

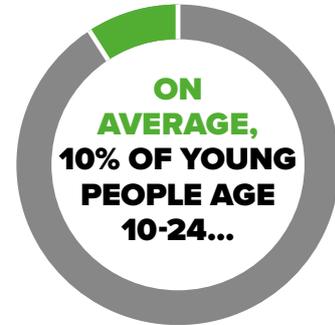
# CHAPTER 6: Physical health, longterm conditions and disability



**1 IN 4 (23%)**  
of 11-15 year olds report that they have a longterm illness or disability

The leading causes of disability in young people in the UK are...

- SOCIAL/ BEHAVIOURAL**
- LEARNING DIFFICULTIES**
- STAMINA/ BREATHING/ FATIGUE**
- MENTAL HEALTH**



have a disability that affects their ability to do normal daily activities



Those aged 16-20 are the group most likely to be diagnosed with asthma

**APPROXIMATELY 36,000 CHILDREN AND YOUNG PEOPLE UNDER 19 HAVE DIABETES IN THE UK**

**PEAK AGE FOR DIAGNOSIS OF TYPE 1 DIABETES IS BETWEEN 9 AND 14**

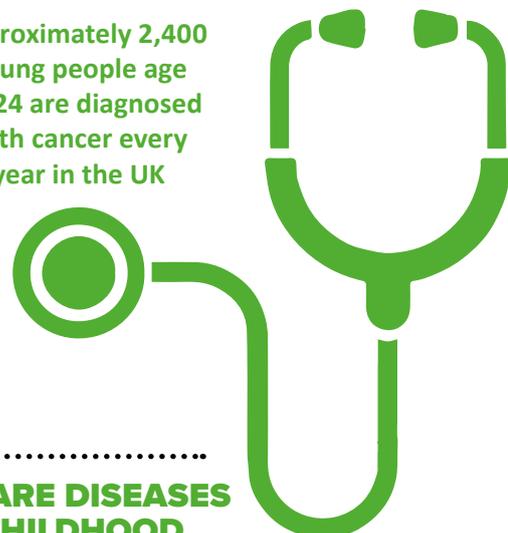


Approximately **34,000** young people under 18 have a diagnosis of epilepsy and are taking antiepileptic drugs in England



**OVER A QUARTER** of children and young people with Type 1 diabetes need additional psychological support

Approximately 2,400 young people age 15-24 are diagnosed with cancer every year in the UK



**THREE QUARTERS OF RARE DISEASES HAVE THEIR ONSET IN CHILDHOOD**

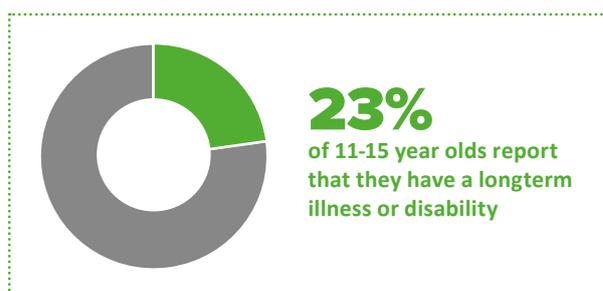
## Physical health, longterm conditions and disability

Although the years 10-24 tend to be a time of good physical health, many young people will experience a range of short term physical health problems. A significant minority will have longterm chronic conditions or some kind of disability.

### Common physical health problems

Headaches, abdominal pain, muscular skeletal disorders, allergies, skin disorders and acne, coughs and respiratory infections are some of the common physical health problems for which young people seek medical advice. Young people are more frequent users of primary care services than is often thought (see Chapter 8). However there are no up to date robust prevalence data on the regular short term health problems of this age group. The topic has not been covered in the Health Survey for England (HSE) since 2002, and there have been no large scale studies of why young people in particular present at general practice since Churchill et al (2000).

Research on individual topics such as headaches (Abu-Arafeh et al, 2010) and skin conditions (Scholfield et al, 2009; Scholfield et al, 2011) suggest these may be very common in this age group. For example, it has been estimated that over half of children and adolescents have suffered headaches (Abu-Arafeh et al, 2010). Prevalence of acne, which usually starts in puberty, has been estimated at between 50% of 14-16 year olds (Smithard et al, 2001) to 80% of all those aged 12-24 (Lynn et al, 2016). A systematic review of epidemiological studies concluded that moderate-to-severe acne affects around 20% of young people, and that acne persists into the 20s in around two thirds of individuals (Bhate and Williams, 2012). The Global Burden of Disease Study 2010 suggested that lifetime prevalence of eczema in children and young people is between 15-30% in industrialised countries, a rate that has increased three fold in the last 30 years (Pawankar et al, 2013). More UK data on young people's routine health concerns (other than longterm conditions such as diabetes) are urgently required for planning services and training GPs and other primary care professionals.



Source: Brooks et al (2015) HBSC study

Experience of chronic pain (usually defined as lasting for approximately 3 months or more, or recurring in episodes over months and years) has been reported to be prevalent in significant proportions of adolescents, although estimates vary widely from 20% to 60% (Howard, 2011). Adolescent pain includes chronic headaches or migraines, fibromyalgia, regional pain syndromes, and irritable bowel syndrome. The 2017 Health Survey for England reported that

among 16-24 year olds, 20% of young women and 11% of young men reported chronic pain, and also noted that chronic pain was more prevalent among lower income groups (NHS Digital, 2018).

The 2013 Health Survey for England covered the use of prescribed medicines and revealed that in the 16-24 age group, 14% of young men and 25% of young women had taken at least one prescribed medicine in the last week. These were largely medicines for respiratory conditions, or antidepressants, antibiotics, analgesics or non-steroidal anti-inflammatory drugs (HSCIC, 2013).

Longer term conditions – where more data are available – include asthma, diabetes, epilepsy, arthritis, cancer and physical and mental health. Overall, results for England from the Health Behaviour in School-aged Children study (HBSC) in 2014 found that 23% of young people aged 11-15

reported that they had a longterm illness, disability or medical condition. The question was broad and left the definition of longterm illness to young people, but did indicate that it needed to have been diagnosed by a doctor. Of those who said yes, half reported their condition was asthma. Of those with a disability, 59% said they were taking medication (Brooks et al, 2015).

