

Statistical bulletin

# Population estimates by output areas, electoral, health and other geographies, England and Wales: mid-2016

National population estimates for Super Output Areas and experimental statistics for health geographies, electoral wards, Parliamentary constituencies and National Parks in England and Wales.



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# 1 . Main points

- In mid-2016, there were 34,753 lower layer Super Output Areas (LSOAs) in England and Wales with a mean population of 1,680 and 7,201 middle layer Super Output Areas (MSOAs) with a mean population of 8,107; the LSOA with the highest median age in mid-2016 was Eastbourne 012B at 70.6 years, whereas Salford 016E had the lowest median age at 15.1 years.
- There were 207 clinical commissioning groups (CCGs) in England with a mean population size of 266,995 in mid-2016; the CCG with the largest proportion of the population aged 65 or over was NHS North Norfolk at 29.2% and the CCG with the largest proportion of the population aged 0 to 15 was NHS Bradford City at 27.9%.
- The 573 Westminster Parliamentary constituencies in England and Wales had a mean population of 101,887 in mid-2016; on average English constituencies tend to have larger populations than Welsh constituencies (means of 103,692 and 77,829 respectively).
- In mid-2016, the 8,297 electoral wards in England and Wales had a mean population of 7,036, although population sizes ranged from 157 in St. Martin's ward in the Isles of Scilly to 42,249 in City and Hunslet ward in Leeds.
- The populations of National Parks have a higher proportion of older people than England and Wales as a whole; in mid-2016, the population of National Parks aged 65 or over was 27.9% compared with 18.0% of the population of England and Wales.

## 2 . Things you need to know about this release

This bulletin includes estimates for lower and middle layer Super Output Areas (LSOAs and MSOAs), Westminster Parliamentary constituencies, electoral wards and National Parks in England and Wales and clinical commissioning groups (CCGs) in England.

There are two broad types of small area population estimates, both of which are included in this release.

The main products are the estimates for Super Output Areas (SOAs), which are based on the 2011 Census and rolled forward annually using a ratio change methodology. This approach uses the change in the population recorded in the GP Patient Register as an indicator of the change in the true population. Estimates for LSOAs by broad ages and MSOAs by five-year age groups (quinary age) hold [National Statistics](#) status. Estimates at a greater level of disaggregation by age including quinary age for LSOAs and single year of age for both SOAs are supporting information only. More information can be found in Small area population estimates: [summary of methodology review and research update](#).

The remainder of small area population estimates products relate to a range of different geographic areas and are derived directly from the SOA figures. Firstly, estimates for lower layer Super Output Areas (LSOAs) are broken down to Output Area (OA) level using an apportionment approach. These OA estimates are then aggregated to produce estimates for electoral wards and Westminster Parliamentary constituencies on a best-fit basis. Estimates for National Parks are also calculated from the OA level data. Electoral wards, Westminster Parliamentary constituencies and National Parks all hold [Experimental Statistics](#) status. Estimates for health geographies are aggregated directly from LSOAs and hold National Statistics status.

Small area population estimates are used by both central government departments and local authorities for a range of purposes, including planning and monitoring of services and as denominators for the calculation of various rates and indicators. The [Quality and Methodology Information report](#) has further information on the quality and use of these statistics.

Population estimates for LSOAs and MSOAs are often used for research and analysis as, unlike other small area geographies, such as electoral wards, they are specifically designed for statistical purposes. Electoral ward population estimates are of particular interest to local government organisations. Parliamentary constituency estimates are of importance to Parliamentary organisations, researchers and MPs. Population estimates for health geographies are widely used within the health sector and information on National Parks is valuable to both local government and the various National Park authorities.

The mid-2016 small area population estimates covered by this bulletin are fully consistent with population estimates for higher levels of geography including local authorities, regions and the national total for England and Wales. A full description of the methods used to calculate all small area population estimates is available in the [methodology guide](#).

In some local authorities, the number of people included in the Patient Register data in 2016 has increased or decreased in a large number of LSOAs and MSOAs compared with 2015 data, which may be due to changes in administrative practices or may reflect genuine population change. The process of constraining LSOA and MSOA estimates to previously published local authority population estimates means that this pattern is not automatically reflected in the mid-year estimates.

