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Health Survey for England 2018
Longstanding Conditions

Published 3 December 2019

This report examines self-reported longstanding conditions among adults and children in England, using data from 2017 and 2018. It compares the prevalence rates of different types of conditions and how these vary across different demographic and socio-economic groups and by overall health status.

Key findings

- 43% of adults aged 16 and over had at least one longstanding condition. The most common types were conditions of the musculoskeletal system (17%); conditions of the heart and circulatory system (11%); mental, behavioural and neurodevelopmental conditions (9%); diabetes and other endocrine and metabolic conditions (8%); and conditions of the respiratory system (8%).
- Most conditions increased in prevalence with age. For example, musculoskeletal conditions affected 5% of those aged 16 to 24, but this increased to 40% of those aged 85 and over. Mental, behavioural and neurodevelopmental conditions did not follow this pattern; prevalence decreased with age, from 12% of those aged 16 to 24 to 2% of those aged 85 and over.
- In adults aged under 45, the most common type of longstanding conditions were mental, behavioural and neurodevelopmental conditions, followed by musculoskeletal and respiratory conditions. In adults aged 45 and over, musculoskeletal conditions were most common, followed by heart and circulatory conditions, then diabetes and other endocrine and metabolic conditions.
- Adults with longstanding conditions assessed their health less positively; had worse health status; were more likely to have probable mental ill health; and had higher prescribed medicine usage than those without such conditions.
- Longstanding conditions were less prevalent among children than adults, varying with age from 7% of infants aged 0 to 1 to 20% of children aged 10 to 15. Across age groups, respiratory diseases (5%) were most common, followed by mental, behavioural and neurodevelopmental conditions (4%).

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This report may be of interest to members of the public, policy officials, people working in public health and to commissioners of health and care services to see the prevalence of different types of longstanding conditions among adults and children in England.

Introduction

Contents

This report examines self-reported longstanding conditions among adults and children in England, using data from the 2017 and 2018 Health Survey for England (HSE). It compares the prevalence of different types of longstanding conditions among different demographic and socio-economic groups. Adults with each type of condition are described in terms of their self-reported general health, EQ-5D (health-related quality of life), GHQ-12 score (probable mental ill health) and use of prescribed medicines. This is the first time that the HSE has reported the prevalence of different types of longstanding conditions in detail.

Background

Longstanding conditions currently affect more than two in five adults in England.[1] These are conditions which affect the body or mind, lasting 12 months or more, some of which can be managed but not cured, and which are therefore likely to affect people for the rest of their lives. Longstanding conditions vary in their effects on individuals, from minimal impact to disability. According to the Opinions and Lifestyle Survey 2013, 13% of adults in Great Britain with longstanding conditions reported problems with mobility, 10% with stamina, breathing or fatigue, and 7% with dexterity.[2] Longstanding conditions are associated with unemployment (33% of unemployed people had a longstanding condition compared with 24% of those in employment) and low income (affecting 45% of those with an annual income under £10,000 compared with 24% of those with incomes over £50,000); prevalence varies across regions.[2] Longstanding conditions become more common with increasing age,[2] and often co-exist. For example, levels of depression and mental health problems are two or three times as common among those with cardiovascular disease (CVD), diabetes, chronic obstructive pulmonary disease (COPD), and musculoskeletal conditions as among the general population.[3]

Most longstanding conditions are managed in the community, but some require inpatient stays, or domiciliary or residential care. People with long term conditions account for 50% of NHS GP appointments, 64% of outpatient visits, and 70% of inpatient bed stays. 70% of the total health budget is spent on those with long-term conditions.[4] Some of the longstanding conditions treated by GPs are monitored through the Quality Outcomes Framework (QOF) for prevalence and achievement of

[1] For trends in the prevalence of longstanding conditions, see the HSE 2018 Adult health report. https://digital.nhs.uk/pubs/hse2018

[2] Orchard C. *Adult health in Great Britain*, ONS, 2013.

https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/compendium/opinionsandlifestylesurvey/2015-03-19/adulthealthingreatbritain2013

[3] Naylor C, Parsonage M, McDaid D, *Long-term conditions and mental health: The cost of co-morbidities*, The Kings Fund Centre for Mental Health, 2012.
https://www.centreformentalhealth.org.uk/sites/default/files/2018-09/Cost_of_Comorbidities.pdf

[4] Department of Health, *Long term conditions compendium of information, third edition.* London, 2012.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/216528/dh_134486.pdf

treatment targets.[5] These show that 14% of the GP-registered population in England are currently diagnosed with hypertension, 10% with depression, 7% with diabetes, endocrine and metabolic conditions, and 6% with asthma. Achievement rates (after exceptions are excluded)[6] vary by condition and by target. For example, reviews of care plans were carried out within the target time for 76% of those with asthma, 84% of those with dementia, 91% of those with rheumatoid arthritis, 93% of those with cancer, and 98% of those on the palliative care register.[5]

Long term conditions are 'a central task of the NHS', as highlighted in the 2014 *Five year forward view*,[7] as well as forward views for cancer,[8] mental health,[9] and the 2015 *Prime Minister's challenge on dementia*.[10] More recently, the 2019 *NHS long term plan*,[11] which sets the direction for the next 10 years, reiterated the challenge of an ageing population with multiple long term conditions, frailty or dementia.[12]

Methods and definitions

Participants were asked this question: 'Do you have any physical or mental health conditions or illnesses lasting or expected to last 12 months or more?'[13,14]

Those who reported that they had such a condition, were further asked 'What is the matter with you?', and their answers for up to six conditions were recorded verbatim. These were coded into 42 conditions which were further grouped into the 14 chapter categories of the ICD-10, the 10th iteration of the International Classification of Diseases,[15] covering infectious and non-communicable diseases of the body and mind. Each ICD-10 chapter covers a system, or group of organs, which work together

[5] *Quality and Outcomes Framework (QOF), Achievement, prevalence and exceptions data 2018-19.* NHS Digital, 2019. https://digital.nhs.uk/data-and-information/publications/statistical/quality-and-outcomes-framework-achievement-prevalence-and-exceptions-data/2018-19-pas

[6] Exceptions are cases unsuitable for treatment, where the patient is newly registered with the practice, or is newly diagnosed with a condition, or in the event of informed withholding of consent.

[7] NHS. *Five year forward view*¸ NHS 2014 https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf

[8] NHS. *Achieving world-class cancer outcomes: taking the strategy forward.* NHS 2016 https://www.england.nhs.uk/wp-content/uploads/2016/05/cancer-strategy.pdf

[9] Mental Health Taskforce to the NHS in England. *The five year forward view for mental health.* NHS England 2016 https://www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf

[10] Cabinet Office, Department of Health, Prime Minister's Office 10 Downing Street. *Prime Minister's challenge on dementia 2020*. Department of Health 2015 https://www.gov.uk/government/publications/prime-ministers-challenge-on-dementia-2020

[11] NHS. *The NHS long term plan,* NHS 2019 https://www.longtermplan.nhs.uk/wp-content/uploads/2019/01/nhs-long-term-plan-june-2019.pdf

[12] Kingston A, Wohland P, Wittenberg R, et al. *Is late life dependency increasing or not? A comparison of the Cognitive Function and Ageing Studies (CFAS).* The Lancet. 2017. **390**;1676-1684

[13] Adult participants answered on their own behalf. Parents answered on behalf of children aged 0 to 12, and children aged 13 to 15 answered their own questions, with a parent or guardian present.

[14] The current wording of this question was introduced in 2012. Further details about the change to the longstanding illness questions are provided in the 2012 report, Volume 2, Chapter 3, Section 3.4 and in Appendix D to Volume 2. http://content.digital.nhs.uk/catalogue/PUB13218

[15] ICD-10 is a medical classification list by the World Health Organisation (WHO), and stands for the 10th revision of the International Statistical Classification of Diseases and Related Health Problems. https://icd.who.int/browse10/2016/en

to carry out a function, e.g. *VII Diseases of the eye and adnexa* covers the eye, eyelids and optic nerve; whilst *XI Diseases of the digestive system* covers conditions of the mouth, oesophagus, stomach, intestines, liver, gallbladder, and pancreas.

A short description of each ICD-10 Chapter is used in this report (see Table A), including seven specific, common longstanding conditions within these categories, listed under the relevant ICD-10 chapter.