## Asthma, diabetes, epilepsy and arthritis

Young people aged  
**16-20** are the group  
most likely to be  
diagnosed with **asthma**

Source: British Lung Foundation (2016)  
Respiratory Health of the Nation

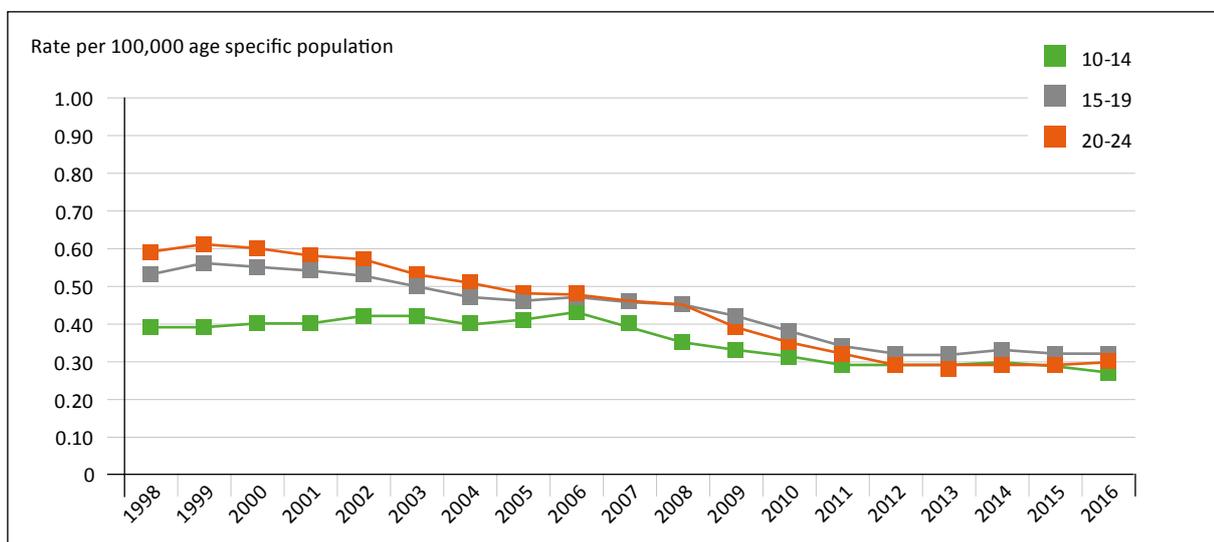
Asthma is a chronic inflammatory disorder of the airways affecting many young people. It is a complex and episodic disorder. Drawing together data from a number of different national datasets, the British Lung Foundation's 'Respiratory Health of the UK' project estimated that 8 million people – over 12% of the population – have been diagnosed with asthma at some point (Mukherjee et al 2016; Snell et al, 2016). Since 2008, young people aged 16-20 have been the group most likely to be diagnosed. Overall, Asthma UK (2019) estimates that 1 in 11 children and young people have asthma.

Taken together, these statistics suggest that something in the region of a million young people between the ages of 10 and 24 are likely to have asthma.

There has been much debate about whether rates of asthma have increased in recent years, but time trend data from the Respiratory Health of the UK project, from 2004 to 2012 suggested that lifetime prevalence of asthma had declined in children and increased in adults over that period. It is worth noting that a smoking ban in public places was introduced in Scotland in 2006 and in England and Wales in 2007. In addition, as we saw in Chapter 4, smoking by young people had fallen over recent decades before the ban, which may have played a role.

More recent data on time trends in prevalence are not available, but statistics on asthma mortality rates for the UK from 1998 to 2016 are available from the Global Burden of Diseases study. **Chart 6.1** shows that for 10-14 year olds, 15-19 year olds and 20-24 year olds in the UK there was a decline in asthma mortality from 1998 to 2011, but the decline appeared to have plateaued since 2011 (Shah and Hagell, 2019).

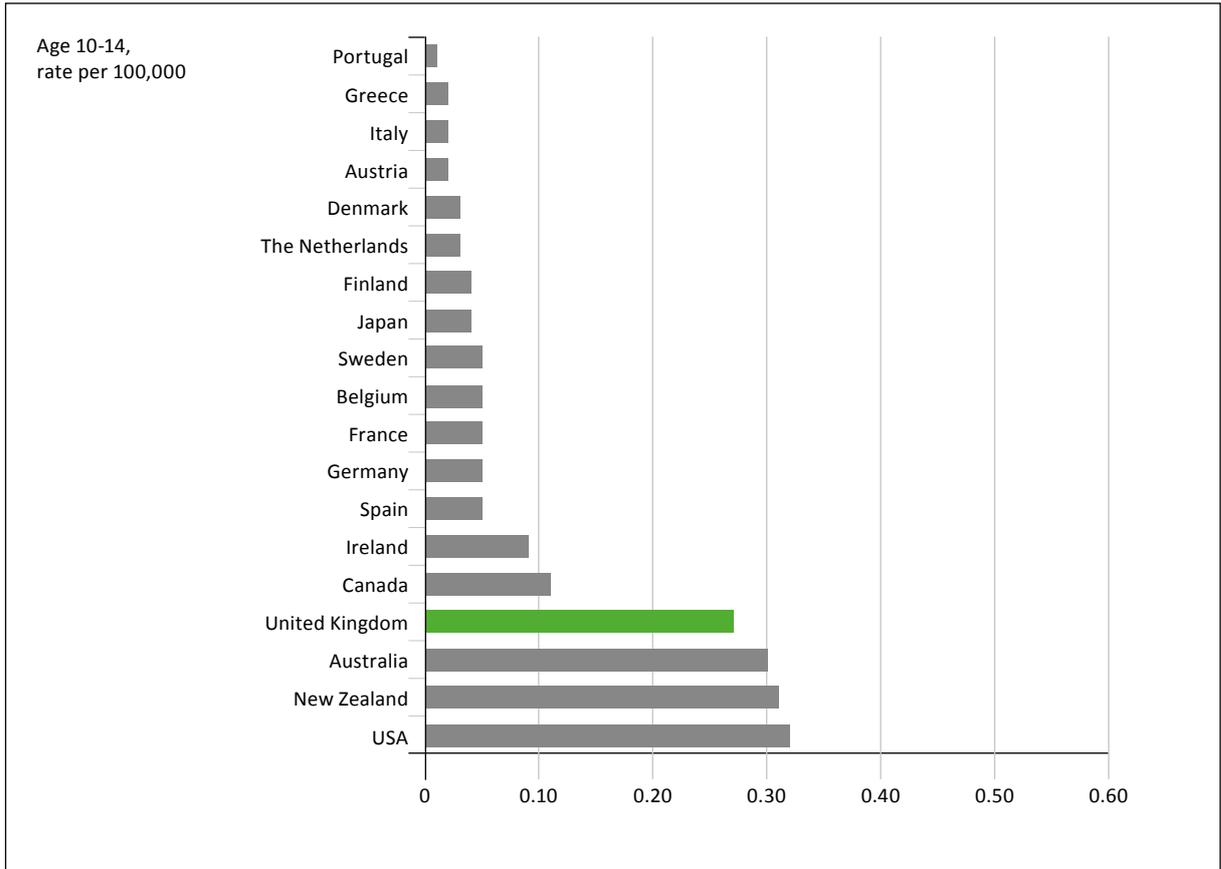
Chart 6.1: Asthma mortality rates, per 100,000 age specific population, 10-24 year olds, UK, 1998-2016



