physical activity (obtained using an accelerometer) can often suggest lower levels than individuals report. **Chart 4.2** shows high rates of sedentary activity for all age groups, moderate rates of light physical activity, but very low rates of moderate to vigorous. Sedentary activities encompassed both homework and social or leisure activities including watching TV, reading and using a computer. The older age group of girls (12-15 years) achieved less than half an hour of moderate to vigorous physical activity on average per day.

All surveys show how physical activity declines across adolescence and they also tend to show much lower levels of activity for young women. This is illustrated in **Chart 4.3**, which considers participation in different types of physical activity and offers further insight into the gendered character of activity rates among young people. Formal sports and activities were defined as including organised and structured activities such as football or gymnastics, whereas informal sports, exercise and active play include activities such as running about, riding a bike or playing active games. Although boys are generally more likely than girls to participate in formal sports, around 90% of both girls and boys aged 10 take part in informal sports, exercise and active play. However, among the 15 year olds, while walking was very common among both sexes, levels of both informal and formal activities had dropped, particularly for the girls aged 15.
Much physical activity is centred on school sport. **Chart 4.4** shows the weekly participation in at least three hours of high quality PE and out of hours school sport in England, demonstrating how this drops off in the older age groups. By year 11, when young people are aged 15-16 years old, 33% of girls and 46% of boys report that they achieve the three hour target. Provision of sports and exercise on offer for girls may need to be reviewed to retain their interest. In addition, reductions to the amount of PE required by the national curriculum may have quite dramatic impacts on the level of activity achieved by this older age group.

**Chart 4.4**
Weekly participation in at least three hours of high quality PE and out of hours school sport in England, by age and gender 2009/10

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Chart 4.3 illustrated the importance of walking in the lives of older teenagers. Much of this is walking to school. **Chart 4.5** shows that 38% of trips to school in the UK by young people aged 11-16 are made on foot, with buses and cars transporting most of the remainder. Only a very small proportion travel by rail (3%) or on bicycles (3%).

**Chart 4.5**
Trips to school by main mode for young people aged 11-16, GB, 2011

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[Source: Department for Education, PE and Sport Survey 2009/10 » Download data]

[Source: Department for Transport, National Travel Survey 2012 » Download data]
Public transport and walking clearly have a big role to play in daily physical activity for this age group. As they get older, driving themselves plays only a small role, unlike countries such as the USA. In the UK, walking and public transport remain important. At the time of writing, young people can take a driving test at age 17 years; this is about to be increased to 18. However, the trend for those aged 17 to 20 years to hold a full driving licence has been falling since the mid 1990s, as Chart 4.6 shows, with less than a third of this age group holding a licence in 2011. There are implications, as we shall see, for accidents and mortality.

![Chart 4.6](chart.png)

Public transport and walking clearly have a big role to play in daily physical activity for this age group. As they get older, driving themselves plays only a small role, unlike countries such as the USA. In the UK, walking and public transport remain important. At the time of writing, young people can take a driving test at age 17 years; this is about to be increased to 18. However, the trend for those aged 17 to 20 years to hold a full driving licence has been falling since the mid 1990s, as Chart 4.6 shows, with less than a third of this age group holding a licence in 2011. There are implications, as we shall see, for accidents and mortality.

![Chart 4.6](chart.png)

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Source: Department for Education, PE and Sport Survey 2009/10 » Download data
Nutrition and obesity

Adolescent nutrition is an area of increasing concern, partly but not only because of the relationship to obesity. As they get older and begin to move to more independence from their families, young people have more control over what they consume. Again, habits of a lifetime can be formed at this stage and poor nutrition has many implications for both current and future health status. Improving diet is a key indicator in the Public Health Outcomes Framework (DH, 2012).

Consumption of five portions a day of fruit and vegetables has become a marker for good diet. As we can see in Chart 4.7, average daily consumption of ‘five a day’ for females aged 11-18 years was reported to be 2.8 in the UK-wide National Diet and Nutrition Survey (averaged across surveys from 2008 to 2011) and for males aged 11-18 the figure was 3. Adults averaged 4.1 portions.

The National Diet and Nutrition Survey also used dietary diaries and other methods to estimate the proportion of young people aged 11-18 years with low levels of daily intake of various minerals. As a baseline, the survey uses the Lower Reference Nutrient Intake, which is a level of intake likely to be sufficient to meet the health needs of only 2.5% of the population, so it is a conservative measure of adequate intake. Chart 4.8 shows that worryingly high proportions of young men and young women do not appear to be consuming enough minerals. This is particularly the case for young women, of whom nearly half are estimated to be deficient in their iron, selenium (an essential trace mineral) and magnesium intake. These estimates are indicative only, as these are difficult data to collect, but they do alert us to the need to consider adolescent nutrition as a whole and they raise a particular concern about the nutrition of young women.
One of the consequences of poor nutrition is, of course, obesity. Reducing excess weight in 4-5 year olds, 10-11 year olds and adults are also 'Health improvement' indicators in the Public Health Outcomes Framework (DH, 2012). Chart 4.9 provides an overview of trends in obesity prevalence in 11-15 year olds since 1995, drawing on data from the Health Survey for England. Obesity peaked in 2004 at 24.3% for boys and 26.7% for girls. This measurement of obesity is based on the UK national BMI percentiles classification. BMI measurements that fall into or above the 95th percentile of the 1990 reference population are classified obese. This is the recommended method for calculating obesity in children (rather than using cut-offs). Overall, obesity levels in England for this age group have reduced over the last five years, but the trend is clearer for young women than for young men.

Download data

NB Estimate of the amount of nutrient needed to maintain good health
LRNI set at a level of intake likely to be sufficient to meet the needs of only 2.5% of the population
Based on limited data, indicative only

Download data

Chart 4.8
Proportion of young people 11-18 with average daily intakes of minerals below the Lower Reference Nutrient Intake in the UK, by gender, 2008-2011

Chart 4.9
Obesity is the extreme end of the weight distribution; there is also a group of young people who are overweight but not obese, as Chart 4.10 demonstrates. Once again obesity is a BMI that falls at or above the 95th percentile of the distribution and overweight is a BMI falling at or above the 85th percentile. Including both those who are overweight and those who are obese, 31% of young men and 37% of young women met the criteria. This is a substantial proportion of the adolescent population.

Although the ratings of obesity are the same as those used in Chart 4.9, these data in Chart 4.10 derive from a different survey (National Diet and Nutrition Survey), covering a different geographical area (the whole UK), a different time span (a rolling average of three surveys from 2008/9 to 2010/11) and a wider age group (11-18 years). Interestingly, the gender distribution is different, so that higher rates of obesity are noted in the young women here, rather than young men. There could be a number of reasons for this, to do with the survey methods, different gender patterns in other UK countries, or different gender patterns in the older age group (16-18) that may sway the data. It also indicates the risk of relying on just one survey to draw firm conclusions.

Having a positive body image during adolescence relates to good self-efficacy and overall life satisfaction (Fenton et al, 2010). The health related attitudes and behaviours of young people in relation to body size and weight are illustrated in Chart 4.11, which shows the proportions aged 11-15 in the Health Survey for England who reported that they were trying to lose or gain weight. A quarter of boys and over a third of girls were trying to lose weight. HSE also reports that of these young people trying to lose weight, more than a quarter overall were neither overweight nor obese. The converse was also true – of those who were obese, just over a quarter were not trying to change their weight (Craig and Mindell, 2011). These findings probably reflects a number of issues, including some evidence of disordered eating and unnecessary dieting, as well as some evidence of avoidance of tackling excess weight. We return to eating disorders in Chapter 6.
Smoking, drinking and drug use

Smoking causes one in five deaths in people aged over 35 (HSCIC, 2012). It is the primary cause of preventable illness and premature death. Two thirds of smokers begin before they are 18 (HSCIC, 2012). Concern about levels of smoking among young people arises from awareness about the longer-term outcomes such as cancer, but also the shorter term negative effects such as respiratory illness and impact on physical fitness. Repeated Department of Health funded ‘Smoking, Drinking and Drug Use’ surveys of 11-15 year olds in England have shown that smoking is clearly related to age; as Chart 4.12 shows, it is much more prevalent in 15 year olds than 11-14 year olds. In 2011, 11% of all 15 year olds were regular smokers (smoking at least one cigarette a week).
Some level of experimentation with smoking is much more common than regular smoking. Chart 4.13 compares whether young people have ever tried a cigarette and whether they have smoked in the last 30 days for UK school pupils as a whole, demonstrating that nearly half have tried cigarettes and up to a quarter have smoked in the last month.