Table A. Condition categories used in this report

ICD-10 Chapter	Short description for this HSE report	Longer description used in coding
I	Infectious diseases	Infectious and parasitic disease.
II	Cancer (neoplasms) and benign growths	Cancer (neoplasm), including lumps, masses, tumours and growths and benign (non-malignant) lumps and cysts.
III	Conditions of blood and related organs	Disorders of blood and blood forming organs and immunity disorders, including anaemia and haemophilia.
IV	Diabetes, other endocrine and metabolic conditions *includes* *Diabetes*	Diabetes, including hyperglycaemia, other endocrine or hormone problems (e.g. thyroid) and metabolic conditions (e.g. obesity, high cholesterol). *Diabetes, including hyperglycaemia.*
V	Mental, Behavioural and Neurodevelopmental conditions	Mental illness, behavioural and neurodevelopmental disorders, including anxiety, depression, ‘nerves’. Learning disabilities.
VI	Nervous system conditions	Nervous system (central and peripheral including brain) - not mental illness. Includes epilepsy, migraine, other problems of brain and nervous system.
VII	Eye complaints	Eye complaints, including cataracts, poor sight, blindness, other eye problems.
VIII	Ear complaints	Ear complaints, including deafness, tinnitus, Meniere’s disease and balance problems, other ear and related complaints.

Continued on next page

Table A (continued)

ICD-10 Chapter	Short description for this HSE report	Longer description used in coding
IX	Heart and circulatory conditions	Disorders of the heart, blood vessels and circulatory system, including stroke, cerebral haemorrhage, thrombosis; ischaemic heart disease, heart attack, angina; hypertension, high blood pressure; other heart problems; piles, varicose veins, other blood vessels problems.
	includes	
	Stroke and IHD	*Stroke, cerebral haemorrhage, thrombosis; ischaemic heart disease, heart attack, angina.*
	Hypertension	*Hypertension, high blood pressure.*
X	Respiratory system conditions	COPD (Chronic Obstructive Pulmonary Disease, bronchitis, emphysema), asthma, hay fever, other respiratory conditions.
	includes	
	COPD	*COPD (Chronic Obstructive Pulmonary Disease: bronchitis, emphysema).*
	Asthma	*Asthma.*
XI	Digestive system conditions	Stomach ulcer, ulcer (not elsewhere specified), abdominal hernia or rupture, other digestive complaints (stomach, liver, pancreas, bile ducts, small intestine - duodenum, jejunum and ileum), complaints of bowel and colon (large intestine, caecum, bowel, colon, rectum), complaints of teeth, mouth, tongue.
XII	Skin complaints	Skin complaints.
XIII	Conditions of the musculoskeletal system	Arthritis, rheumatism, fibrositis; back problems, slipped disc, spine, neck; other problems of bones, joints or muscles.
	includes	
	Arthritis, rheumatism, fibrositis	*Arthritis, rheumatism, fibrositis.*
	Back problems	*Back problems, slipped disc, spine, neck*
XIV	Conditions of the genito-urinary system	Kidney, urinary tract, bladder problems, reproductive system problems, prostate, hysterectomy.

To increase the precision of the estimates and to permit analysis of less common conditions, data from 2017 and 2018 were combined for this report. The GHQ-12 was not included in the HSE 2017, therefore that analysis is based on HSE 2018 only.

Age standardisation

Adult data within this report have been age-standardised to allow comparisons between groups after adjusting for the effects of any differences in their age distributions. When different sub-groups are compared in respect of a variable on which age has an important influence, any differences in age distributions between these sub-groups are likely to affect the observed differences in the proportions of interest. For information about the method used, see Section 8.6 of the HSE 2018 Methods report.

About the survey estimates

The Health Survey for England, in common with other surveys, collects information from a sample of the population. The sample is designed to represent the whole population as accurately as possible within practical constraints, such as time and cost. Consequently, statistics based on the survey are estimates, rather than precise figures, and are subject to a margin of error, shown as a 95% confidence interval. For example the survey estimate might be 24% with a 95% confidence interval of 22% to 26%. A different sample might have given a different estimate, but we expect that the true value of the statistic in the population would be within the range given by the 95% confidence interval in 95 cases out of 100.

Where differences are commented on in this report, these reflect the same degree of certainty that these differences are real, and not just within the margins of sampling error. These differences can be described as statistically significant.[16,17]

Confidence intervals are quoted for key statistics within this report and are also shown in more detail in the Excel tables accompanying this report. Confidence intervals are affected by the size of the sample on which the estimate is based. Generally, the larger the sample, the smaller the confidence interval, and hence the more precise the estimate.

[16] Statistical significance does not imply substantive importance; differences that are statistically significant are not necessarily meaningful or relevant.

[17] Significance testing was carried out in this report to compare mutually exclusive groups (e.g. the prevalence of having one or more longstanding conditions between men and women). Where groups were not mutually exclusive (e.g. those with cancer and those with respiratory conditions), statistically significant differences (e.g. those with a particular condition being more likely to have probable mental ill health) were inferred by examining the accompanying 95% confidence intervals.

Prevalence of longstanding conditions among adults

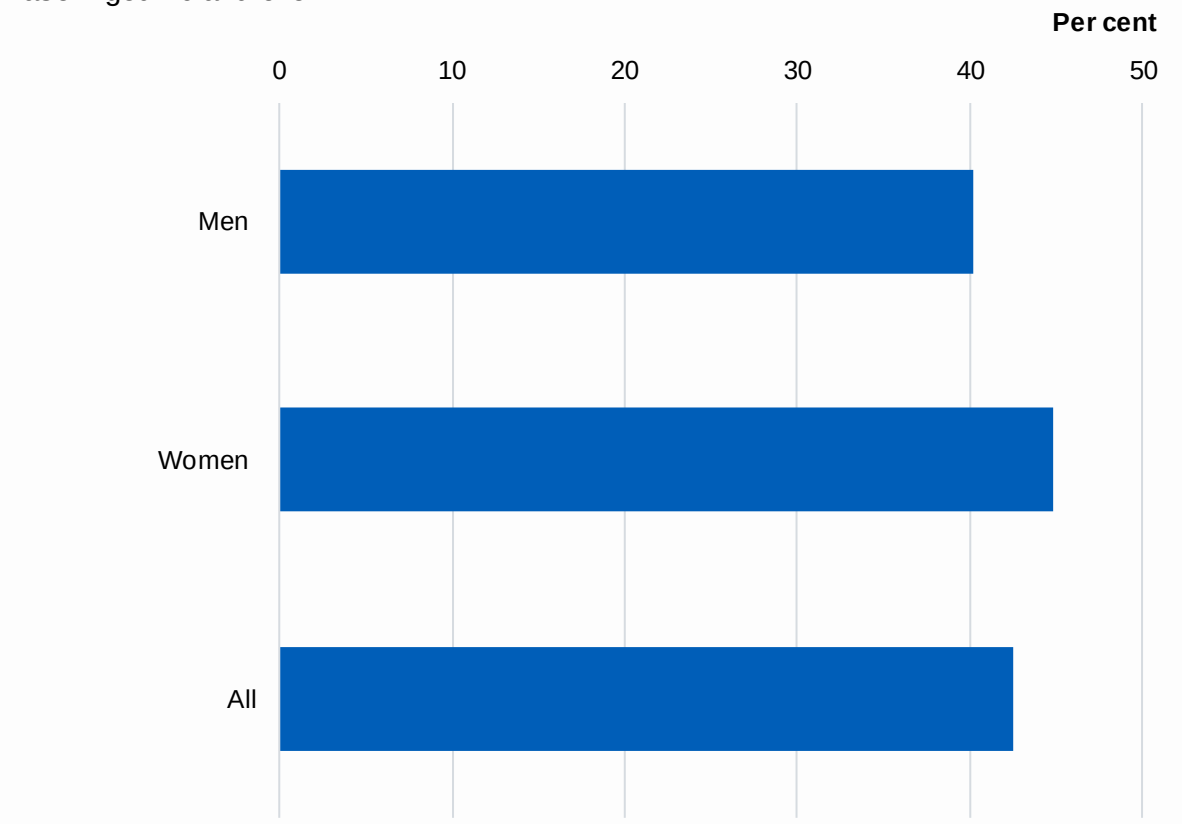
Longstanding conditions, by age and sex

Overall 43% of adults had at least one longstanding condition.[18] The most common types of conditions were musculoskeletal conditions (17%), heart and circulatory conditions (11%), mental, behavioural and neurodevelopmental conditions (9%), diabetes and other endocrine and metabolic conditions (8%), and respiratory conditions (8%). Other types of longstanding conditions had prevalence rates of 5% or lower.

Figure 1, Table 1

Figure 1: Prevalence of any longstanding conditions among adults, by sex

Base: Aged 16 and over



Source: NHS Digital

Table 1 shows the prevalence of each type of condition, including some specific conditions within those types. Among those with one or more musculoskeletal conditions almost half had arthritis and related conditions, and more than a quarter had back problems. Within heart and circulatory diseases, hypertension was more common than stroke. Within respiratory conditions, asthma was the most common condition, and a smaller proportion had COPD or other respiratory conditions.