Source: Global Burden of Disease Study, 2016 (last accessed January 2019) > [DOWNLOAD DATA](#)

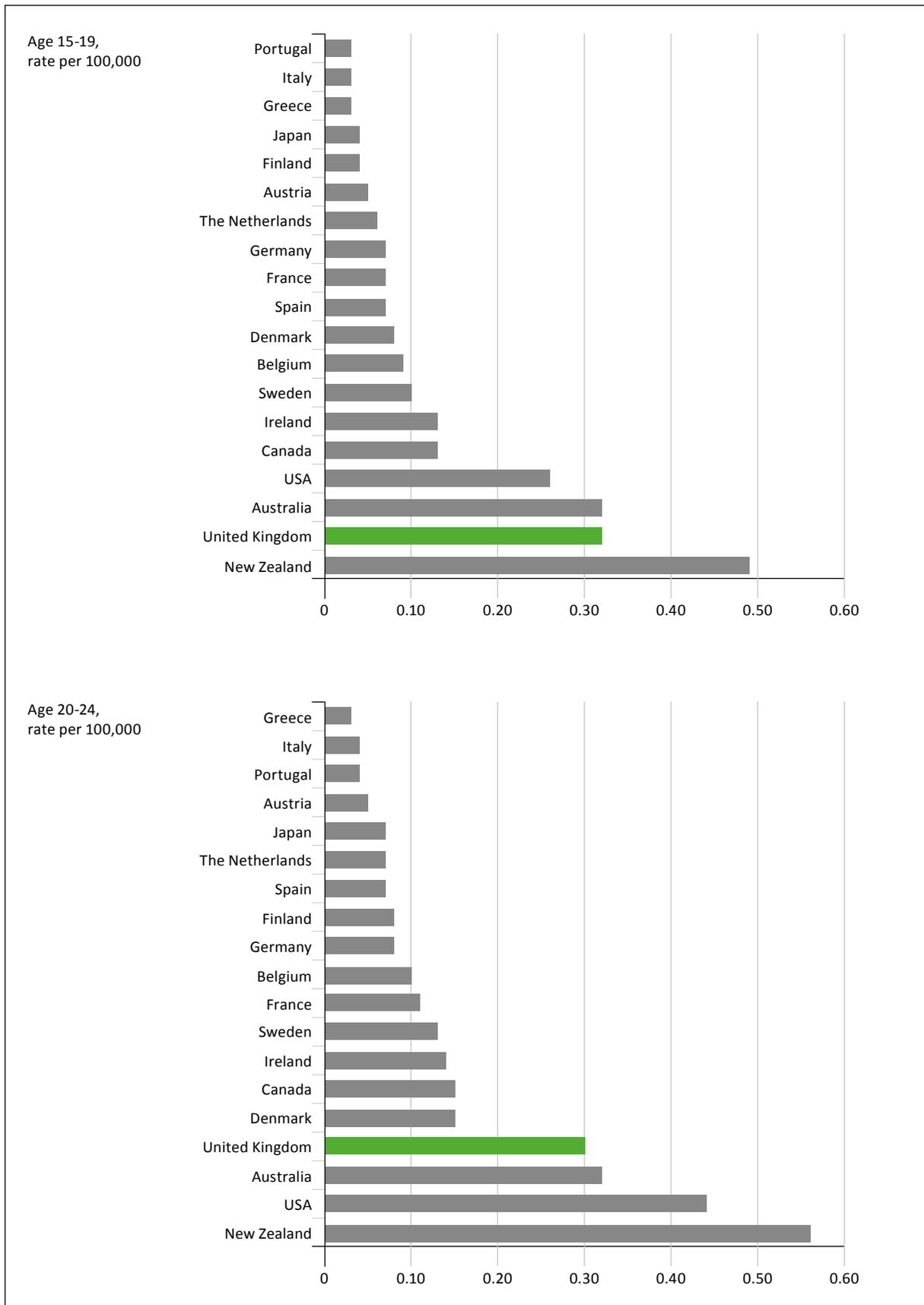
International comparisons of asthma mortality rates, again using the Global Burden of Disease study, have shown that the UK has some of the highest rates compared with other similar high-income countries. Comparisons for rates for 10-14 year olds, 15-19 year olds and 20-24 year olds are shown in **Chart 6.2**.