These levels seem high, but Chart 4.14 portrays a positive picture of the long term trends for regular smoking. By 2011, the proportions of 11-15 year olds in England who were regular smokers were 5% of girls and 4% of boys. In the 10 years since 2001, these proportions have halved. The introduction of a smoking ban in public places came into force in England in July 2007 and may have had some impact on the figures, although there no noticeable acceleration in the downward trend.
These downward trends are also apparent in the older age groups from 16-19 years and 20-24 years, demonstrated in Charts 4.15 and 4.16. The gender patterns in these older age groups are not consistent; sometimes more young women smoke, sometimes more young men, but the overall direction of travel is positive. Since 2008 there has been a particular drop among young women aged 16-19 years, which is reassuring as there have often been more girls than boys smoking before the age of 16 years (although the annual data are volatile). However there is no room for complacency. The fact that between a quarter and a fifth of those aged 16-24 are regular smokers is still a serious concern.


Adolescent alcohol consumption levels have been a concern for many years. Again the trends are not entirely straightforward. The ‘Smoking, Drinking and Drug Use’ surveys of 11-15 year olds in England have shown increases in both the proportions who do not drink at all and also in the amount drunk by those who do drink, at least up until the mid 2000s. The latest data suggest that 59% of this age group do not drink. Overall, 12% report that they drank alcohol in the previous week (Fuller, 2012) and as Chart 4.17 shows, the majority of these are 14 and 15 years old, with little differentiation by gender. The rise in drinking at the age 13/14 point makes this an important age group to target with alcohol related health promotion interventions. Among the 15 year olds, 29% reported drinking in the previous week; the same proportions of young men as young women.

In 2011 an average of 10.4 units was drunk by pupils aged 11-15 who had alcohol in the last week, with a median of seven units (Fuller, 2012). Chart 4.18 presents the mean alcohol consumption in the last week by pupils who had had a drink, by gender, from 2007 to 2011. Across this fairly short time span there has in fact been a fall in the average amount drunk. Whether this is a long term trend remains to be seen.
Being drunk is a key indicator of alcohol misuse. **Chart 4.19** compares the prevalence of self-reported drinking to excess among 11, 13 and 15 year olds, drawing on data from the Health Behaviour in School-Aged Children survey. Figures for England and Scotland provide a similar picture.
Not surprisingly, older age groups consume more. Using data from a different survey, **Chart 4.20** shows the average weekly alcohol consumption among 16-24 year olds is higher than that for the younger group. By this stage, a fifth of young men in this age group are drinking more than the recommended limit of 21 units of alcohol a week and the same proportion of young women are exceeding the recommended limit of 14 units for women.

![Chart 4.20](chart420.png)

Not surprising. However, again we should note that these statistics represent a fall over time. **Chart 4.21** shows the percentage of young people aged 16-24 years in Great Britain who drank on five days or more in the last week, from 1998 to 2011.

![Chart 4.21](chart421.png)
There is a considerable amount of data relating to substance and illegal drug use among young people. However, not all findings are consistent as this is a challenging area to research and self-report studies have obvious potential limitations. **Chart 4.22** shows self-reported drug use in 13-15 year olds in England from 2001 to 2011. Since 2001 there has been a downward trend in the school-aged population who had reported using illegal substances at any point in the last year. The fall is particularly notable, from 41% to 26% for males and from 36% to 21% for females. The chart illustrates an increase in use with age as seen for alcohol and smoking. Overall, in 2011, 9% of 13 year olds reported that they had taken a drug in the previous year, rising to 23% of 15 year olds.

The ESPAD study reports a similar statistic for the older age group, with 27% of 15-16 year old UK school pupils having tried some kind of illegal substance at some time in their lives (Atkinson et al, 2012).

**NB** Drugs include amphetamines, anabolic steroids, cannabis, cocaine, crack, ecstasy, heroin, ketamine, LSD, magic mushrooms, methadone, poppers (eg, amyl nitrite) tranquillisers, volatile substances such as gas, glue, aerosols and other solvents, and other non-prescription drugs.
Concern often centres on young people who take several substances, as an indicator of particularly problematic use. **Chart 4.23** gives a summary of drugs taken in the last year by the 15 year olds who reported any use, identifying those who took only one type of drug and those who took more than one. Use of cannabis on its own is the most common form of usage. Young people were unlikely to report using a Class A drug on its own unless they were also using another drug as well. The similarity of the gender patterns is notable.

Finally, pulling together use of all different kinds of substances, including nicotine, alcohol and illegal drugs, **Chart 4.24** presents the proportions who report ever having smoked, drunk alcohol or taken drugs at different ages. Of all young people aged 11-15 in 2011, 46% had never done any of these activities (Fuller, 2012), which is perhaps higher than might be imagined from media coverage, but we should note that this drops to 20% of 15 year olds.
A number of young people will report a range of risky health behaviours ongoing at the same time. The clustering of multiple risky behaviours in youth has long been known to lead to worse outcomes (eg, Elliott et al, 1989). Clustering may also pose particular problems in areas of social deprivation, when some groups may find it hard to change their health behaviour because of constrained choices and pressure on local services. There are few UK data pertaining to this issue and the topic warrants further attention.

Accidents

The highest rates of unintentional injury death occur in young men aged 15-19 years, more than any other stage of childhood (European Child Safety Alliance, 2012). Accidents at this age are therefore an important part of the picture of health and may be affected in part by behaviour. Chart 4.25 shows the causes of injury related deaths in children and adolescents, giving three year standardised death rates (per 100,000).

<table>
<thead>
<tr>
<th>Cause</th>
<th>Males 10-14</th>
<th>Males 15-19</th>
<th>Females 10-14</th>
<th>Females 15-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicide</td>
<td>0.02</td>
<td>0.35</td>
<td>0.07</td>
<td>0.16</td>
</tr>
<tr>
<td>Fires, burns, scalds</td>
<td>0.04</td>
<td>0.08</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Motorcycle drivers</td>
<td>0.08</td>
<td>2.70</td>
<td>0.00</td>
<td>0.04</td>
</tr>
<tr>
<td>Poisoning</td>
<td>0.15</td>
<td>1.17</td>
<td>0.07</td>
<td>0.56</td>
</tr>
<tr>
<td>Falls</td>
<td>0.17</td>
<td>0.54</td>
<td>0.02</td>
<td>0.10</td>
</tr>
<tr>
<td>Suicide/self-inflicted</td>
<td>0.17</td>
<td>3.27</td>
<td>0.13</td>
<td>0.97</td>
</tr>
<tr>
<td>Drowning</td>
<td>0.21</td>
<td>0.84</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td>Cyclists</td>
<td>0.45</td>
<td>0.39</td>
<td>0.09</td>
<td>0.10</td>
</tr>
<tr>
<td>Motor vehicle driver/passengers</td>
<td>0.55</td>
<td>10.55</td>
<td>0.25</td>
<td>3.01</td>
</tr>
<tr>
<td>Choking/strangulation</td>
<td>0.62</td>
<td>0.68</td>
<td>0.25</td>
<td>0.27</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>0.77</td>
<td>1.81</td>
<td>0.60</td>
<td>0.70</td>
</tr>
</tbody>
</table>

What is interesting in this table is the huge relative contribution of deaths caused by motor vehicle drivers and passengers among 15-19 year old males, with a death rate of 10.55 per 100,000 for this age group from this cause per year. Driving related events are also the largest cause of death by accidents for females in this age group (at 3.01 per 100,000). The second largest cause of injury-related deaths for the 15-19 age group is suicide/self-harm, again with the highest rates in the 15-19 males (3.27 per 100,000). Among the younger teenagers aged 10-14, the rates of injury-related deaths are much lower, but again road traffic accidents are the most common type.
Sleep

Adolescent sleep is a neglected but important topic. Poor sleep (insufficient sleep and poor quality sleep) may be the cause and result of health problems. For example, sleep deficiency has been identified as a contributing factor in road traffic accidents (AYPH, 2012).

There are very few representative survey data on adolescent sleep. The Exeter Schools Survey Unit undertakes research (Balding and Regis, 2012) including a question on whether young people get adequate sleep to cope at school. Chart 4.26 shows that approximately a quarter of those at secondary school report that they do not get enough sleep to concentrate and stay alert.