[Mid-year population estimates for 2016 for England and Wales](#), regions within England and local authorities within England and Wales were published on 22 June 2017. The estimates refer to the usually resident population on 30 June of the reference year and are published annually. In mid-2016, the population of England and Wales was 58,381,217, an increase of 0.8% since mid-2015 and 8.2% over the 10 years since mid-2006.

The population increase of 495,800 since mid-2015 was driven by net international migration of 311,300 and natural change (births minus deaths) of 184,600 and offset slightly by internal migration of -8,800. Other changes of 8,700 made up the remaining increase. The population of England and Wales is ageing. Ageing of the population refers to both the increase in the average (median) age of the population and the increase in the number and proportion of older people in the population. The proportion of the population in England and Wales aged 65 or over at mid-2016 was 18.0%, compared with 15.9% at mid-2006. Changes in the population of England and Wales are reflected in the changes at small area levels outlined throughout this bulletin.

### 3 . Super Output Area population estimates

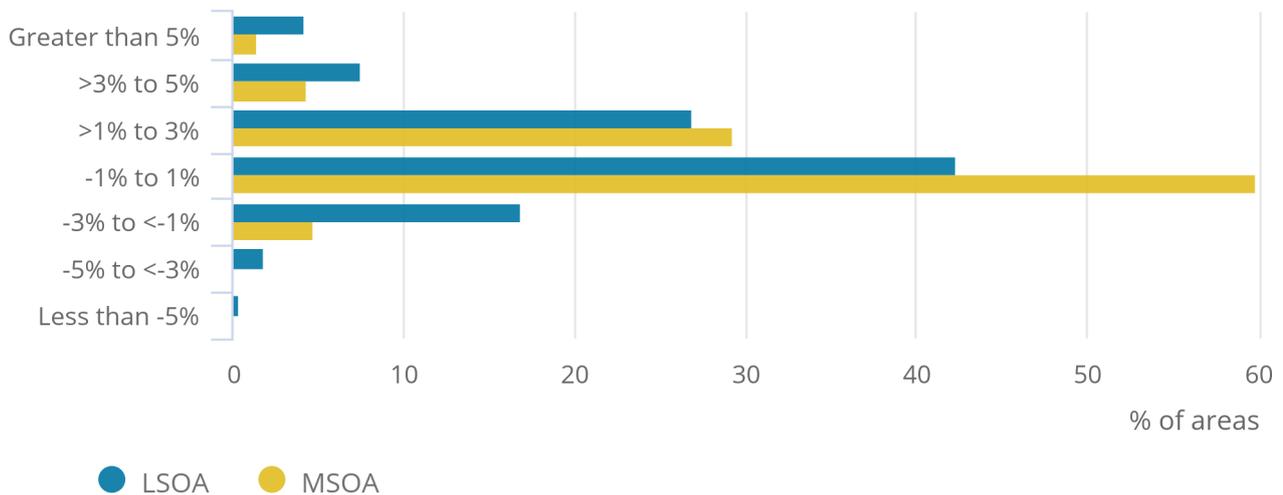
- National Statistics for lower layer Super Output Areas (LSOAs) by broad age groups and middle layer Super Output Areas (MSOAs) by five-year age groups (quinary ages)
- supporting information for estimates at a greater level of disaggregation by age, including quinary age for LSOAs and single year of age for both SOAs

Super Output Areas (SOAs) are statistical geographies designed to improve the reporting of small area statistics. They are built from groups of census Output Areas, are generally of a consistent population size and are not subject to boundary changes between censuses. Where possible they are formed from groups of socially similar households and align with local features such as roads and railway lines. The comparability and stability of the geography, which cannot be provided by other small area administrative geographies such as wards or parishes, is one of the main benefits to users of statistics.

Figure 1 shows the annual population change between mid-2015 and mid-2016 was 1% or less in 42.3% of LSOAs and 5% or less in 95.4% of LSOAs. Figure 1 also shows the annual population change was 1% or less in 59.9% of MSOAs and 5% or less in 98.5% of MSOAs. This compares with the annual change of 0.8% for England and Wales.