**Chart 6.2:** Comparison of asthma mortality rates for young people aged 10-24 per 100,000 age-specific population, 2016



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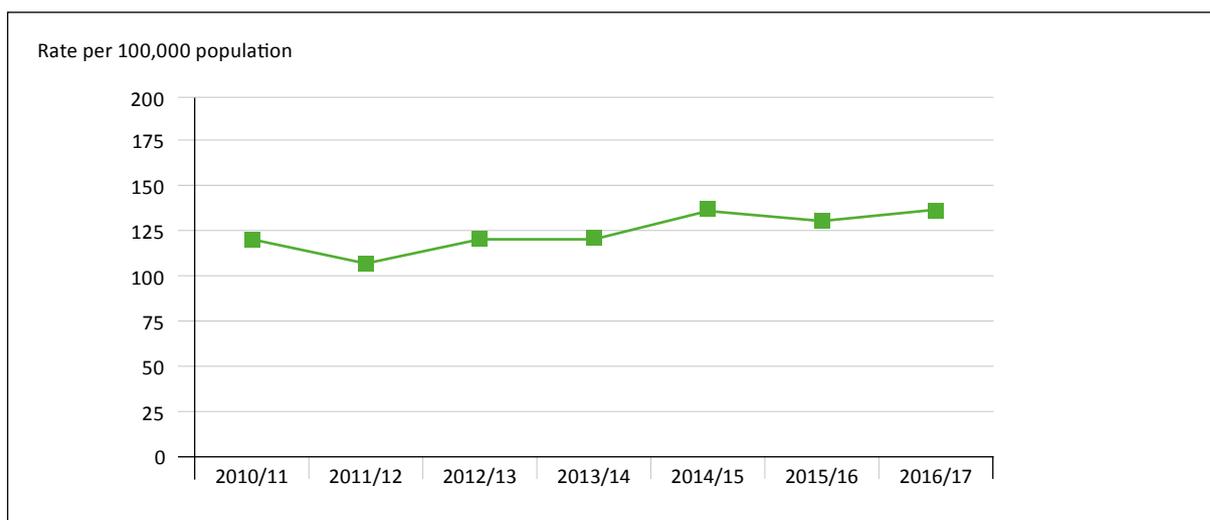
Chart 6.2 Continued



Source: Global Burden of Disease Study, 2016 (last accessed January 2019) > [DOWNLOAD DATA](#)

Research has shown that there are a number of barriers to the successful management of asthma in this age group which need addressing in order to improve young people's outcomes, including concerns related to side effects (such as weight gain), social stigma and feelings of embarrassment and exclusion (Simoni et al, 2017). Poor management can result in hospital admissions. **Chart 6.3** shows that hospital admissions for 10-18 year olds rose in England from 2010/11 to 2016/17.

**Chart 6.3:** Hospital admissions of 10-18 year olds for asthma, England, 2010/11 to 2016/17



Source: NHS Digital: Hospital Episode Statistics (HES) > [DOWNLOAD DATA](#)

Diabetes also represents a key concern for this age group. Diabetes is a serious life-long health condition, where the amount of glucose in the blood is too high because the body cannot use it properly. It may cause longterm complications and needs to be well managed. Reducing recorded diabetes is an outcome indicator in the Public Health Outcomes Framework (Public Health England, 2016). Drawing on surveys from England, Wales and Scotland, the charity Diabetes UK has estimated that there are approximately 36,000 children and young people under the age of 19 who have diabetes. Of these, the great majority have Type 1 diabetes (90%). The remainder have Type 2 and other rare forms (Diabetes UK, 2019). They also note that the first children with Type 2 diabetes were diagnosed in the UK in the year 2000. Although still very uncommon, the number of cases of Type 2 diabetes in children and young people in the UK continues to rise, particularly among girls and South-Asian children (Candler et al, 2018).

Approximately  
**36,000**  
children and young  
people under 19 in the  
UK have diabetes

Source: Diabetes UK (2019)

Similar estimates of prevalence are provided in an annual national paediatric audit undertaken by the Royal College of Paediatrics and Child Health (RCPCH, 2019). The audit aims to monitor the incidence and prevalence of all types of diabetes among children and young people receiving care from a paediatric diabetic unit in England and Wales, of which there are 172. The 2017/18 audit included all the paediatric diabetic units in England and Wales and collected data on 29,752 children and young people up to the age of 24 years under the care of a paediatric consultant (all young people with diabetes should be under the care of a consultant but some may not be). In 2017/18, the prevalence

of Type 1 diabetes in children and young people aged 0 to 15 years old in England and Wales was 196.0 per 100,000 of the general population; it was slightly higher among boys (198.1 per 100,000) compared to girls (193.2 per 100,000). Rates were very similar over the last three years.

Peak age for diagnosis of Type 1 diabetes is between 9 and 14 years

Source: Diabetes UK (2019)

Surveys also show that the peak age for diagnosis of Type 1 diabetes is between 9 and 14 years of age, and while most children and young people with diabetes are white, children and young people of non-white ethnicity have a disproportionately higher prevalence of diabetes (RCPCH, 2019; Diabetes UK, 2019). Type 1 diabetes is not related to obesity, but a rise in obesity among young people may result in more Type 2 diagnoses in the longterm. Drawing on the paediatric audit for 2016/17, Diabetes UK has calculated that 6,825 young people 10-24 were treated for Type 2 diabetes in GP practices in England and Wales that year (Diabetes UK, 2018)