Source: Balding A and Regis D (2012) Young People into 2012 » Download data
References


Balding and Regis (2012) Young People into 2012. Exeter: Schools Health Education Unit


Department of Health (2011a) Start Active, Stay Active: A report on physical activity for health from the four home countries’ Chief Medical Officers. London: Department of Health


The average age of first heterosexual intercourse is 16 years.

Among women aged 16-49, the lowest levels of contraceptive use are found in the 16-19 year olds. Two thirds of 16-19 year olds are ‘at risk’ of pregnancy (ie, have a sexual partner) but approximately one in ten of those with a partner did not use contraception.

Both GPs and community contraceptive services are important sources of information for young people aged 15-24 years. In 2012 23% of those aged 16-19 had visited an NHS community contraceptive clinic.

In 2011, the lowest rate of conceptions was reported in the under-18 age group since 1969, but the UK still has a relatively high birthrate among 15-24 year olds compared with other countries.

The highest rates of sexually transmitted infections are among those aged 15-24 years. Those under 25 accounted for 64% of all new chlamydia diagnoses in 2012.
Sexual health

Developing a sense of sexual identity is a key part of adolescent development. Staying safe, healthy and happy through the process is important. As a result, the sexual health and behaviour of young people is a huge topic in adolescent public health, with important ramifications for wellbeing, education and service provision. There is a lot that we know, but this is also a topic where there are many challenges in collecting regular, robust information.

In policy terms, there have been some significant changes. The Teenage Pregnancy Strategy, which ran in England from 1999-2010, came to an end along with the Teenage Pregnancy Unit (TPU), which ran it. The Strategy achieved significant results. Under-18 conception rates fell from 44.8 per 1,000 in 1999 to 34.2 in 2010, a reduction of 23.7%. The rates continued to fall in 2011 to 30.7 per 1,000, representing a drop in rates of 31.5% since 1999 (Office for National Statistics, 2013). There is concern that without the lead from TPU and no national strategy, local areas will stop prioritising teenage pregnancy reduction and rates will level off or rise again.

In England the Department of Health (DH) recently published *A Framework for Sexual Health Improvement in England* (DH, 2013), to create a context for commissioners and providers in the new NHS structures from April 2013. Importantly, young people’s sexual health accounts for three indicators in the Public Health Outcomes Framework (DH, 2012), including under-18 conceptions, chlamydia diagnoses in 15-24 year olds and HIV rates. In addition, the Scottish Government is holding an inquiry into teenage pregnancy during 2013, which will result in more policy recommendations (The Scottish Parliament, 2013).

Sexual activity

The third National Survey of Sexual Attitudes and Lifestyle (Natsal 2013) is due to be published in December 2013 and will provide new, up to date information about sexual behaviour of adults aged 16-44 in Great Britain (ie, over the age of consent at age 16). It will not include the younger age group and, for the time being, one of the main sources of information on young people’s reports of their sexual behaviour remains the Health Behaviour in School Aged Children (HBSC), which provided data for England, Scotland and Wales in 2010. **Chart 5.1** presents the data on the proportions of 15 year olds in the different counties of Great Britain who reported experience of sexual intercourse in the HBSC report.

The proportions are very similar, ranging from 34% to 38% of 15 year old young women in each country and 27% to 28% of men aged 15. In studies of sexual behaviour in the 1970s and 1980s, it was always the case that more young men reported having had sexual experience than young women. The change is of great interest but without more research we cannot determine what is driving the trends, or whether the results vary depending on how and when the survey is conducted. Possible explanations could include the fact that some young women may have older male sexual partners or that, because young women mature sexually earlier than young men, the age range of 15-16 years is exactly the time when this difference is reflected in sexual behaviour.
Chart 5.2 shows the reported experiences of sexual activity among this age group from kissing to vaginal intercourse. The findings come from a combination of data from two large scale school surveys in Scotland and England (the RIPPLE and SHARE studies; Parkes et al 2011) and relate to reports of experiences with the opposite sex. Just over 40% of young women state that they have experienced sexual intercourse, while 35% of the young men do so. The last National Survey of Sexual Attitudes and Lifestyles in 2000 had estimated that the average age at first heterosexual intercourse among young people in GB was 16 years for both men and women (Wellings et al, 2001). The Parkes et al study (2011) also provided estimates of any genital contact with same sex partners (not shown on the chart), which was reported by two percent of this age group.
Use of contraception

The majority of young people use contraception during sexual intercourse, but rates are still not as high as for older age groups. The most recent ONS survey on contraception and sexual health among women was undertaken in 2008/09 (Lader, 2009) and Chart 5.3 shows the use of contraception by age among women at that time, demonstrating the lowest levels of contraceptive use among those aged 16-19 years. Lader et al estimated that 64% of those aged 16-19 were ‘at risk’ of pregnancy (ie, had a sexual relationship and were not protected), so the finding that only 57% were using any methods of contraception suggests that approximately one in ten are not protected. In addition, some of those using contraceptives may not be doing so properly or on every occasion. Use of contraception is important both for preventing conception and also for protecting against sexually transmitted infections (STIs). The new UK Government’s Sexual Health Strategy (DH, 2013) specifically aims to increase knowledge and awareness of all methods of contraception for all ages.

The ONS survey of women also illustrated the numbers using family planning services (during the five years prior to interview) and the ways in which the reported behaviour of the 16-19 year olds differed from those aged 20-24, as demonstrated in Chart 5.4. Approximately half of the younger age group had used at least one service and these tended to be either their own GP or a community contraceptive clinic. Two thirds of those aged 20-24 had used services and the GP or practice nurse was the most popular choice.
Given how central the community clinics are to the younger age group, it is interesting to note the majority of respondents in the Exeter Schools Unit annual survey to the question did not know if there was ‘a special birth control service for young people available locally’. The results suggest the need to improve promotion of local services and access to them. Chart 5.5 shows that, among the 15 year olds in the survey, only a third of both boys and girls indicated they were aware of such services.

Data on the preferred type of contraception are available from surveys of those attending community contraceptive clinics. Overall, in 2011/12, ONS estimated that 23% of 16-19 year olds visited NHS community contraceptive clinics (ONS, 2012); a proportion that has increased slightly year on year recently. It can be seen from the data illustrated in Chart 5.6 that the most common type of contraceptive for all young women attending clinics remains oral contraceptives, followed by the male condom. Use of the male condom is highest in the youngest age groups and is overtaken by the oral pill in those aged 15 and above. However long acting reversible contraceptives such as IU devices, injectable contraceptives and implants account for approximately a fifth for those aged over 15 years; a significant proportion.
Conception and birth

Teenage conception rates provoke continuing debate. Data collection improved in England during the Teenage Pregnancy Strategy. The establishment of the Teenage Pregnancy Unit in England in 1998 and cross-government support was pivotal to giving the topic a high profile. The leadership and national guidance also assisted professionals in reducing rates of teenage pregnancy and improving support for young parents. In 2011, the lowest number of conceptions was reported in the under-18 age group since 1969 in England and Wales (ONS, 2013), at a figure of 31,051. The rate of under-18 conceptions for 2011 is also the lowest since records began in 1969 at 30.0 pregnancies per 1,000 women in 2011, compared to 47.1 in 1969. This is a fall of 34%. Charts 5.7 and 5.8 illustrate how this rate (per 1,000 females aged 15-17) has fallen since the late 1990s, both in England and Wales and in Scotland. In addition, in England and Wales, the proportion of under-18 conceptions that result in a termination of pregnancy has remained fairly stable since the mid 2000s and in 2011 stood at 49% (ONS, 2013).
Conception rates among the under-16s are low but of considerable concern. Charts 5.9 and 5.10 again present the trends for England and Wales and Scotland. England and Wales demonstrate a similar trend as the under-18s, with a downward fall (apart from an unexplained spike in 2007). The proportion resulting in a termination of pregnancy is higher for the under-16s than for the older age group, at 60% (ONS, 2013). The trends in Scotland do not reflect such a clear trajectory and have remained fairly constant since 1998.
As far as Northern Ireland is concerned, conception rates are not available, but we can look at the number of live births in the 15-19 year age group since 1998. These figures are shown in Chart 5.11 from which it can be seen that there has been a decline here too, with a reduction from 28 births per 1,000 young women in 1998 to 19 per 1,000 in 2011.
Comparable conception data are not available for other European countries, but again comparisons can be made for birth rates per 1,000 women aged 15-19. **Chart 5.12** plots the births per 1,000 young women aged 15-19 in a range of countries, as reported in the latest Unicef Innocenti Report Card (Unicef, 2013). There is wide variation in the rates, from 4.32 per 1,000 in Switzerland, to 35.66 in the United States of America. Unicef identifies the mid ranking countries as falling between approximately 10 and 15, but the rate in for the UK as a whole is much higher, at 29.68.