[18] Participants could record up to six conditions and so the overall prevalence of longstanding conditions is lower than the combined prevalence of individual conditions.

Women were more likely than men to have one or more longstanding conditions (45% of women had a longstanding condition, compared with 40% of men).[19] This was true for a number of types of conditions, including musculoskeletal conditions; mental, behavioural and neurodevelopmental conditions; diabetes and other endocrine and metabolic conditions; digestive system conditions; nervous system conditions; and genito-urinary conditions. Heart and circulatory conditions were more commonly reported by men (12% of men, 10% of women).

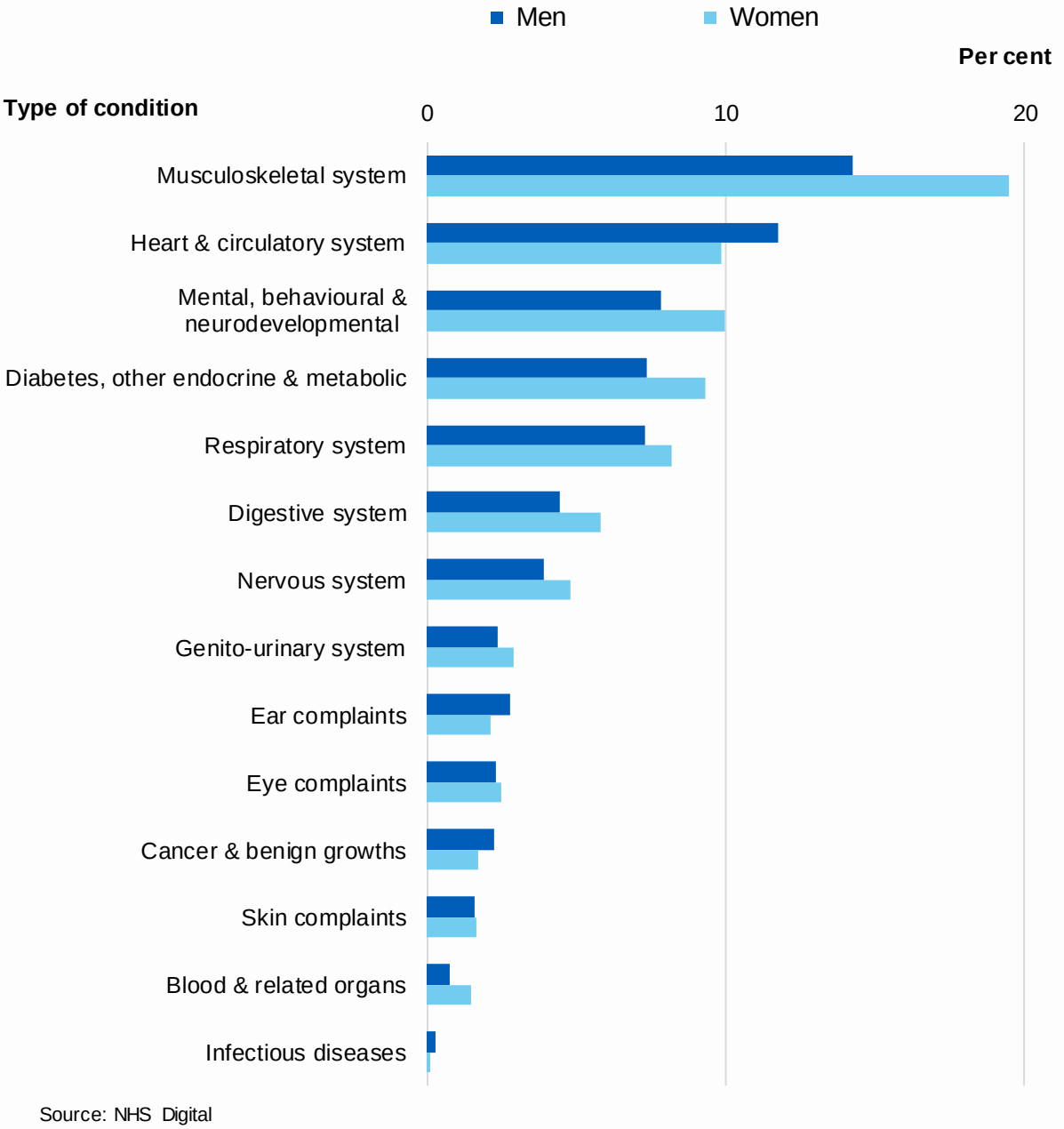
There were different patterns for men and women with diabetes and other endocrine or metabolic conditions. Among the men with these conditions, diabetes predominated (5% of men had diabetes, and 7% had this type of condition overall), whereas a minority of women with this type of condition had diabetes (9% had any type of endocrine or metabolic condition, including 4% with diabetes).

Figure 2, Tables 1 and 2

[19] Trends in longstanding conditions by sex are presented in the HSE 2018 Adult health report· https://digital.nhs.uk/pubs/hse2018

Figure 2: Prevalence of individual longstanding conditions among adults, by sex

Base: Aged 16 and over



Source: NHS Digital

There were differences in the patterns of prevalence across age groups. Overall, the proportion with at least one longstanding condition increased with age from 25% of 16 to 24 year olds to 74% of those aged 85 and over. This was the pattern for most types of condition, including musculoskeletal conditions (from 5% of those aged 16 to 24 to 40% of those aged 85 and over) and heart and circulatory conditions (from 1% of those aged 16 to 24 to 32% of those aged 75 and over), as well as other less prevalent conditions. Endocrine or metabolic complaints, including diabetes, and respiratory conditions also followed this pattern, although for both of these, prevalence was highest among adults aged between 75 and 84, slightly lower in the oldest age group.

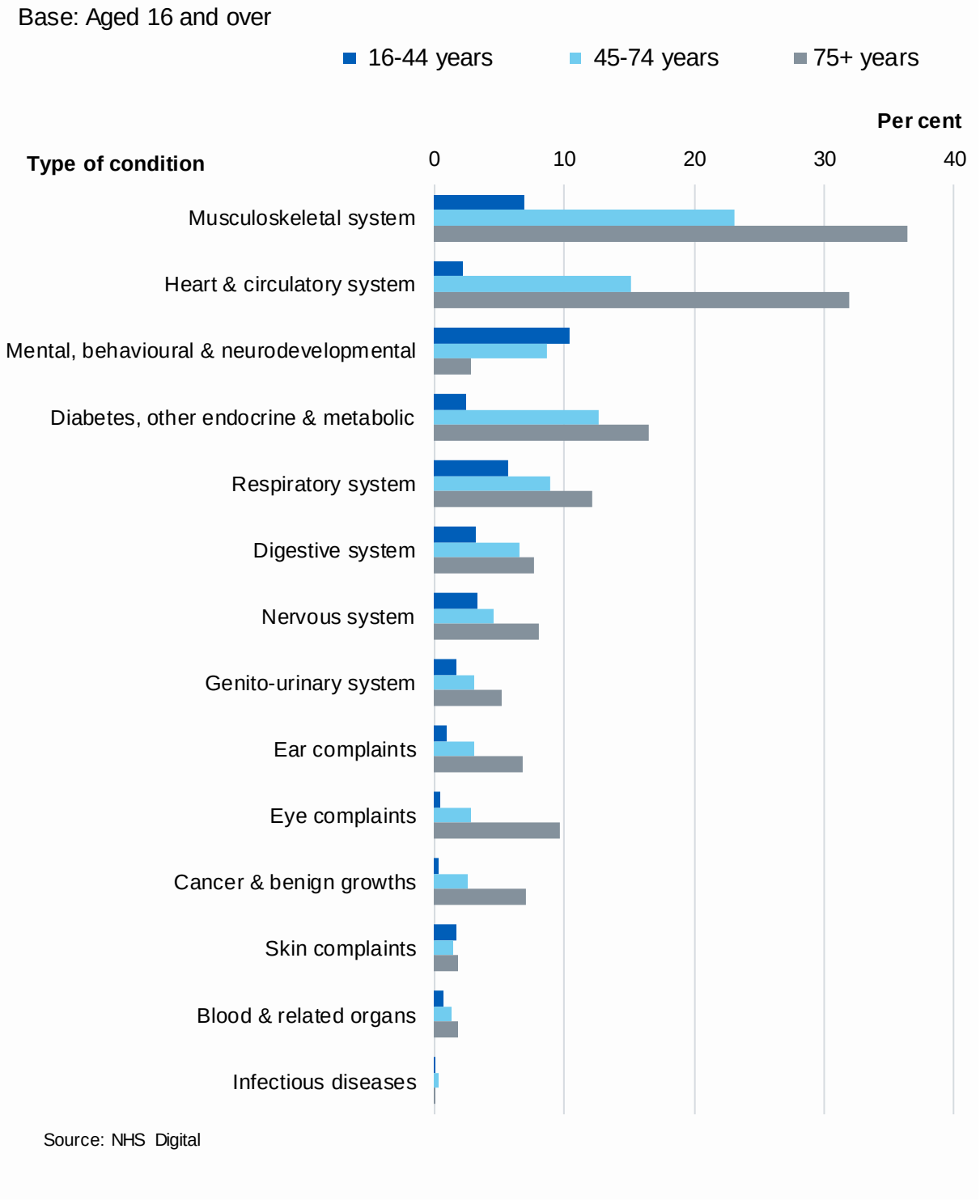
Among the most frequently reported conditions, mental, behavioural and neurodevelopmental conditions were an exception: self-reported prevalence decreased with age, from 12% among those aged 16 to 24 to 2% of those aged 85 and over.