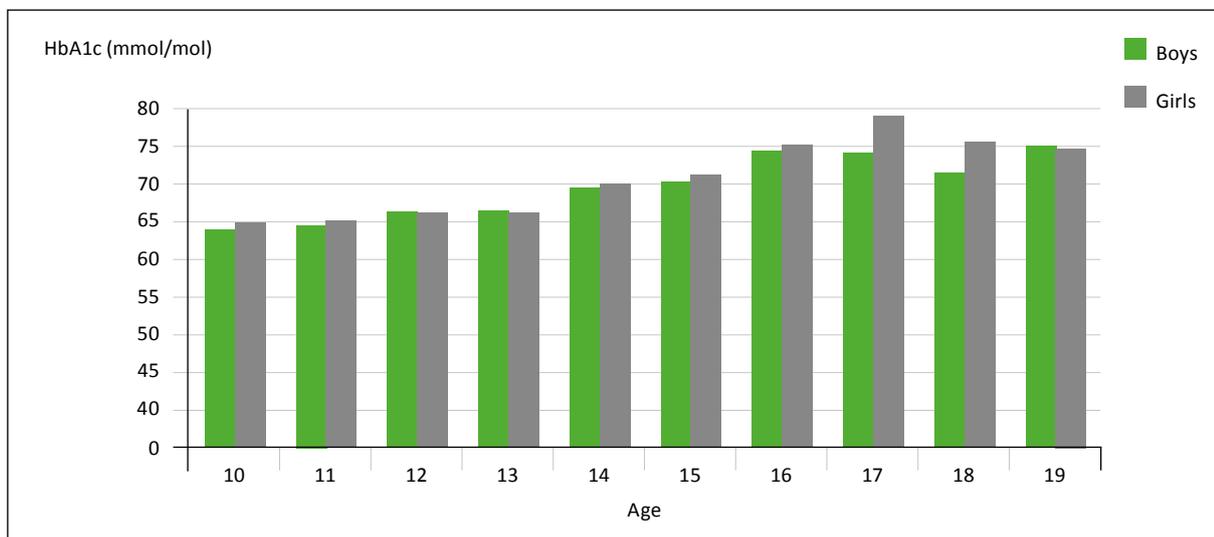
**6,825**  
10-24 year olds were treated for Type 2 diabetes in GP practices in England and Wales in 2016/17

Source: Diabetes UK (2018)

Management of diabetes in young people can present challenges. All those over 12 years should have certain checks that are required to screen for various complications arising from the disease. Since 2004/05, there has been consistent improvement in the percentages of children and young people recorded as receiving essential health checks (RCPCH, 2019). In the 2017/18 audit, over three quarters of young people aged 12 and above had the required foot and eye checks, a distinct improvement on previous years. Diabetic control was worse for young people if they lived in a deprived area, were of a non-white ethnicity, or were female (RCPCH, 2019). Diabetic control also varies by age. It is usually measured by a blood test showing

the average blood glucose (sugar) levels for the last two or three months (HbA1c). A low HbA1c measure is better than a high one. **Chart 6.4** shows that diabetic control as measured by the National Diabetes Audit in 2017/18 was better at young ages than for older teenagers.

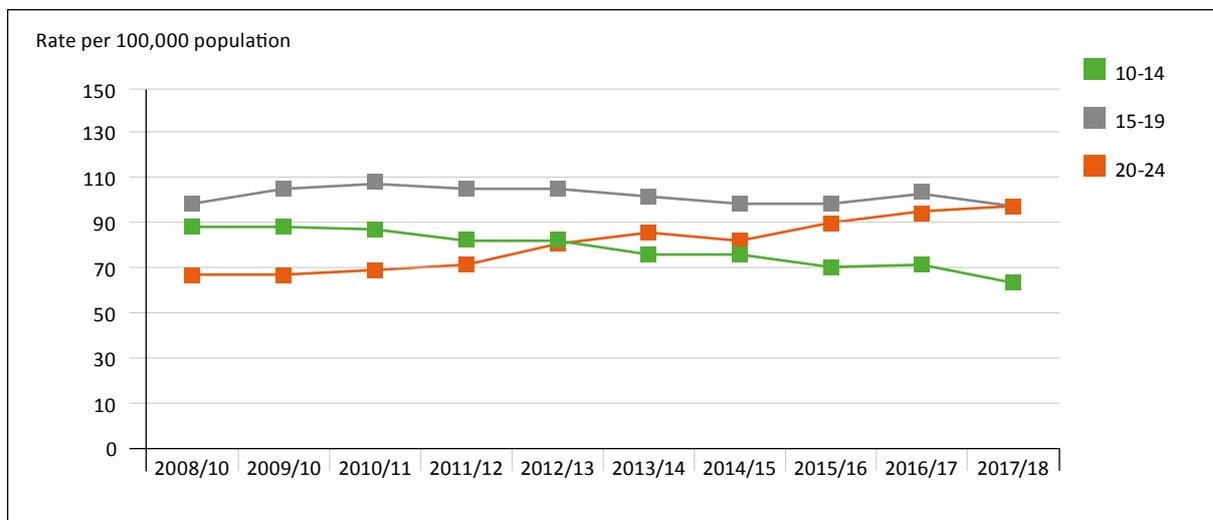
Chart 6.4: HbA1c outcomes by age for children and young people age 10-19 with Type 1 diabetes, England, 2017/18



Source: National Paediatric Diabetes Audit 2017/18 (2019) RCPCH and Health Quality Improvement Partnership > [DOWNLOAD DATA](#)

Looking at the rate of hospital admissions for diabetes per 100,000 population for 10-24 year olds in England from 2007/08 to 2017/18, **Chart 6.5** suggests that emergency admissions for Type 1 diabetes have been fairly stable for those aged 10-19, however there has been a striking increase in emergency admissions for diabetes in young adults aged 20-24. This is the time when young people with diabetes transition from paediatric to adult services. One explanation for the worsening trend could be the fragmented and variable service quality during the transition that can put young people at risk of poor control of diabetes and its symptoms.