**Chart 5.12**
Births per 1,000 girls aged 15 to 19, Unicef international comparisons, 2013

Rates are relatively high in the UK, but time trends do suggest that live births have been falling in recent years. **Chart 5.13** shows the time trends in the proportion of births to mothers under-20 years in England and Wales, 1961-2011 and demonstrates that, as with conceptions, live births have been falling over this period.

**Sexually transmitted infections**

As well as pregnancy, sexual behaviour carries the possibility of sexually transmitted infections (STIs). Public Health England data on the number of STI diagnoses in England make it clear that the highest rates of infection are among those aged 15-24. Indeed it is estimated that those under 25 accounted for 64% of all new chlamydia cases and 54% of all genital warts diagnoses in heterosexuals in 2012 (Public Health England, 2013).

The 20-24 age group is most at risk of STIs for both genders. Among women, the second age group at risk is 15-19 but in males the 25-29s (PHE, 2013). Under the age of 24 rates are higher in young women than young men. Helping all young people to protect themselves is a major public health issue, but the higher rates in young women indicate that particular attention needs to be paid to health promotion strategies targeted directly at them.
Chart 5.14 presents the rates of selected STI diagnoses, per 100,000 population, for young people in the UK in 2011 by gender and age. Chlamydia is clearly the most frequent STI diagnosis, followed by gonorrhoea. Syphilis is rare.

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<th>Rate per 100,000 population</th>
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<tr>
<td></td>
<td>Chlamydia</td>
<td>Gonorrhoea</td>
<td>Syphilis</td>
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<td>MALES</td>
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<tr>
<td>Under 15</td>
<td>6.7</td>
<td>0.5</td>
<td>0</td>
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<tr>
<td>15-19</td>
<td>960.1</td>
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<td>20-24</td>
<td>1733.5</td>
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<td>15.7</td>
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<td>Chlamydia</td>
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<td>FEMALES</td>
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<tr>
<td>Under 15</td>
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<td>6.4</td>
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<td>112.7</td>
<td>1.2</td>
</tr>
<tr>
<td>20-24</td>
<td>2607.1</td>
<td>112.9</td>
<td>3.3</td>
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Improvements in screening and diagnosis have meant that more STI cases are identified now than previously, so untangling the underlying trends is complicated. England’s National Chlamydia Screening Programme has diagnosed over 470,000 infections in 15-24 year olds. Modelling by the former Health Protection Agency (now Public Health England) suggests it has ‘probably decreased the prevalence of chlamydia among sexually active under-25 year olds’ (HPA 2012a).
In addition, changes to PHE data collection methods in 2012 make comparisons with earlier years difficult. **Chart 5.15** illustrates both these points. The data for chlamydia diagnoses by age group and gender are presented from 2003 to 2012. In 2008 the rates go up as data from community services were included as well as data from genitourinary clinics (GUM). As we can see from the increase in the figures in 2008, the largest proportion of the diagnoses are actually made in the community clinics (59% in 2012) so it does not make sense to look at the trends without including these data. The data for 2012 stand separate from the trend lines because PHE introduced further changes to data collection methods and the results are not comparable to those for 2003-2011. Overall, the last few years have witnessed an increase in diagnoses between 2008 and 2009 and a levelling out or slight decline since then.

Finally, we note that rates of acute STI diagnoses vary by the Index of Multiple Deprivation; for example, Health Protection Agency (now Public Health England) data for London residents in 2011 have shown that the acute STI rate for people living in the most deprived areas of London was 3.4 times higher than for those living in the least deprived areas (Health Protection Agency, 2012). As we have seen, those with STIs are more likely to be young people than other age groups.
References


Chapter 6 | Mental health

- Half of all lifetime cases of psychiatric disorders start by age 14 and three quarters by age 24.
- Surveys show that around 13% of boys and 10% of girls aged 11-15 have mental health problems.
- The most common issues for boys are conduct problems. For girls they are emotional difficulties.
- Over the last ten years there have been falls in physical fighting across countries including the UK.
- Suicide rates for young men have fallen since 2001 to 13.3 per 100,000 in 2011. There has been little change for young women.
- The largest number of admissions to hospital for eating disorders is among young women aged 15 years.
- Other mental health problems include attention deficit and hyperactivity, affecting around two to four percent of teenagers.
- Four out of five young people report high life satisfaction and young people aged 16-19 are among the most optimistic about what the next 12 months will bring.
Mental health

Mental health is a major part of young people’s general wellbeing. There is much debate about whether young people today are more anxious, depressed and stressed than previous generations (Hagell, 2012; Collishaw et al, 2004), but there is no doubt that mental health disorders in young people are surprisingly common. Those most frequent in the teenage years include anxiety and depression, eating disorders, conduct disorder (serious antisocial behaviour), attention deficit and hyperactivity disorder (ADHD) and self-harm. This age also witnesses the early emergence of rarer psychotic disorders such as schizophrenia (Green et al, 2005). In fact, half of all lifetime cases of psychiatric disorders start by age 14 and three quarters start by age 24 (Kessler et al, 2005).

Mental health problems have important implications for every aspect of young people’s lives including their ability to engage with education, make and keep friends, engage in constructive family relationships and make their own way in the world. Detection, treatment and support for young people with mental health problems are all important parts of the services provided to this age group.

Prevalence of mental health problems among young people

The prevalence of selected diagnosed mental health conditions in the UK youth population is not measured regularly and this shortage of good, up to date, data is a real issue in understanding the picture. There are some measures in the British cohort studies but these are not repeated annually and the most recent, the Millennium Cohort Study, only has data available on children in the primary school years at the moment. Two large scale and robust surveys by the Office for National Statistics (ONS) in 1999 (Meltzer et al, 2000) and 2004 (Green et al, 2005) are the source of most information about this topic but unfortunately they have not been repeated since. Given that the Green data were collected in 2004, they are nearly a decade out of date. There has been much concern expressed recently by academics and practitioners about the possible impact of the 2008 economic crisis, including rises in youth unemployment and cuts to services, on the mental health of this age group. Encouraging the collection of new survey data on the topic of adolescent mental health is critical.

In the meantime, drawing on the older data from the last Office of National Statistics survey of child and adolescent mental health in 2004, we can see (Chart 6.1) that the most common mental health problems in young men are conduct disorders and in young women are emotional problems, although both are common in the opposite gender too. Overall, around 13% of boys and 10% of girls were rated as having some kind of disorder.

Chart 6.2 shows that the prevalence of mental health problems varies by ethnicity and Chart 6.3 by parents’ educational backgrounds (as a proxy for socioeconomic status). In the ONS 2004 survey, rates of mental health problems were higher in some ethnic minority groups (Black) and lower in others (Indian, Pakistani and Bangladeshi). The distribution of disorders also appeared to be associated with social background. Young people living in households with higher levels of parental educational qualifications had lower levels of mental disorders.
Analyses of parents’ reports of their 16 year old children’s symptoms in successive British birth cohorts have allowed comparisons of data on this age group from 1974, 1986 and 1999. Although parental report has limitations in terms of understanding young people’s mental health, the repeat of similar questions at these three points offers a unique insight into time trends. Over this 25 year period it appeared that there was a significant increase in emotional problems such as depression and anxiety and a rise in adolescent behaviour problems (Collishaw et al, 2004). However in recent years this trend seems to have slowed down or stopped. Comparison of the two large scale ONS surveys in 1999 and 2004 mentioned above showed little change over this five-year period, as illustrated in Chart 6.4.
Emotional disorders

Allowing further insight into the trends over time, particularly in emotional disorders, Collishaw and colleagues undertook a comparison between surveys in 1986 and 2006, focusing particularly on depression and anxiety (Collishaw et al, 2010). **Chart 6.5** shows parents’ reports of their children’s symptoms of depression or anxiety for one cohort in 1986 and then another cohort in 2006. The same questions were asked in both surveys. Over the 20 year intervening period, ratings of depressed and irritable mood, sleep disturbance, appetite problems and general worry increased in both boys and girls. Rates for all these problems in 1986 ranged from 1% to 12% of the age group; in 2006 they ranged from 3% to 17%. Why this should be the case is not clear (Hagell, 2012) and, as we have noted, the real rises may have been in the 1980s and early 1990s rather than in more recent years.