For most types of condition, the increase with age was similar for men and women, but there was a marked difference for musculoskeletal conditions; for men, prevalence of these increased from 4% of those aged 16 to 24 to 30% of those aged 85 and over, compared with an increase 5% to 47% among women.

Under the age of 45, the most common type of longstanding conditions were mental, behavioural and neurodevelopmental conditions, followed by musculoskeletal and respiratory conditions. From the age of 45, musculoskeletal conditions were most common, followed by heart and circulatory conditions, then diabetes and other endocrine and metabolic conditions. Referring

Figure 3, Table 2

Figure 3: Prevalence of longstanding conditions among adults, by age



Source: NHS Digital

Longstanding conditions, by equivalised household income

The HSE uses the measure of equivalised household income, which takes into account the number of adults and dependent children in the household as well as overall household income. Households are divided into quintiles (fifths) based on this measure. The age profile of the income quintiles have been age-standardised to account for differences in age profiles between households.

For information about how equivalised income is calculated, see Chapter 8 and Appendix B: Glossary in the HSE 2018 Methods report.

After controlling for age, longstanding conditions were more common among those in lower income households. 52% of adults in the lowest income quintile had one or more longstanding conditions, compared with 37% of adults in the highest income quintile.

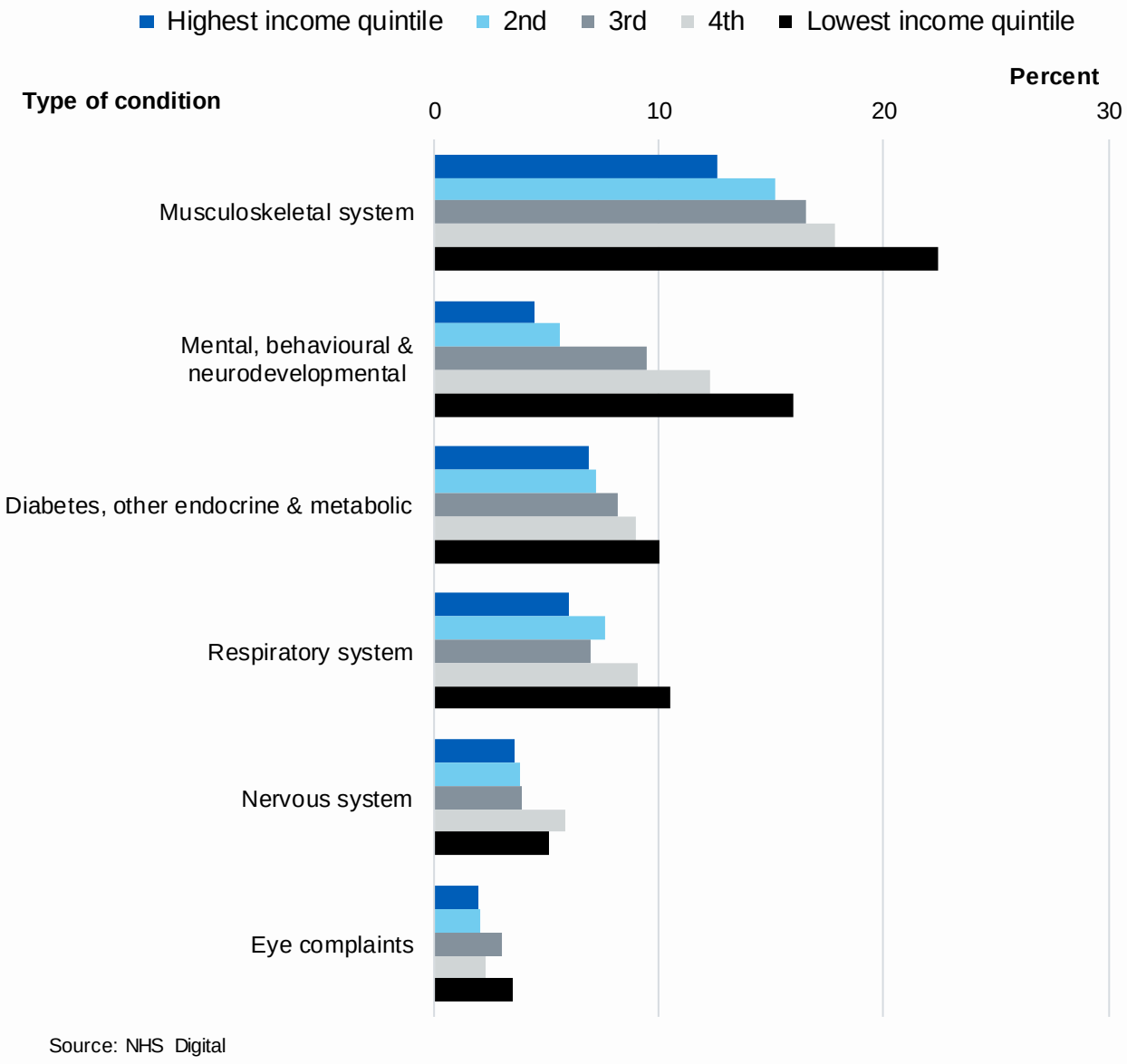
Several conditions had particularly pronounced socio-economic inequalities. In particular, mental, behavioural and neurodevelopmental conditions were nearly four times as prevalent in the lowest income quintile as in the highest (16%, compared with 4% respectively). Musculoskeletal conditions were nearly twice as prevalent in the lowest income quintile (22% compared with 13% in the highest), as were respiratory conditions (10% compared with 6%) and eye complaints (4% compared with 2%). Diabetes and other endocrine and metabolic complaints were also more prevalent in the lowest income quintile (10% compared with 7% in the highest quintile), as were conditions of the nervous system (5% compared with 4%). Other conditions did not vary significantly with household income.

Men and women had different patterns of prevalence by income for diabetes and other endocrine and metabolic conditions; and for mental, behavioural and neurodevelopmental conditions. While for women, the prevalence of both conditions rose with each decreasing quintile of income, for men, prevalence was similar among the highest two quintiles.

Figure 4, Table 3

Figure 4: Age-standardised prevalence of selected longstanding conditions among adults, by income

Base: Aged 16 and over



Source: NHS Digital

Longstanding conditions, by area deprivation

The English Index of Multiple Deprivation (IMD) is a measure of area deprivation, based on 37 indicators, across seven domains of deprivation.[20] IMD is a measure of the overall deprivation experienced by people living in a neighbourhood, although not everyone who lives in a deprived neighbourhood will be deprived themselves. To enable comparisons, areas are classified into quintiles (fifths). The age profile of the IMD quintiles have been age-standardised to account for different area age profiles.

For further information about the IMD, see Chapter 8 and Appendix B: Glossary in the HSE 2018 Methods report.

After controlling for age, the prevalence of longstanding conditions varied by area deprivation, though not as much as by household income. 48% of adults in the most deprived areas had one or more longstanding conditions, compared with 38% of those in the least deprived areas.

Mental, behavioural and neurodevelopmental conditions were nearly twice as common in the most deprived (13%) as in the least deprived areas (7%), and the same was true of respiratory conditions (10% and 6% respectively). Musculoskeletal conditions were also higher in the most deprived areas (21% compared with 14% in the least deprived), as were heart and circulatory conditions (12% compared with 9% respectively) and diabetes and other endocrine and metabolic conditions (11% and 7% respectively).

Similar patterns were seen for other conditions, notably infectious diseases, conditions of the nervous system, eye complaints and conditions of the digestive system. Other conditions did not vary significantly by area deprivation.

Table 4

[20] The seven domains used to calculate IMD are: income deprivation; employment deprivation; health deprivation and disability; education; skills and training deprivation; crime; barriers to housing and services; and living environment deprivation.