**Chart 6.5:** Emergency hospital admissions for Type 1 diabetes, 10-24 year olds, England 2008/09 to 2017/18



Source: Nuffield Trust and The Health Foundation (2019) NHS Digital: Hospital Episode Statistics (HES) > [DOWNLOAD DATA](#)

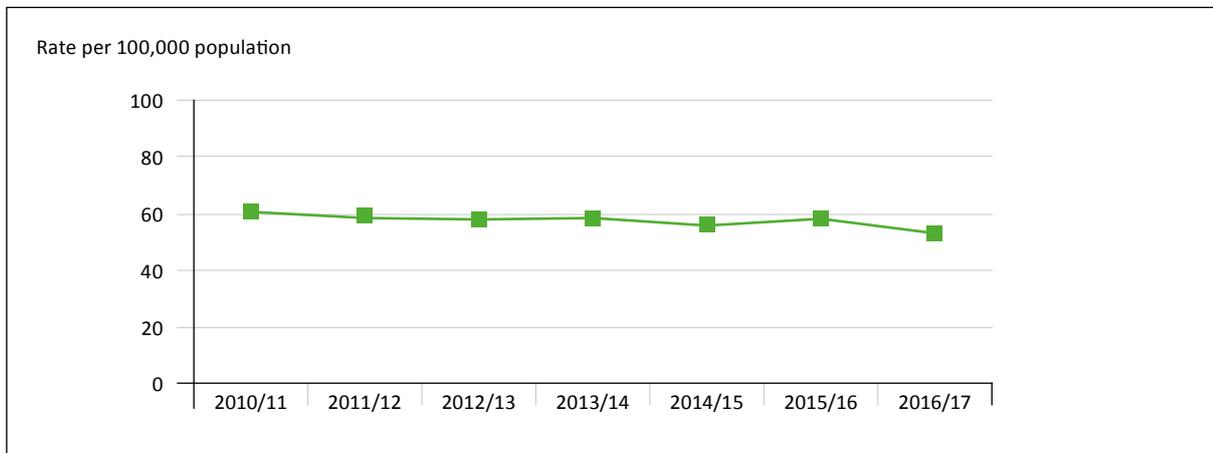
The National Diabetes Audit also reported that over a quarter of (28.2%) of children and young people with Type 1 diabetes were assessed as requiring additional psychological or CAMHS support. There was a higher proportion of adolescent girls with diabetes recorded as requiring additional psychological support compared to adolescent boys (RCPCH 2019).

Epilepsy is another important longterm condition affecting teenagers. Epilepsy is a neurological condition resulting in a tendency to have recurrent seizures. One in 50 people will have epilepsy at some time in their lives, with around 500,000 (1 in 100) with the condition at any given time (Epilepsy Society, 2017). The National Institute for Clinical Excellence (NICE) has estimated that there were approximately 34,000 young people under 18 with a diagnosis of epilepsy and taking antiepileptic drugs in England (NICE, 2013). For 12-17 year olds, the incidence of new diagnoses was 0.3% for the age group as a whole, similar to other age groups.

There are approximately  
**34,000**  
 young people under  
 18 with a diagnosis  
 of epilepsy and  
 taking antiepileptic  
 drugs in England

Source: NICE (2013)

**Chart 6.6** shows that the rate of emergency hospital admissions for epilepsy per 100,000 of the population aged 10-19 in England has remained fairly level since 2010/11.

**Chart 6.6:** Emergency hospital admissions of 10-18 year olds for epilepsy, England, 2010/11 to 2016/17

Source: PHE Fingertips tool; Hospital Episode Statistics > [DOWNLOAD DATA](#)

There is evidence that epilepsy levels are higher in urban areas, areas of social deprivation and areas without specialist services (Thomas et al, 2012), suggesting that social determinants of health play a part in its development. There is also evidence of co-morbidity between epilepsy and mental health problems (Aaberg et al, 2016).

Arthritis, an inflammatory joint disease, is rare in young people. It covers several related conditions occurring before the age of 16, including juvenile rheumatoid arthritis and juvenile idiopathic arthritis (definitions of which overlap). Despite being rare, it is estimated that juvenile idiopathic arthritis affects 15,000 children in the UK with more than 2,500 developing the condition every year (Arthritis Research UK, 2014). There are no UK prevalence data and this is an obvious evidence gap.

## Cancer

On average, **2,400** young people aged 15-24 are diagnosed with cancer every year

Source: Cancer Research UK (2017)  
Cancer Statistics for the UK

Cancer is also 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 2,400 young people aged 15-24 years are diagnosed with cancer every year in the UK and approximately 280 of this age group die from cancer each year (Cancer Research UK, 2017).

**Chart 6.7** shows the incidence of cancer diagnoses in young people aged 15-24 is similar in the four countries of the UK. The rate for females appears higher in Wales but the absolute numbers are very small. Rates do not differ significantly among the other countries for either gender (Cancer Research UK, 2017).

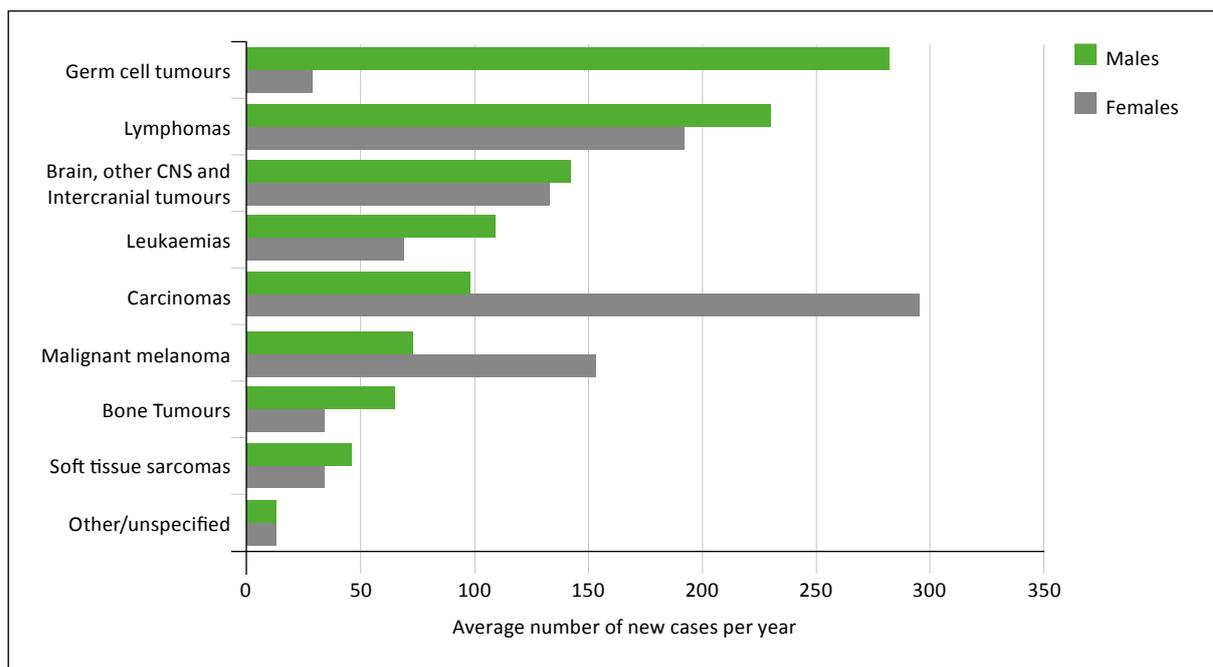
Chart 6.7: Average annual cancer incidence for 15-24 year olds by gender, UK, 2014-2016