![Chart 6.5: Parents’ reports of children’s symptoms of depression or anxiety in England by gender, 1986 and 2006](source)

Although not based on any representative sample, it is interesting to note that ChildLine (the UK’s free, 24-hour helpline for children and young people) reported 315,111 counselling sessions in 2011/12, with the primary concerns being family relationships, bullying, physical abuse and self-harm (Harker et al, 2013).
Self-harm and suicide

Self-harm (usually deliberate cutting and scratching) is a key part of the picture of mental health for young people; the majority of people who self-harm are aged between 11 and 25 years (Mental Health Foundation, 2006; Association for Young People’s Health, 2013). However, self-harm is a very private behaviour and a very sensitive topic, which means that there is a shortage of reliable information about young people who do not make use of accident and emergency or other services. A Scottish self-report survey in schools found self-harm reported by 14% of pupils aged 15-16 years and that it was at least three times more common in girls than boys (O’Connor et al 2009). Rates are particularly high amongst groups of vulnerable young people, such as those in the youth justice system. In 2011, for example, 326 young people aged 15-17 self-harmed in prison custody, as did 1,281 aged 18-20 and 1,465 aged 21-24 (Ministry of Justice, 2012).

A minority of people who are self-harming will end up in hospital, but these cases provide important information about this behaviour. Reducing hospital admissions caused by self-harm is a key public health outcome indicator (DH, 2012). Professor Keith Hawton at the Oxford Centre for Suicide Research has been providing trend data for several decades on young people admitted to hospital in the Oxford area as a result of self-harm. **Chart 6.6** illustrates that, despite some variation, rates for both young men and young women have remained broadly within the same parameters over the last two decades. However, admissions for self-harm are clearly higher for young women. The figures may represent a slight rise over time, although rates appear to have fallen in recent years.

It should be remembered that these data are only collected from one region in England so, while they are helpful, they are limited and cannot be considered representative of the whole country.
Suicide is rare among young people but it remains a key public health target. Reducing numbers who commit suicide is a Public Health England outcome indicator and reducing suicide by 20% has been a recent target of the Scottish Government. Chart 6.7 shows rates for young men in the UK as a whole have come down gradually since 2001. In 2011 the rate for young men was 13.3 per 100,000, a reduction over 10 years from 17.6 per 100,000 in 2001. This is a significant achievement, although it is difficult to be sure exactly which factors have contributed to the fall. It is likely that economic factors do play a role and keeping a watching brief on this is important. As far as young women are concerned, there has been little change over the past 10 years with suicide rates remaining low but stable.

Making comparisons of suicide rates between the countries of the UK is difficult, as they vary in definition and how the statistics are presented. Overall, the rates are similar in England, Wales and Scotland, with reductions in suicides by young people over recent years, but rates are consistently higher among young men (ONS, 2013). The trends in Northern Ireland are less clear but the absolute numbers are very small so the rates can fluctuate quite substantially.
More detailed information from the England and Wales statistics is interesting, showing the jump in risk between those aged 15-19 and those aged 20-24. Chart 6.8 demonstrates that rates are more than double in the older age group.

Chart 6.8
Age specific suicide rates by gender and five-year age group (15-19 & 20-24 years), England and Wales, 1991-2011

Conduct disorder and behaviour problems

Almost everyone gets involved in something that would be classified as antisocial at some point. Taking risks and challenging authority can be part of adolescent identity development. In addition, what is defined as antisocial is to some extent culturally and generationally specific. At any time, there are all sorts of different ways to be antisocial, some more concerning than others.

However, serious violent behaviour in this age group is relatively rare and can be associated with longterm negative outcomes. ‘Conduct disorder’ is the official, psychiatric term for serious antisocial behaviour (eg, American Psychiatric Association, 1994), including the extremes of aggressive behaviour (fighting, being cruel to others or animals), destructive behaviour (arson or vandalism), deceitful behaviour (lying, stealing) and violation of rules (running away, truanting). Prevalence estimates for conduct disorder from the 2004 ONS survey suggested a rate of around 6.5% for young people aged 11-15%, with a higher rate in young men than young women (Green et al 2005).

Analyses from the Health Behaviour in School Aged Children (HBSC) study, looking at trends in adolescent physical fighting across 30 countries, have shown that recently there have been declines over time in two thirds of the countries (Pickett et al, 2013), including the UK and the USA. Chart 6.9 presents the comparisons as a standardised prevalence rate in 2002 and 2010 for a selection of these countries. It is interesting to note the rise in countries that have suffered severe economic crises in the intervening years (Greece and Spain, for example).

NB Only a selection of countries is presented for illustrative purposes
Attention Deficit and Hyperactivity Disorder
(ADHD and hyperkinetic disorders)

Key symptoms of ADHD are inattention, impulsiveness and hyperactivity. It has been estimated that it affects around two to four percent of teenagers in the UK, with rates consistently higher in boys than girls (AYPH, 2012). It can affect educational attainment, peer relationships, self-esteem and can contribute to youth offending. Chart 6.10 shows the rates of hyperkinetic disorders (as they are termed in the European classification of mental disorders, ICD-10) by gender in Great Britain, for 1999 and 2004. This demonstrates the higher rates in young men, but there is little to indicate much of an increase in prevalence in recent years.

Eating disorders

Eating disorders tend to start in the mid-teens and understanding these complex and distressing disorders is important when thinking about this age group. Overall, it is estimated that around 1 in 250 females and 1 in 2,000 males will experience anorexia nervosa, usually as an adolescent or young adult, and that around five times this number will suffer from bulimia nervosa (National Collaborating Centre for Mental Health, 2012). However, like self-harm, eating disorders may be underestimated in the general population. Significant proportions will not seek help and good representative community surveys are rare. On the basis of routine Hospital Episode Statistics, The Health and Social Care Information Centre has reported that young people aged 10 to 19 years account for more than half of hospital admissions for eating disorders (HSCIS, 2012). As Chart 6.11 shows, the largest number of admissions in 2011/12 was for 15 year old girls. Although bulimia is more common, anorexia accounts for a larger proportion of the hospital admissions (HSCIS, 2012).
Autistic spectrum disorders

The majority of young people become increasingly focused on their peer groups and social interaction during adolescence so this can be a very difficult time for young people who find it hard to manage their relationships with others. Those with autism and autistic spectrum disorders (such as Asperger’s) may find this a particularly challenging life stage. The defining characteristics of autistic spectrum disorders are impairments of social interaction, communication and imagination and often a reliance on repetitive, habitual activities and behaviours.

Again, the only national survey data relating to prevalence derive from the ONS survey by Green and colleagues. This suggested a prevalence rate of approximately one percent for autistic spectrum disorders (Green et al., 2005). Extrapolating from these figures, the National Autistic Society has estimated that there could be approximately 133,500 young people under 18 years in the UK with an autistic spectrum disorder (National Autistic Society, 2013).
Young people’s reports of their wellbeing

Several surveys regularly ask young people for their own reports of their wellbeing. The Health Behaviour in School Aged Children survey asked 11, 13 and 15 year olds to report their life satisfaction using a device called the Cantrill ladder. Respondents had to place themselves on a 10-step ladder, where the top rung indicates they have the best possible life and the bottom rung indicates the worst. **Chart 6.12** shows the proportion of young people in GB reporting high life satisfaction using this method. Ratings are encouraging, with, on average, four out of five young people reporting high life satisfaction. Rates are similar in England, Scotland and Wales.