Health status of adults with longstanding conditions

Self-assessed general health

The category ‘infectious diseases’ has been excluded from this analysis as there were too few cases in the sample.[21]

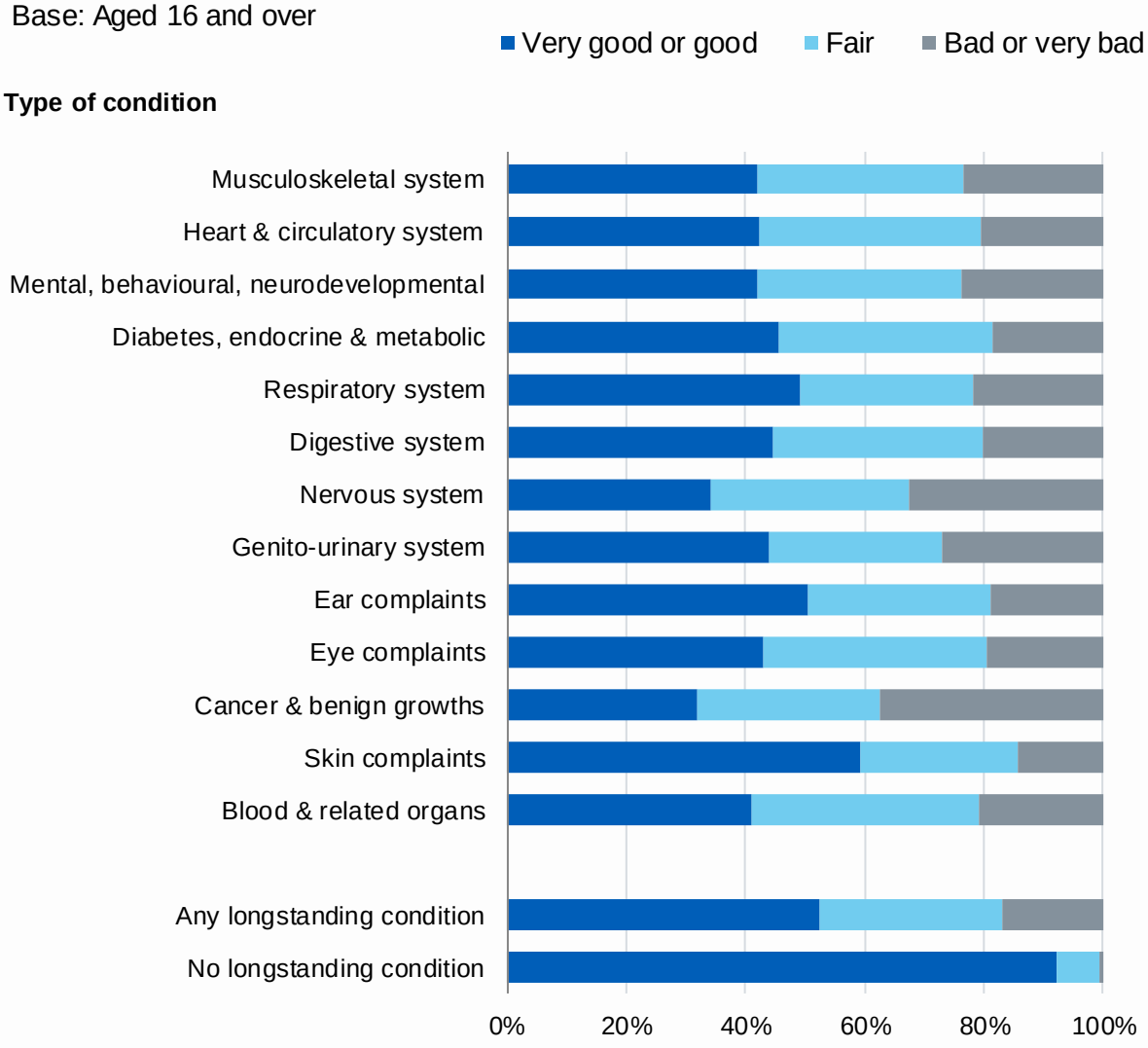
Those with longstanding conditions rated their general health more poorly than those without: 47% of those with one or more longstanding conditions described their general health as fair, bad or very bad compared with 8% of those without a longstanding condition. The proportion with fair, bad or very bad general health varied by condition, being highest among those with cancer and benign growths (68%) and conditions of the nervous system (66%), and lowest among those with skin complaints (41%).

Figure 5, Table 5

[21] Participants who reported an infectious disease as a longstanding condition are included in the overall longstanding conditions category.

Figure 5: Self-assessed general health among adults with longstanding conditions, by condition

Base: Aged 16 and over



Source: NHS Digital

Health status (EQ-5D)

Health status was assessed using the EQ-5D questionnaire, a standardised instrument that comes in two parts: a descriptive system and a visual analogue scale (VAS).[22]

The descriptive system consists of five dimensions: mobility, self-care, usual activities, pain or discomfort, and anxiety or depression. For each dimension, study participants are asked to rate their health state 'today' on a five-point scale ranging from no problem to extreme problems.

The category 'infectious diseases' has been excluded from this analysis as there were too few cases in the sample.[23]

Those with one or more longstanding conditions were more likely to have at least one severe health-related problem, as assessed by the EQ-5D instrument, than were those without a longstanding condition (21%, compared with 2% respectively). The proportions having at least one severe health-related problem were highest among those with nervous system conditions (36%), mental, behavioural and neurodevelopmental conditions (35%), cancer and benign growths (33%), and musculoskeletal conditions (31%). Adults with conditions of the blood and related organs and those with skin complaints were least likely to report at least one severe problem (19% and 16% respectively), although these proportions were much higher than those with no longstanding conditions.

More than three quarters (78%) of those with one or more longstanding conditions had at least one slight, moderate or severe problem, compared with 41% of those with no longstanding condition. The prevalence of any problems as assessed by the EQ-5D instrument ranged from 93% of those with mental, behavioural or neurodevelopmental conditions and 92% of those with musculoskeletal conditions to 69% of those with skin complaints.

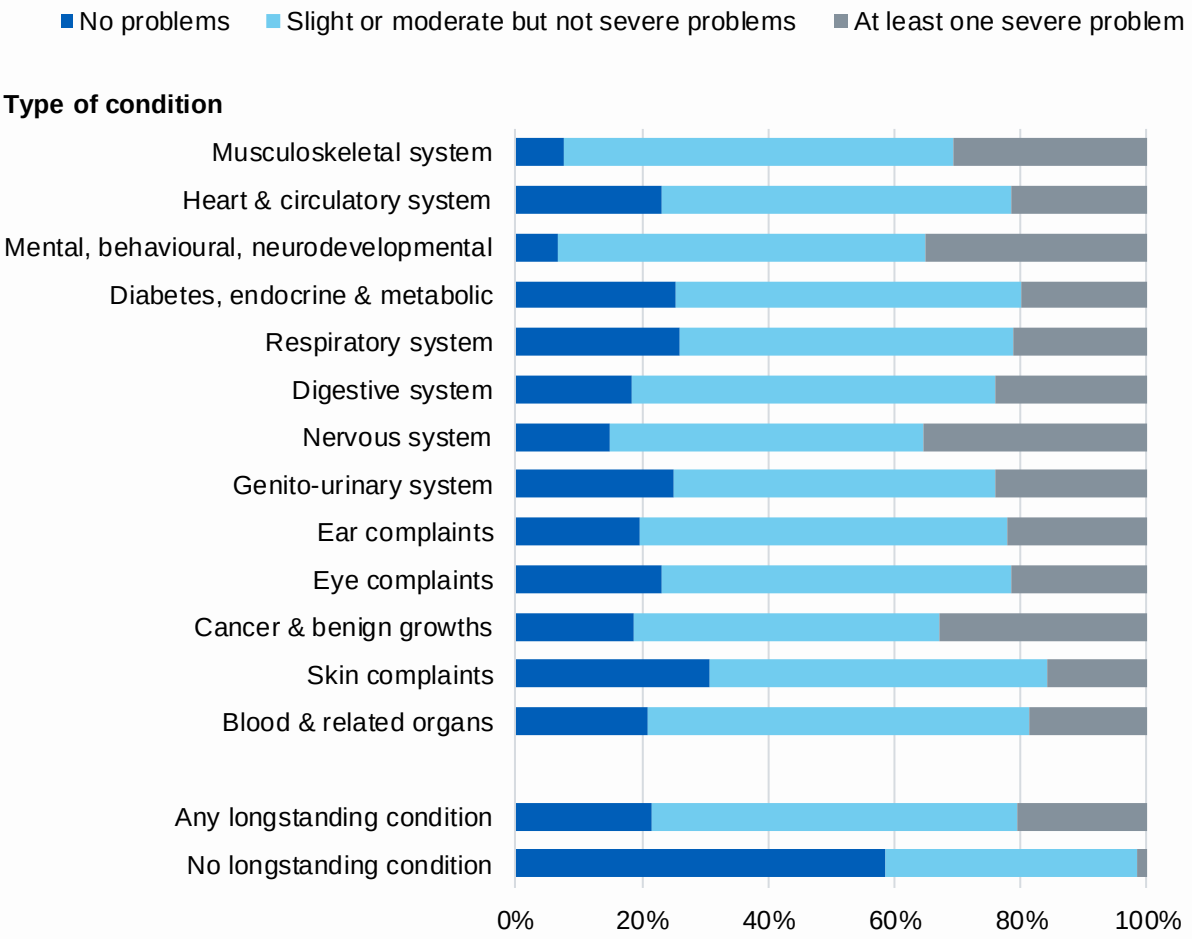
Figure 6, Table 6

[22] EuroQol Group. *EQ-5D.* www.euroqol.org

[23] Participants who reported infectious diseases are included in the overall longstanding conditions category.