	England	Wales	Scotland	Northern Ireland	UK
<b>Females</b>					
Cases	1,128	109	76	45	1,357
Crude rate per 100,000	34	32.7	39.1	38.1	34.3
Age standardised rate per 100,000 of age group	33.9	32.2	38.9	38.5	34.1
<b>Males</b>					
Cases	1,056	98	56	36	1,246
Crude rate per 100,000	30.3	29.1	27.3	28.9	30.1
Age standardised rate per 100,000 of age group	30.3	28.9	27.2	29.1	30

Source: Cancer Research Statistics 2014-2016 > [DOWNLOAD DATA](#)

Chart 6.8 shows the most common cancers for this age group are lymphomas, including cancer of the lymph system, Hodgkin Disease and non-Hodgkin Lymphoma, followed by carcinomas (malignant tumours on the surface or lining of a body organ). 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, 2017). The rates balance out, however, and overall it is estimated that the male:female ratio for cancer in this age group is equal.

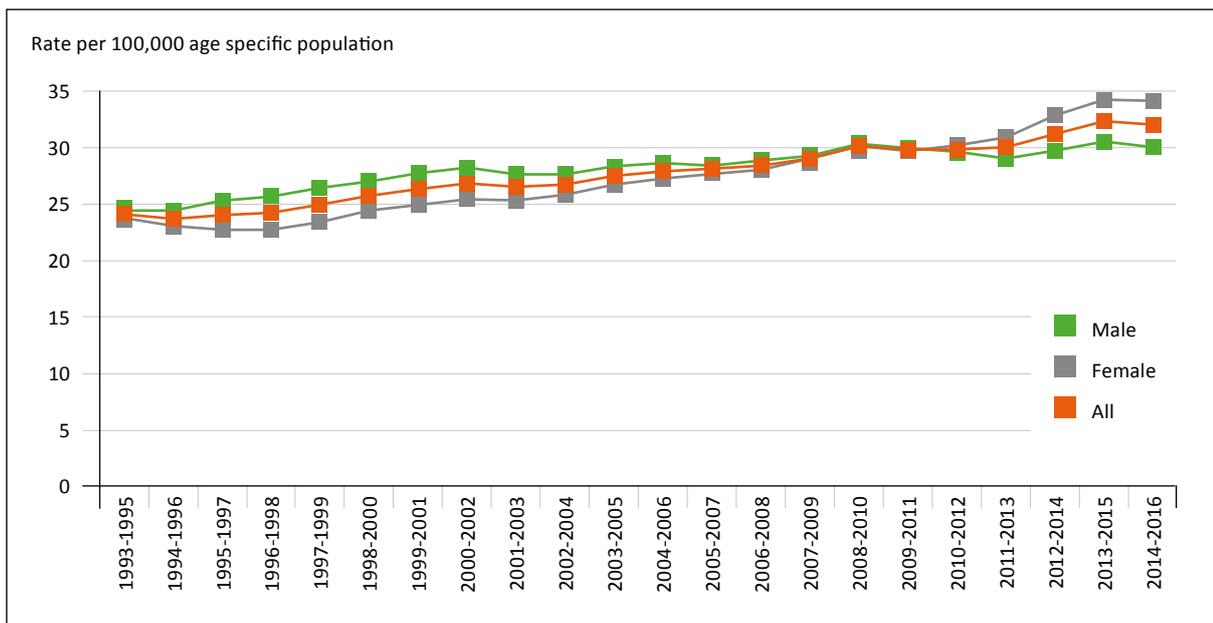
Chart 6.8: Average number of teenage and young people’s cancers by diagnostic group, age 15-24, UK, 2012-2014



Source: Cancer Research UK (2017) Teenagers’ and young adults’ cancer incidence statistics > [DOWNLOAD DATA](#)

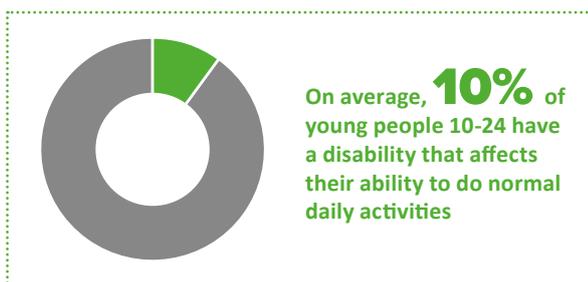
The cancer registry data compiled by Cancer Research UK suggests an increase of one fifth in cancer diagnoses among 15-24 year olds in the UK since the 1990s. Mortality, however, has fallen, almost halving since the 1970s (Cancer Research UK, 2017). Overall, over 84% of those diagnosed survive five years or longer. **Chart 6.9** shows that the average age-standardised rate for cancer incidence in 15-24 year olds in the UK has been on a steady rise for many years.