**Chart 6.12**
Proportion of young people in GB reporting high life satisfaction, by age, gender and country, 2010

<table>
<thead>
<tr>
<th>Country</th>
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<th>Females aged:</th>
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<tr>
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</tr>
<tr>
<td>England</td>
<td>87</td>
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<tr>
<td>Scotland</td>
<td>92</td>
<td>90</td>
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<tr>
<td>Wales</td>
<td>87</td>
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Source: Health Behaviour in School Aged Children data for England, Scotland and Wales 2010 » Download data

Similarly, the widely cited Unicef Office of Research produces the *Innocenti Report Card* (in fact based in part on HBSC data), assessing child wellbeing in rich countries, with the most recent report published in 2013 (Unicef, 2013). **Chart 6.13** presents the rankings of children’s reported life satisfaction in 29 countries around the world. The UK comes 16th out of 29. Scandinavian countries are over-represented in the top half of the table and Eastern European countries in the bottom half.
<table>
<thead>
<tr>
<th>Rank</th>
<th>UNICEF league table of child wellbeing</th>
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<tbody>
<tr>
<td>1</td>
<td>Netherlands</td>
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<td>2</td>
<td>Norway</td>
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<td>3</td>
<td>Iceland</td>
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<td>Finland</td>
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<td>Latvia</td>
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<td>Romania</td>
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Finally, the new Office for National Statistics Measuring National Well-being Programme reports on various aspects of wellbeing for young people aged 16-24 years in the UK. The first report is for 2012 (ONS, 2012). Overall, relatively high levels of life satisfaction were recorded for the younger age groups (16-17 and 18-19), who were more satisfied than those aged 20-21 or 22-24. People were also asked how optimistic they felt about the next 12 months. Chart 6.14 shows the level of medium to high optimism for the next 12 months by age.

Chart 6.14
Level of medium to high optimism for the next 12 months by age, April 2011-March 2012

Source: Opinions Survey, Office for National Statistics

Click to download data.
References


Chapter 7 | Longterm conditions and disability

- One in seven 11-15 year olds have a longterm illness or disability.
- Approximately 800,000 teenagers in the UK suffer from asthma.
- Diabetes affects approximately 29,000 under-18s.
- Hospital admissions for epilepsy in 10-19 year olds have risen 19% from 2002 to 2009.
- 2,200 young people aged 15-24 are diagnosed with cancer every year.
Longterm conditions and disability

Longterm chronic conditions and disability affect a significant minority of the adolescent population. These conditions include asthma, diabetes, allergies, epilepsy, cancer and physical and mental impairment. Results for England from the Health Behaviour in School Aged Children study (HBSC) in 2010 found that one in seven young people (15%) aged 11-15 reported having been diagnosed with a longterm medical illness or disability.

One in seven 11-15 year olds have a longterm illness or disability

Source: Health Behaviour in School Aged Children, 2010

In the HBSC survey two thirds of those with a longterm condition were taking medication and one third reported that their condition affected their engagement with school (Brooks et al, 2011).

Asthma, diabetes and epilepsy

Asthma is a chronic inflammatory disorder of the airways affecting many young people. It is a complex and episodic disorder. The Quality and Outcomes Framework (QoF) estimates that approximately six percent of the English population has asthma overall, a total of 3.2 million people (HSCIC, 2009). It has been estimated that over 800,000 teenagers in the UK suffer from asthma, and noted that under-diagnosis and poor treatment are common (Couriel, 2003).

More boys than girls are told by a doctor that they have asthma. Drawing on data from the 2010 Health Survey for England (which focused on respiratory disease), Chart 7.1 shows how the prevalence of lifetime asthma increases with age, with four times as many young people aged 13-15 having been diagnosed at some point compared to those under three. This may be partly due to differences in diagnosing very young children.
There has been much debate about whether rates of asthma have increased in recent years, but HSE data suggest that they did not rise for children across the decade from 2001 to 2010. Rates for all boys aged 0-15 fell from 23% to 17% over this period and for girls from 18% to 12% (HSCIC, 2010). These trends are positive and it is worth noting that a smoking ban in public places was introduced in Scotland in 2006 and in England and Wales in 2007. This has been associated with a five percent annual reduction in emergency admissions for asthma in the adult population (Sims et al, 2013). There are also presumably benefits for young people. In addition, as we saw in Chapter 3, smoking by young people has fallen over recent decades before the ban, which may have played a role. However, absolute levels of asthma are still very high.

Diabetes also represents a key concern for this age group. Reducing recorded diabetes is an outcome indicator in the Public Health Outcomes Framework. Drawing on surveys from England, Wales and Scotland, the charity ‘Diabetes in the UK’ has estimated that there are approximately 29,000 children and young people under the age of 18 who have diabetes. Of these, the great majority have Type 1 diabetes, with approximately 500 known to have Type 2 (Diabetes UK, 2011). On this basis, Diabetes UK estimates that local authorities can expect between 100-150 young people under 18 to be living with diabetes in their area. The peak age for diagnosis of Type 1 diabetes is between 10 and 14 years of age. Type 2 diabetes is up to six times more common in people of South Asian descent and three times more common among people of African and African-Caribbean origin (Diabetes UK, 2011).
The number of hospital admissions in England among 10-19 year olds because of diabetes increased by 31% from a baseline of 5,800 in 2002/3 to just under 7,600 in 2009/10 (Chart 7.2). While it is widely accepted that effective management of conditions such as asthma and diabetes can prevent hospitalisation, admissions for diabetes have remained above 7,000 young people per year since 2006. These rates of hospital admission give rise to questions about the standards of care for young people with longterm and chronic conditions and their increase each year. Obesity accounts for between 80-85% of the overall risk of developing Type 2 diabetes but is not related to the development of Type 1. Although obesity in this age group rose until approximately 2004 (see Chart 4.9 previously), it has been relatively stable since then, and the majority of cases in children and young people are Type 1 diabetes.

![Chart 7.2](source)

Epilepsy is another important longterm condition that affects a number of teenagers; more than those with diabetes, in fact, although it receives less attention and results in fewer hospital admissions. Epilepsy Action estimates that some 600,000 people in the UK have epilepsy – around one percent of the population – with young people under 18 accounting for around ten percent of this total. Chart 7.3 shows that there were just over 5,400 hospital admissions for epilepsy among 10-19 year olds in England in 2009/10 – an increase of 19% since 2002/3.
There is emerging evidence from analyses of the Quality Outcome Framework (QoF) prevalence rate data that epilepsy levels are higher in areas that are urban, socially deprived and lacking specialist services (Thomas et al, 2012), suggesting that social determinants of health play a part in its development.

Cancer

Cancer is relatively rare in young people, but is one of the leading causes of death for those in their teens and early 20s. Drawing on data from the cancer registries, Cancer Research UK estimates that around 2,200 young people aged 15-24 years are diagnosed with cancer every year in the UK and approximately 310 of this age group die from cancer each year (Cancer Research UK, 2013).

Chart 7.4 shows the incidence of cancer in young people aged 15-24 in the four countries of the UK, drawing on data from 2008-2010 and giving the European age-standardised rate per million. Rates are similar between the countries. Although there are variations, these are not statistically significant (Cancer Research UK, 2013).
The most common cancers for this age group are lymphomas, including cancer of the lymph system, Hodgkin Disease and non-Hodgkin Lymphoma. Chart 7.5 shows cancers for the 15-24 year age group by diagnostic group, presenting the average annual number of new cases. Lymphomas account for 21% of new cases each year, closely followed by carcinomas (malignant tumours on the surface or lining of a body organ), accounting for a further 20%. Cancers show different distributions by gender; there are more lymphomas, germ cell tumours (in cells producing sperm and eggs) and leukaemias (cancer of the white blood cells) among young men and more carcinomas and malignant melanoma among young women (Cancer Research UK, 2013). Overall it is estimated that the male:female ratio for cancer in this age group is 11:10.

The cancer registry data compiled by Cancer Research UK suggests an overall increase in cancer among 15-24 year olds in the UK since the 1990s; up 21% for females since 1993-4 and up 16% for males over the same period. Mortality, however, has fallen, almost halving since the 1970s (Cancer Research UK, 2013). Overall, over 80% of those diagnosed survive five years or longer.

Disability

There are a number of ways of defining disability. The most widely used definition derives from the UK Equality Act 2010. This specifies that a disability is a physical or mental impairment that has substantial and longterm (usually one year) negative effects on a person’s ability to do normal daily activities. This might include arthritis, HIV infection, cancer, chromosomal and gene problems (for example, Downs Syndrome, cystic fibrosis, haemophilia and spina bifida), or loss of physiological and psychological functions such as mobility, sight, hearing and learning capacity. Disability can result in social, economic or
environmental barriers restricting full and equal participation in society. According to the formal definition, the Life Opportunities Survey undertaken by the Department for Work and Pensions (wave one results) in 2009/11 found that nine percent of children aged 11-15 and eight percent of young adults aged 16-24 in GB were disabled. In the older age group, aged 16-24, eight percent were disabled (Office for Disability Issues, 2011).