Figure 6 : Health status (EQ-5D) among adults with longstanding conditions

Base: Aged 16 or over



Source: NHS Digital

Overall, women were more likely than men to report health problems according to the EQ-5D. This was also true for adults with most longstanding conditions. For example, among those with mental, behavioural and neurodevelopmental conditions, 95% of women reported at least one health-related problem, compared with 91% of men, and there were also differences of varying magnitude for musculoskeletal conditions (94% and 91% respectively), digestive system conditions (85% of women, 77% of men), diabetes and other endocrine and metabolic conditions (79% of women, 68% of men), respiratory conditions (78% of women, 69% of men), and genito-urinary conditions, (80% of women, 68% of men).

Table 6

Probable mental ill health (GHQ-12)

Mental health was assessed using the 12-item General Health Questionnaire (GHQ-12), a widely used and validated measure. It was originally intended for use in general practice settings as a screening instrument for general, non-psychotic psychiatric morbidity (probable mental ill health), and should not be used to diagnose specific psychiatric problems.[24,25] The GHQ-12 concentrates on the broader components of psychological morbidity (ill health) and consists of 12 items measuring such characteristics as general levels of happiness, depression, anxiety, sleep disturbance and self-confidence. Six questions are positively phrased and six questions negatively so. Response options are not uniform but each of the 12 items is rated on a four-point response scale to indicate whether symptoms of mental ill health are 'not at all present', or, if present, 'no more than usual', 'rather more than usual', or 'much more than usual'.[26] No formal threshold exists for identifying probable mental ill health, with optimal values likely to be specific to the population under study. However, in keeping with previous HSE surveys, participants' scores are grouped according to three categories: 0 (indicating no evidence of probable mental ill health), 1 to 3 (indicating less than optimal mental health), and 4 or more (indicating probable psychological disturbance or mental ill health).[27]

The GHQ-12 was not included in the 2017 HSE; the findings in this section refer to 2018 only. Infectious diseases and conditions of blood and related organs have been excluded from this analysis as there were too few cases in the sample. [28]

Prevalence of probable mental ill health (a score of 4 or more on the GHQ-12 questionnaire) was higher among those with one or more longstanding conditions (24%) than among those without a longstanding condition (10%).

The prevalence of probable mental ill health varied by longstanding condition type. Half (49%) of adults who reported having a long term mental, behavioural or neurodevelopmental condition had probable mental ill health, as defined by a GHQ-12

[24] Goldberg D, Williams PA. *User Guide to the General Health Questionnaire.* NFER-Nelson, Windsor, UK, 1988.

[25] The 12-item version of the GHQ has comparable psychometric properties to the longer (60-item and 28-item) versions, and is often used in research studies where it is impractical to administer a longer form.

[26] For the purpose of the HSE, the standard GHQ coding method was adopted for each of the four possible responses to each item, as advocated by the test author. Each symptom was scored either 0 if 'not at all present' or present 'no more than usual', or 1 for symptoms that were present 'rather more than usual' or 'much more than usual'). Using this method, the maximum score for any individual study participant is therefore 12.

[27] A threshold score of 4 was chosen as the suggested level for identifying 'cases' of mental illness, i.e. individuals with a possible psychiatric illness. Although this threshold is known to generate quite a high level of false positives (individuals who have a score of 4 and above but on psychiatric examination have no psychiatric illness), it was found to be the most suitable cut-off point for the purposes of the HSE reports, providing large enough numbers for analysis. There is no universally used 'threshold' score for GHQ-12 because the populations it is used on vary considerably. The author of the questionnaire suggested that a threshold is chosen which is the same as that used on surveys among similar populations, hence both the original choice of 4 as the threshold for HSE reports, to be comparable with existing surveys, and the continued use of the same threshold in subsequent HSE reports.

[28] Participants who reported infectious diseases or conditions of blood and related organs are included in the overall longstanding conditions category.

score of 4 or more. A further 25% had a score of 1 to 3, indicating less than optimal mental health, and the rest (26%) had a score of 0, indicating no evidence of probable mental ill-health. There are a number of possible reasons for this apparent discrepancy. First, the GHQ-12 refers to 'the last few weeks', and the response options compare symptoms with the respondent's usual experience. For example, the questionnaire asks if the respondent has recently 'been able to concentrate on whatever you're doing?', with the response options 'Better than usual', 'Same as usual', 'Less than usual' and 'Much less than usual'. Someone with a longstanding mental, behavioural or neurodevelopmental condition might not feel that their concentration was worse than usual, regardless of how poor it actually was. In addition, people with these conditions under control, for example through medication, might also reply that their concentration was no worse than usual. Finally, the GHQ-12 measures symptoms of probable non-psychotic mental disorders, a more restricted definition than the broad range of conditions covered by this category of longstanding illness.[29]

Between one fifth and two fifths of those with other longstanding conditions had probable mental ill health according to their GHQ-12 score: 37% of those with conditions of the nervous system, 33% of those with genito-urinary conditions, 29% of those with cancer and benign growths, 28% of those with musculoskeletal conditions, and between 20% and 24% of those with other conditions.

Probable mental ill health was more common among women than men, whether or not they had a longstanding condition. This is consistent with the findings of the 2014 Adult Psychiatric Morbidity Study, which reported that common mental disorders such as depression and anxiety, the type of condition identified by the GHQ-12, were more prevalent among women than men (19% and 12% respectively).[30] The difference in prevalence was particularly apparent among adults with mental, behavioural or neurodevelopmental conditions (55% of women and 41% of men with these conditions had probable mental ill health according to their GHQ-12 score), musculoskeletal conditions (30% of women and 24% of men), respiratory conditions (29% of women and 19% of men), and skin complaints (30% of women, 14% of men).