**Chart 6.9:** Average per year age-standardised cancer incidence rates per 100,000 population, age 15-24, UK, 1993/95 to 2014/16



Source: Cancer Research UK > [DOWNLOAD DATA](#)

## Disability



Source: Department for Work and Pensions (2019) Family Resources Survey

The UK Equality Act 2010 defines disability as a physical or mental impairment that has a substantial and longterm (usually one year) negative effect on a person's ability to do normal daily activities. Disability might include some of the conditions covered above such as arthritis and cancer, or other conditions including HIV, chromosomal and gene problems (for example, Down's 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.

**Chart 6.10** shows the rates of disability by this definition, by five year age bands up to age 24, drawing on data from the most recent national Family Resources Survey. Between the ages of 10 and 24, 9% of 10-14 year olds, 10% of 15-19 year olds and 10% of 20-24 year olds meet the definition. For children and young people, the most common types of impairment reported were social/behavioural, learning, stamina/breathing/fatigue, and mental health (Department for Work and Pensions, 2019).

Chart 6.10: Average disability prevalence by age and gender, UK, 2013/14 to 2015/16

Age Group	All disabled people	% Male disabled	% Female disabled
<b>All people</b>	<b>20</b>	<b>19</b>	<b>22</b>
0-4	3	3	3
5-9	7	9	5
10-14	9	11	7
15-19	10	10	11
20-24	10	9	11

Data are presented as an average over three years as there are small sample sizes for some age groups.  
 Source: Department for Work and Pensions (2017) Family Resources Survey: financial year 2015/16 > [DOWNLOAD DATA](#)

Estimates vary in different surveys depending on the definition of disability used and the age bandings employed in the study. The 2015 English HBSC survey (of 11-15 year olds) arrived at a slightly higher estimate than the Family Resources Survey (1 in 8), although this was a broader construct including longterm illness and disability (Brooks et al, 2015).

A learning disability is defined by the Department of Health and Social Care as “a significant reduced ability to understand new or complex information, to learn new skills (impaired intelligence), with a reduced ability to cope independently (impaired social functioning), which started before adulthood” (Department of Health, 2001). There is an overlap between learning disability and autism spectrum disorder, but not all young people with autism will have learning disabilities or vice versa. Incidence of learning disabilities is more common in boys than girls, and it has been estimated that there are 286,000 children and young people aged 0-17 in the UK with a learning disability (Mental Health Foundation, 2017).

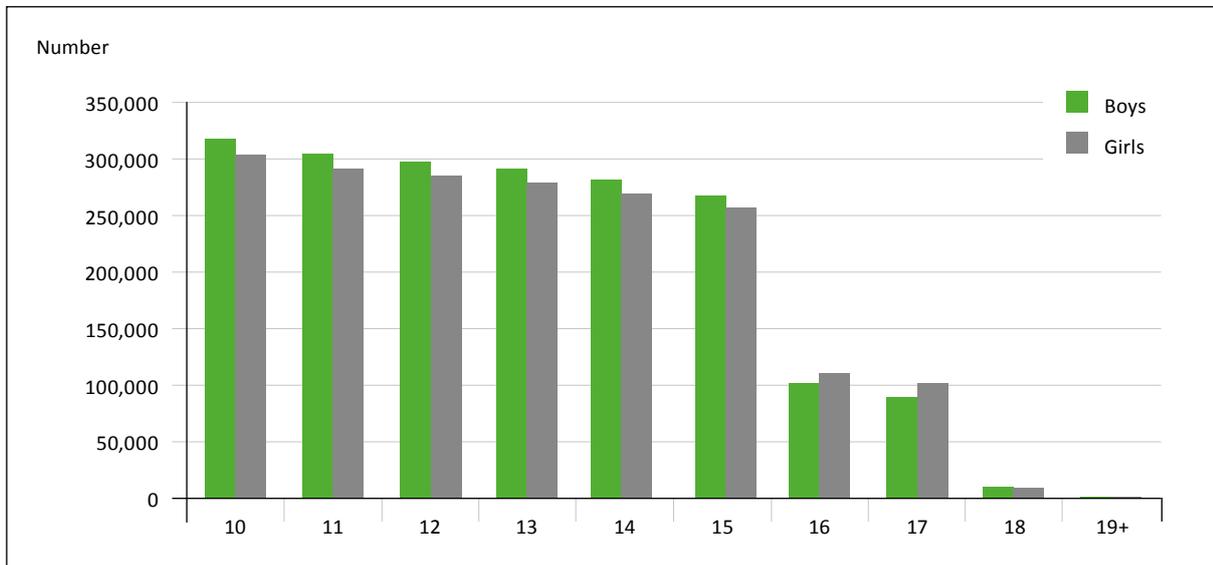
**Leading causes of disability in young people in the UK:**

- 1 Social/behavioural
- 2 Learning difficulties
- 3 Stamina/breathing/fatigue
- 4 Mobility

Source: Department for Work and Pensions (2019) Family Resources Survey: financial year 2017/18

The definition of special educational needs (SEN) is broader than that for learning disability, and in 2016 the Department for Education estimated that 1,228,785 school pupils (primary and secondary) had special educational needs in England. Nearly a million children (11.6% of the total pupil population) received SEN support at school. Fewer (236,805) had an Education, Health and Care (EHC) plan. Autistic spectrum disorder is the most common primary type of need for pupils with a statement or EHC plan, accounting for more than one quarter of all those with a statement or plan (Department for Education, 2017). **Chart 6.11** presents the rates for young people age 10-19 in England in 2018.

Chart 6.11: Number of children and young people with statements or education, health and care (EHC) plans by age, England, 2018



Source: Department for Education (2018) Statements of SEN and EHC plans: England, 2018 > [DOWNLOAD DATA](#)

Note: SEN = Special Educational Need; EHC = Education, Health and Care plans

Finally, we have not included a separate section on young people with rare diseases, but it is worth noting that they are an important part of the landscape when considering young people's physical health, longterm conditions and disability. It is estimated that there are approximately 6,000 rare diseases, of which three quarters have their onset in childhood. In the general population as a whole, approximately 1 in 17 people have a rare disease (Rare Diseases UK, 2019).

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