Estimates vary in different surveys depending on the definition of disability used and the age bandings used. As we have already seen, the HBSC made a slightly higher estimate. In the General Lifestyle Survey, rates for children aged 5-15 using a broader definition of ‘long-standing illness or disability’ were 16% for boys and 10% for girls in the 2010 survey (ONS, 2012). Most surveys show that proportionately more boys than girls have long-standing illnesses or disability.

**Chart 7.6** presents data from the Life Opportunities Survey to show that longterm pain and chronic health conditions are the most common forms of impairment experienced by older adolescents and young adults. Chronic health conditions included asthma, severe allergies, heart disease, diabetes, cancer, epilepsy, cerebral palsy, spina bifida, cystic fibrosis and arthritis. While learning difficulties and mental health conditions both affected three percent of the age group, all other impairments affected around one percent of this group. Despite a significant proportion of young people suffering from chronic pain, there is a real gap both in terms of the treatment evidence base and the provision of specialised services.
Finally we consider parental reports of the participation levels of children aged 11-15 with and without impairments. **Chart 7.7** demonstrates the high levels of restrictions experienced by these young adolescents with impairments compared to others in their age group. In core areas like education, well over one quarter of young people with an impairment experience restrictions in access and opportunity compared to only a very small percentage of children without impairments.

**Chart 7.7**
Participation restrictions experienced by children aged 11-15 in Great Britain 2009/11

**Source:** Life Opportunities Survey, Wave one results, 2009/11 - Download data
**Chart 7.8** shows that parents identified the attitudes of others as being one of the most significant modifiable barriers encountered by their children.

Professor Sir Ian Kennedy’s report on children in the NHS (Kennedy, 2010) identified the major barriers that disabled young people face in accessing quality health services. They included the lower priority they are afforded, the lack of coordination between services and the sheer complexity of the services that some young people need. Other research has revealed the significant barriers restricting disabled young people’s participation in society, the greater risk they face of targeted violence and the fact that younger disabled people are least likely to be satisfied with their lives. We look in more detail at services for adolescents in the next two chapters, and it is important to bear in mind the particular challenges faced by this important minority of young people.
References


Kennedy, Professor Sir Ian (2010) Getting it right for young people. London: Department of Health


Chapter 8  |  Health promotion and use of health services

- Young people rely on their family for help and support.
- Young women aged 15-19 visit their GP 4.5 times a year on average, and young men visit twice a year on average.
- A fifth of girls felt uneasy with their GP at their last visit.
- A fifth of emergency admissions in those under 19 are accounted for by 16-19 year olds.
- In one study 35% of young people with mental health problems were not referred on to adult services.
Health promotion and use of health services

Good outcomes for young people rely on an interaction between their needs and how well services can meet them. In order to be effective, health care has to respond to the particular health needs of the target population (Nolte, McKee and Pomerleau, 2005).

Health promotion

There is a substantial and growing evidence base on what works in terms of changing health behaviour, including the role for health promotion (Davies, Macdowall and Bonell, 2006). This can take place through population level interventions such as media information campaigns, or upstream actions such as advertising bans, tax incentives and pricing structures (for example, in relation to alcohol sales) and clearer food labelling. Health promotion can also work through provision of information at school, vaccination programmes, access to helplines and individual support and advice.

There are few survey data on young people’s experience of health promotion, but what do exist centre on the provision of personal, social, health and economic education (PSHE). PSHE is considered a necessary part of the school curriculum in the UK although in England and Wales it is currently not a statutory requirement. The aim of PSHE is ‘...to equip pupils with a sound understanding of risk and with the knowledge and skills necessary to make safe and informed decisions’ (Department of Health, 2013). Taking the example of education about substance misuse, Charts 8.1 and 8.2 draw on data from the Smoking, Drinking and Drug Use (SDDU) survey commissioned by the NHS Health and Social Care Information Centre (HSCIC) to consider young people’s own perspectives on the classes they have received. The SDDU compiles data from approximately 6,000 young people aged 11-15. Chart 8.1 illustrates that although there have been minor fluctuations since 2003 the proportion of pupils who remember receiving drug-related health education lessons has remained relatively stable at around 60%.

Source: Smoking, drinking and drug use among young people in England in 2011 » Download data
Chart 8.2 presents findings from the same survey, relating to pupils’ perceptions about the effectiveness of health education in terms of increase in risk-related knowledge and impact on drug-taking behaviours. The majority of pupils viewed the lessons positively in terms of increasing their knowledge about risk and sources of help or advice. However, pupils who have taken drugs more recently are least likely to feel the lessons had helped them to avoid future drug taking or given them strategies for managing high-risk situations. There could be a number of reasons for this and the pattern of causality is not clear.

<table>
<thead>
<tr>
<th>When last took drugs</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In last month</td>
</tr>
<tr>
<td><em>They helped me to.....</em></td>
<td></td>
</tr>
<tr>
<td>... think about the risks of taking drugs</td>
<td>88</td>
</tr>
<tr>
<td>... find out more about drugs</td>
<td>90</td>
</tr>
<tr>
<td>... realise that taking drugs is against the law</td>
<td>83</td>
</tr>
<tr>
<td>... avoid drugs</td>
<td>44</td>
</tr>
<tr>
<td>... think about what I would do if someone offered me drugs</td>
<td>65</td>
</tr>
<tr>
<td>... find out where to go to get information or help about drugs</td>
<td>78</td>
</tr>
<tr>
<td>... understand why people take drugs</td>
<td>70</td>
</tr>
<tr>
<td>... see that not as many young people take drugs as I thought</td>
<td>35</td>
</tr>
</tbody>
</table>

Source: Smoking, drinking and drug use among young people in England in 2011 » Download data
Chart 8.3 provides an overview of the sources of information and support that young people report using for emotional and physical health issues. Among 12-15 year olds, peers feature strongly as sources of information and support. However, many adults might be surprised to learn that, with the exception of sex and relationships and marital conflict, many young people report turning first to their family. This finding illustrates the value of providing support for parents in communicating with their teenage children. Importantly, primary health care services also feature as a source of advice and help for a wide range of issues, highlighting the value of helping GPs and others to prioritise young people’s health improvement.

Source: Balding and Regis (2012), ‘Young People into 2012’ Exeter: Schools Health Education Unit » Download data
General Practice (GP) consultations

As Chart 8.3 suggests, young people use their GPs for a wide range of health issues. Chart 8.4 draws on data from the QResearch Database, providing trends in consultation rates for general practice for young people from 1995 to 2008. QResearch collates electronic health data collected from over 600 GP practices. These show a relatively stable rate of consultation over this period. There are consistent gender-based patterns of GP usage; male consultation patterns remain relatively constant at around two consultations per year. Among young women, however, late adolescence (15-19 years) marks a dramatic increase in rates to an average of 4.5 per year, with a further increase to 5.5 consultations per year by age 20-24.

The ‘Young People into 2012’ study from the Exeter Schools Unit (Balding and Regis, 2012) indicates that around half of school pupils in Year 10 (aged 14-15 years) had visited their GP in the three months preceding the survey (Chart 8.5). It is evident from both Chart 8.4 and Chart 8.5 that young people form a substantial group of users of primary health care, particularly young women.
Balding and Regis (2012) also report on teenagers’ experience of talking to their GP, with Chart 8.6 showing that a fifth of girls (22% of Year 8 and 20% of Year 10) reported feeling ‘quite uneasy’ or ‘very uneasy’ with their doctor on their last visit. This highlights the importance of supporting GPs to provide youth friendly services.

We have previously noted the dearth of up-to-date information about young people’s usage of primary health care services. Over a decade ago, Churchill et al (2000) identified the range of conditions that prompted young people to seek a primary health care consultation. The most common were respiratory, dermatological and musculoskeletal conditions and problems associated with ears, nose and throat. New data on this topic are now needed urgently. Data on young people’s experiences with the wider range of professionals involved in primary health care – such as practice nurses – are also lacking.