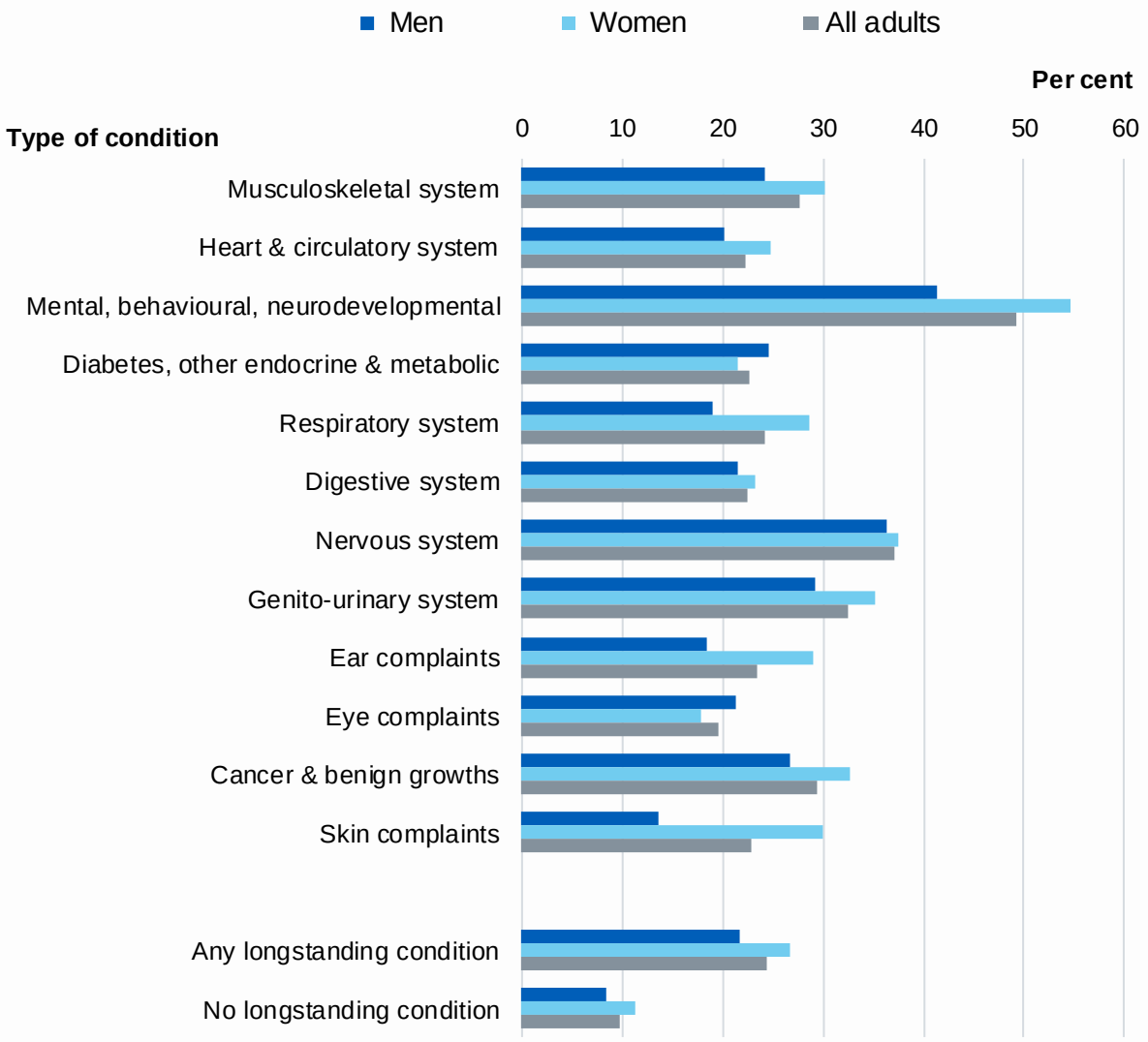
Figure 7, Table 7

[29] Including psychotic and bipolar illnesses, learning difficulties and neurodevelopmental disorders such as autism.

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

Figure 7: Prevalence of probable mental illness (GHQ score 4+) by longstanding conditions and sex

Base: Aged 16 and over



Source: NHS Digital

Prescribed medicine use

Infectious diseases and conditions of blood and related organs have been excluded from this analysis as there were too few cases in the sample. [31]

Prescribed medicine use varied by longstanding conditions. 77% of adults with a longstanding condition reported taking one or more medicines in the last week, and 46% reported taking three or more medicines.[32] Among those not reporting a longstanding condition, far fewer reported taking prescribed medicines in the last week: 27% took at least one medicine and 8% took three or more.

Similar proportions of men and women with longstanding conditions had taken at least one prescribed medicine in the past week. For those without a longstanding condition, women (30%) were more likely than men (23%) to report taking at least one prescribed medicine.

More than nine in ten adults with diabetes and other endocrine and metabolic conditions (98%), heart and circulatory conditions (95%), and cancer and benign growths (91%) had taken one or more prescribed medicines in the last week. The majority of adults with other longstanding conditions had taken at least one prescribed medicine; this was least likely among those with mental, behavioural and neurodevelopmental conditions (76%); musculoskeletal conditions (76%); and skin complaints (74%).

There was a similar pattern among adults taking three or more prescribed medicines in the last week; this was most likely among those with heart and circulatory conditions (73%), diabetes and other endocrine and metabolic conditions (73%), and cancer and benign growths (71%), and least likely among those with mental, behavioural and neurodevelopmental conditions (38%).

Prescribed medicine use differed by sex for some conditions. Women with either mental, behavioural and neurodevelopmental conditions or musculoskeletal conditions were more likely than men with those conditions to have taken one or more medicines in the last week (both 81% of women, compared with 69% of men). Men with genito-urinary conditions were more likely than similarly-affected women to have taken one or more prescribed medicines in the last week (93% of men, 78% of women). The patterns were similar for having taken three or more medicines in the last week.

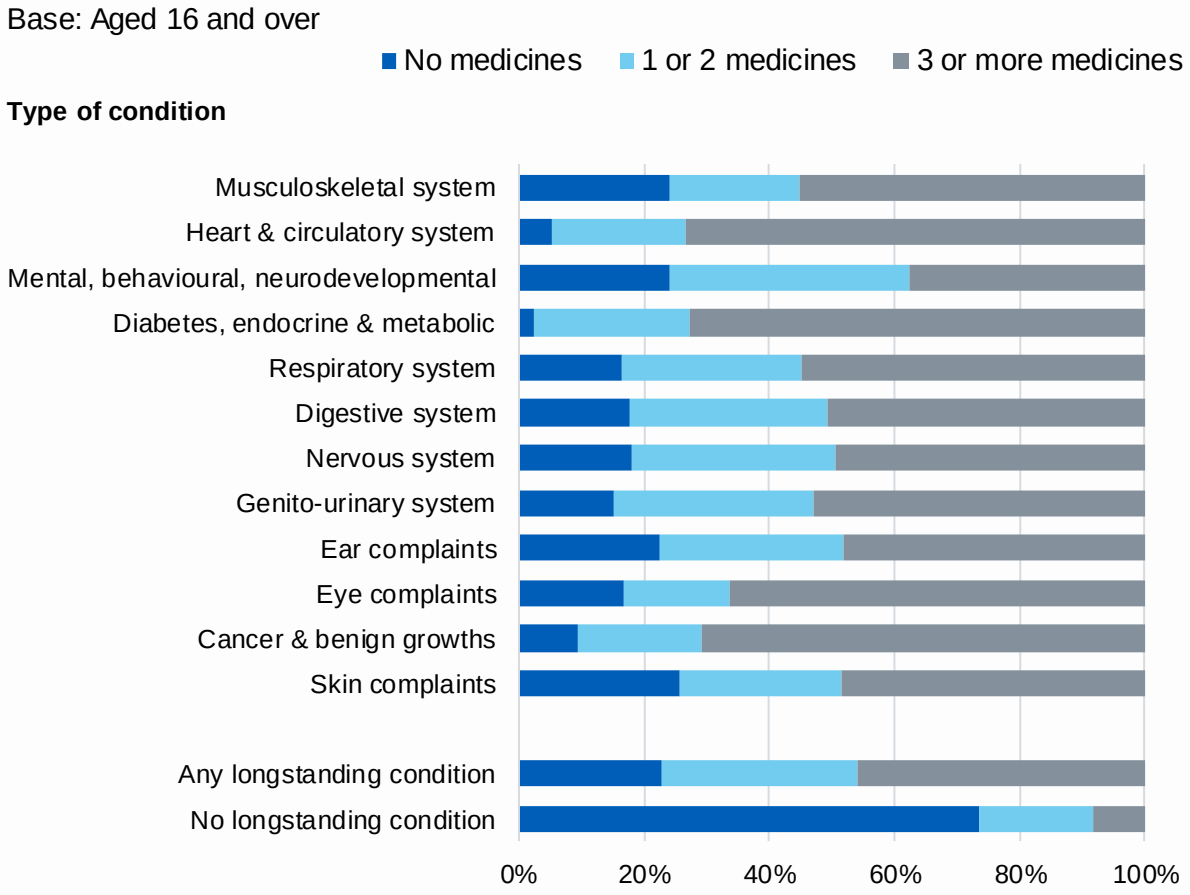
Figure 8, Table 8

[31] Participants who reported infectious diseases or conditions of blood and related organs are included in the overall longstanding conditions category.

[32] Prescribed medicines covered in this report do not include contraceptives. This report refers to all prescribed medicines taken, not only those for the condition in question.

Figure 8: Number of prescribed medicines taken in the last week among adults with longstanding conditions

Base: Aged 16 and over



Source: NHS Digital

Prevalence of longstanding conditions among children

Longstanding conditions, by age and sex

Longstanding conditions were less prevalent among children than adults: 16% of children up to 15 years old had one or more. The prevalence of longstanding conditions increased with age, from 7% of infants (aged 0 to 1) to 20% of children aged 10 to 15.

The most common conditions overall were respiratory conditions (5% of all children), mental, behavioural and neurodevelopmental conditions (4%), conditions of the digestive system, skin complaints and musculoskeletal conditions (all 2%).

Several conditions increased with age. The proportion of children with mental, behavioural and neurodevelopmental conditions increased from less than 1% of infants (aged 0 to 1) to 7% of those aged 10 to 15. Respiratory conditions followed the same pattern, increasing from 1% to 6%.

Among infants (aged 0 to 1), the prevalence of all types of longstanding condition was below 2%.