Hospital admissions

Young people may have lower overall morbidity than older age groups, but their needs due to illness or longterm conditions must not be overlooked within health policy and service planning. Nationally there are still very few hospital facilities specifically for teenagers. Yet many young people, particularly those with a longterm or chronic condition, are at risk of hospital admission and age appropriate services can help to make these experiences easier and may potentially make the visits more effective in improving health outcomes.

Recent analysis of the Hospital Episode Statistics for the years 1999-2010 has revealed an increase of 28% in the emergency admission rate for children under the age of 15 in England (Gill et al, 2013). As Chart 8.7 shows, the rise is less notable in those aged 10-14 years than for the age group as a whole, which is reassuring. The authors note that
the rises are primarily due to increases in admissions for common infections, including respiratory tract infections, urinary tract infections and gastroenteritis. Ideally, emergency admissions should be going down. Reducing emergency admissions is to everyone’s benefit. It reduces costs to the system and reduces the chance of hospital-acquired infections (Gill et al, 2013). In addition, another set of analyses of the same Hospital Episode Statistics has suggested that children and young people from more deprived areas (based on the English Indices of Deprivation) account for a greater proportion of inpatient care than those from more affluent areas (Hargreaves et al, 2012).

Chart 8.8 shows a significant proportion (22%) of emergency admissions for those under 20 years old is accounted for by those aged 15-19 years.

Source: Hospital Episode Statistics » Download data
In 2004, a National Young Patient Survey was undertaken as part of the NHS patient survey programme. These data are old now, but the survey has not been repeated and provides a useful baseline. Based on nearly 9,000 respondents who had been inpatients, the survey showed that ten percent of 12-14 year olds and 18% of 15-17 year olds were treated on adolescent wards at that time. Smaller proportions were treated on adult wards (less than half of one percent for the 12-14 year olds but 16% of the 15-17 year olds). The remainder were treated on children’s wards (Viner, 2007). We urgently need to update these data in the light of a decade of changes to NHS provision.

It is also worth noting that around a quarter of teenagers and young adults with cancer present as an emergency admission to hospital; their cancer is essentially diagnosed in A&E (Cancer Research UK, 2013).

Transition from children’s to adult services

Increasing numbers of children with longterm conditions are surviving into adulthood, because of improved healthcare. Adolescence is a time of moving to independent use of health care. Successful management of ongoing conditions can reduce the need for emergency care and improve outcomes. The transition from child services to adult services through the years from 16 to 19 or so has received increasing attention, particularly in relation to child and adolescent mental health services but also in relation to longterm conditions such as diabetes, kidney disease and epilepsy (Royal College of Nursing 2004; Allen et al 2010; Brodie et al, 2011; Joint Commissioning Panel for Mental Health, 2012).

However, there are very few data on young people making the transition from children’s to adult services. In the first study to follow a systematically identified cohort of young people crossing the boundary from child to adult mental health services, Singh et al (2010) reported that a third were not referred on to adult services and a fifth of those referred on were never seen. Fewer than four percent were reported to have experienced optimal transition. The study was relatively small and only explored mental health services, but suggests the need for more data on this topic.

Palliative care

Although young people’s death rates are low and a major cause is accidents, there is still a small but very important group who are likely to require palliative care. Across England, for example, it was estimated from 2005 data that 20,088 young people aged 0-19 years required palliative care and that 1,787 died from causes likely to have required it (Cochrane, 2007). Less than half of these will be in the 10-19 age group. In the last edition of Key Data on Adolescence (2011) we drew on Hospital Episode Statistics to estimate that there were approximately 750 deaths per year in England among 10-19 year olds from causes requiring palliative care. There are no universal registers of patients with palliative care needs, that patient data are not collected in a consistent form and definitions of palliative care can vary (Savage, 2011).
Chart 8.9 presents data from a three year period (2006-2009) on deaths from causes likely to require palliative care. The most common were neoplasms (cancer in body tissue) and diseases of the nervous system.

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>10-14</th>
<th>15-19</th>
<th>20-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoplasms</td>
<td>337</td>
<td>554</td>
<td>729</td>
</tr>
<tr>
<td>Diseases of the nervous system</td>
<td>285</td>
<td>475</td>
<td>498</td>
</tr>
<tr>
<td>Congenital malformations, deformations and chromosomal abnormalities</td>
<td>148</td>
<td>194</td>
<td>203</td>
</tr>
<tr>
<td>Endocrine, nutritional and metabolic diseases</td>
<td>107</td>
<td>105</td>
<td>166</td>
</tr>
<tr>
<td>Diseases of the circulatory system</td>
<td>100</td>
<td>229</td>
<td>338</td>
</tr>
<tr>
<td>Diseases of the blood, blood forming organs &amp; immune mechanism</td>
<td>45</td>
<td>69</td>
<td>86</td>
</tr>
<tr>
<td>Diseases of the musculoskeletal system &amp; connective tissue</td>
<td>42</td>
<td>66</td>
<td>44</td>
</tr>
<tr>
<td>Diseases of the genitourinary system</td>
<td>25</td>
<td>33</td>
<td>72</td>
</tr>
<tr>
<td>Injury, poisoning and certain other consequences of external causes</td>
<td>16</td>
<td>39</td>
<td>26</td>
</tr>
<tr>
<td>Diseases of the digestive system</td>
<td>15</td>
<td>26</td>
<td>88</td>
</tr>
<tr>
<td>Diseases of the respiratory system</td>
<td>13</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>Certain conditions originating in the perinatal period</td>
<td>11</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Certain infectious and parasitic diseases</td>
<td>10</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>External causes of morbidity and mortality</td>
<td>1</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Mental and behavioural disorders</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Hospital Episode Statistics, NHS Information Centre  » Download data

Most deaths from causes needing palliative care occur in hospital. It has been estimated that 74% of deaths for the 0-19 age group (excluding neonatal) occurred in hospital. Approximately 19% occurred at home and only seven percent either in a hospice or some other setting such as a psychiatric hospital (Cochrane et al, 2007). More detailed data would establish whether more needs to be done to meet the needs of very ill adolescents and to ensure the most appropriate location for them.
References


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Concluding comments

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AYPH is committed to improving data sources on adolescent health as a way of improving outcomes for young people. We firmly believe in the importance of considering the health needs and outcomes for this group as separate from children and adults. Adolescence is a critical time for health. The effects of poor health can last a lifetime and health inequalities are already detectable at this age. Ignoring chronic adolescent disease is an inefficient use of resources. *Key Data on Adolescence* is an attempt to collate what we know, but we are limited by the restrictions of the existing data. As Professor Sir Ian Kennedy (2010) noted in his review of children’s services, it is not just information on trends in health outcomes that is needed, but good robust data on health service performance as well.

There are issues with the paucity of data overall, but there are also difficulties of separating out those aged 10-24 years, and then further dividing that age group into quinary bandings (10-14 years, 15-19 years etc). In addition, there are complications in comparing outcomes across the countries of the UK. It is a rare indicator that is measured in the same way, at the same time, for the same age group across England, Wales, Scotland and Northern Ireland. We would also like to note the challenges posed by recent changes to some of the key surveys that we have relied on previously. Some data are not being routinely collected in the same way.

However, despite the limitations on data, it is clear there have been improvements. The positive developments of the last decade or so need to be recognised. Many of the negative health behaviour trends of the 1980s and 1990s seem to have passed their peak. Young people are drinking less, using fewer drugs, exhibiting less violence, making good use of contraception, achieving in the educational arena, drawing on support from their families, and generally making use of the services on offer to them. However, there are three things we would like to emphasise.

First, unlike its predecessors, this version of Key Data explicitly focused on data relating to the social determinants of health for this age group. We made a first step in this direction; but much more needs to be done to discover how patterns of advantage and disadvantage manifest in the transition from childhood to adolescence. While the overall picture may be positive, it is clear that there are particular challenges and disadvantages facing some subgroups of young people as they make this transition.

Second, we also attempted a new approach this year by drawing together the available information on health promotion and use of health services into a separate chapter. Again this highlights the need for more data on use of services by those in their teens and early 20s, but it also emphasises how much primary care can offer young people.

Third, alongside our collation of the data we have been mindful of indicators in the 2012 Public Health Outcomes Framework, and also the priorities of the Children and Young People’s Health Outcomes Forum. Many of the indicators relate to adolescence. Taking note of these data – and improving their collection – will help practitioners and commissioners to meet the targets and improve young people’s health.

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