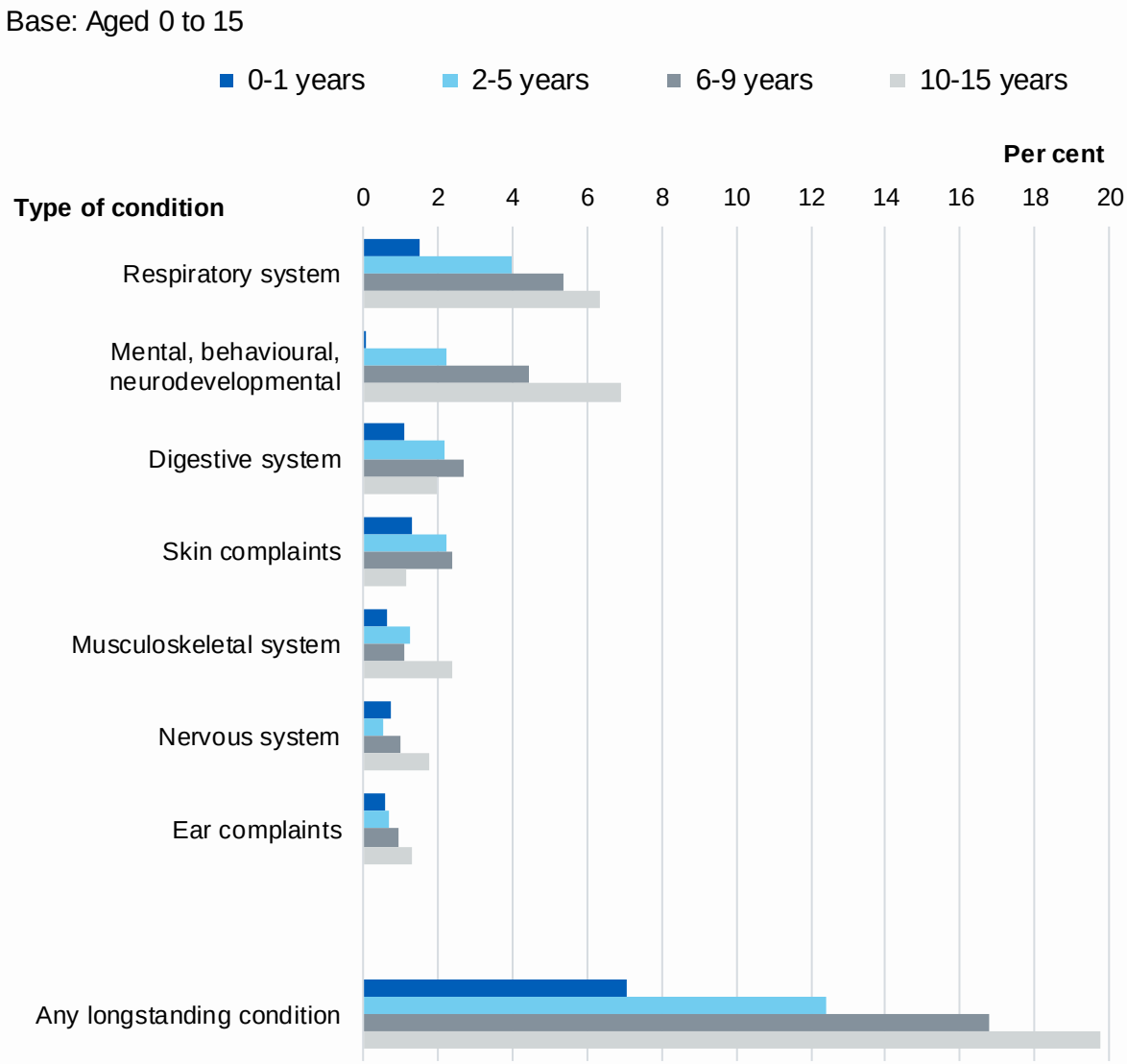
Prevalence was higher among children aged 2 to 5; in this age group 4% had respiratory conditions, and similar proportions had mental, behavioural and neurodevelopmental conditions, digestive system conditions or skin complaints (2%).

Similarly, among children aged between 6 and 9 years, respiratory conditions were the most common longstanding condition (5%); followed by mental, behavioural and neurodevelopmental conditions (4%), digestive system conditions (3%) and skin complaints (2%).

For the oldest children (aged 10 to 15), mental, behavioural and neurodevelopmental conditions were most common (7%), followed by respiratory conditions (6%), musculoskeletal conditions, digestive system conditions and conditions of the nervous system (all 2%).

Figure 9, Table 9

Figure 9: Prevalence of the most common longstanding conditions among children, by age



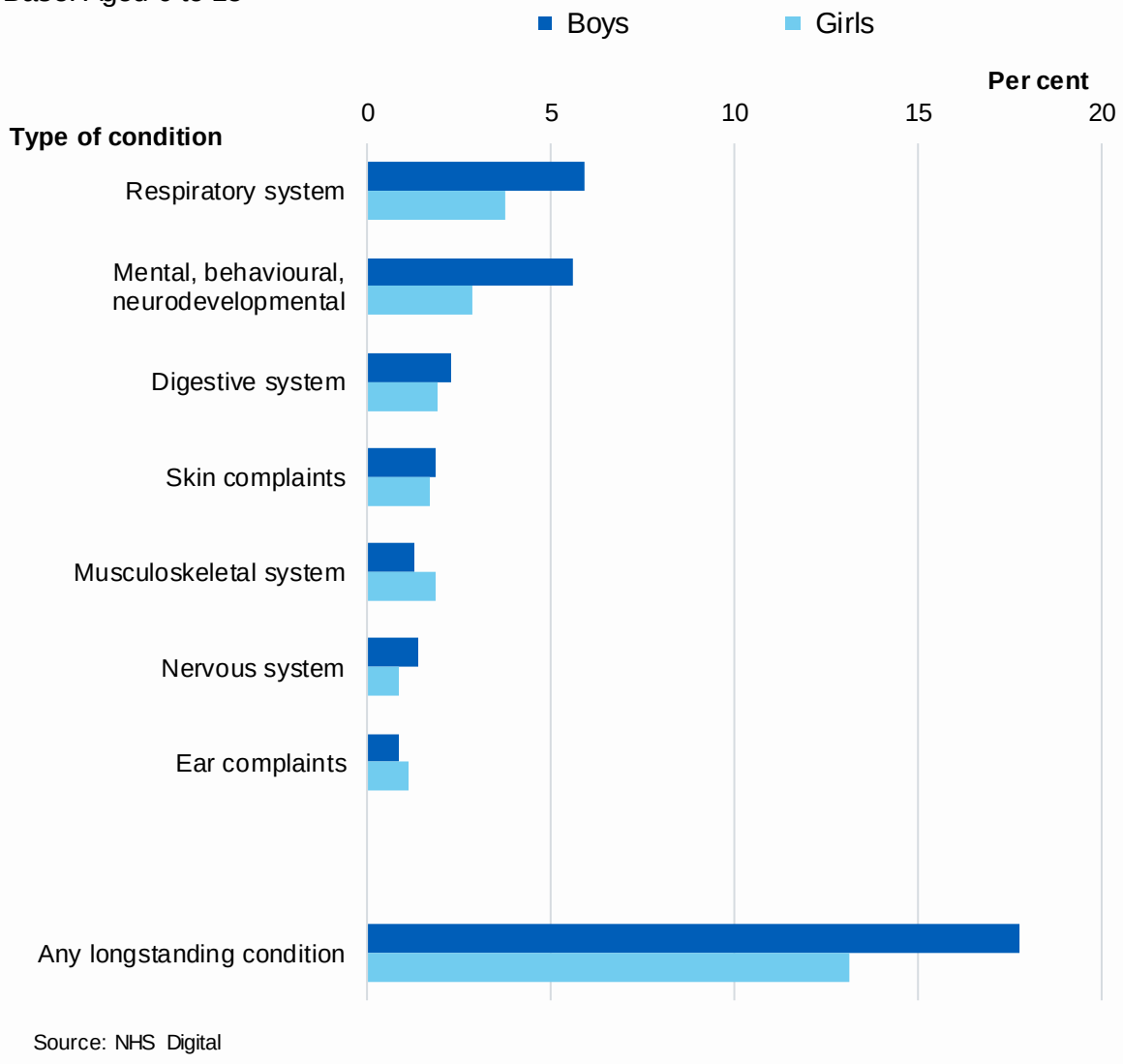
Source: NHS Digital

Overall, longstanding conditions were more prevalent among boys than girls (18% of boys, compared with 13% of girls). This was also true for respiratory conditions (6% of boys and 4% of girls) and mental, behavioural and neurodevelopmental conditions (6% of boys and 3% of girls).

Figure 10, Table 9

Figure 10: Prevalence of the most common longstanding conditions among children, by sex

Base: Aged 0 to 15



Source: NHS Digital

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part of the Government Statistical Service