**Figure 1: Distribution of lower layer Super Output Areas and middle layer Super Output Areas by percentage population change, England and Wales, mid-2015 to mid-2016**

Figure 1: Distribution of lower layer Super Output Areas and middle layer Super Output Areas by percentage population change, England and Wales, mid-2015 to mid-2016



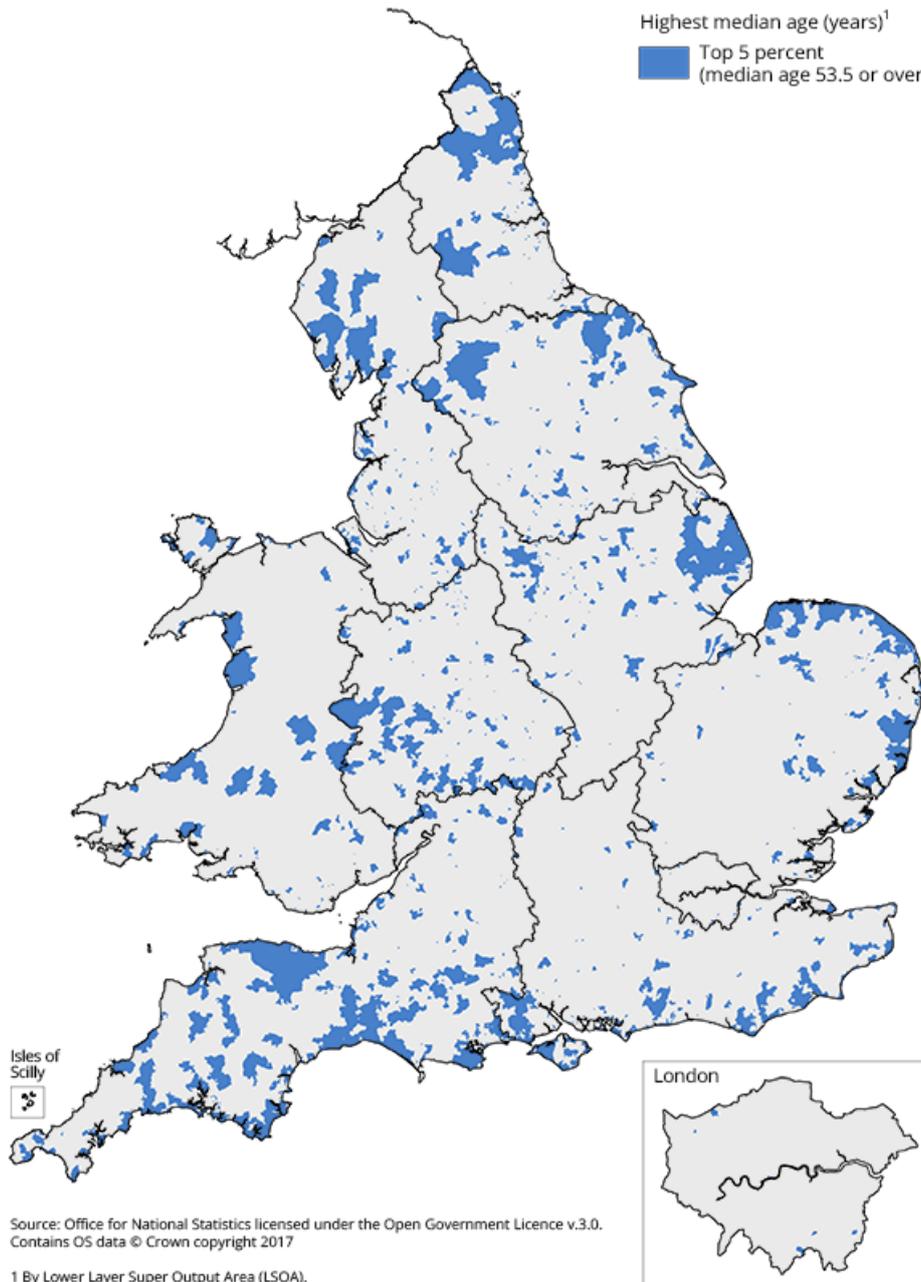
Source: Office for National Statistics

### Populations in coastal areas, National Parks and the South West have older age structures

The median age of the population of England and Wales in mid-2016 was 39.9 years. The median age for LSOAs within England and Wales varies widely between different areas. In mid-2016, the highest median age was 70.6 in Eastbourne 012B.

Figure 2 shows that populations with the highest median age are concentrated around the coastal areas, the National Parks and the South West.

**Figure 2: Highest median age (top 5 %), by lower layer Super Output Areas, England and Wales, mid-2016**

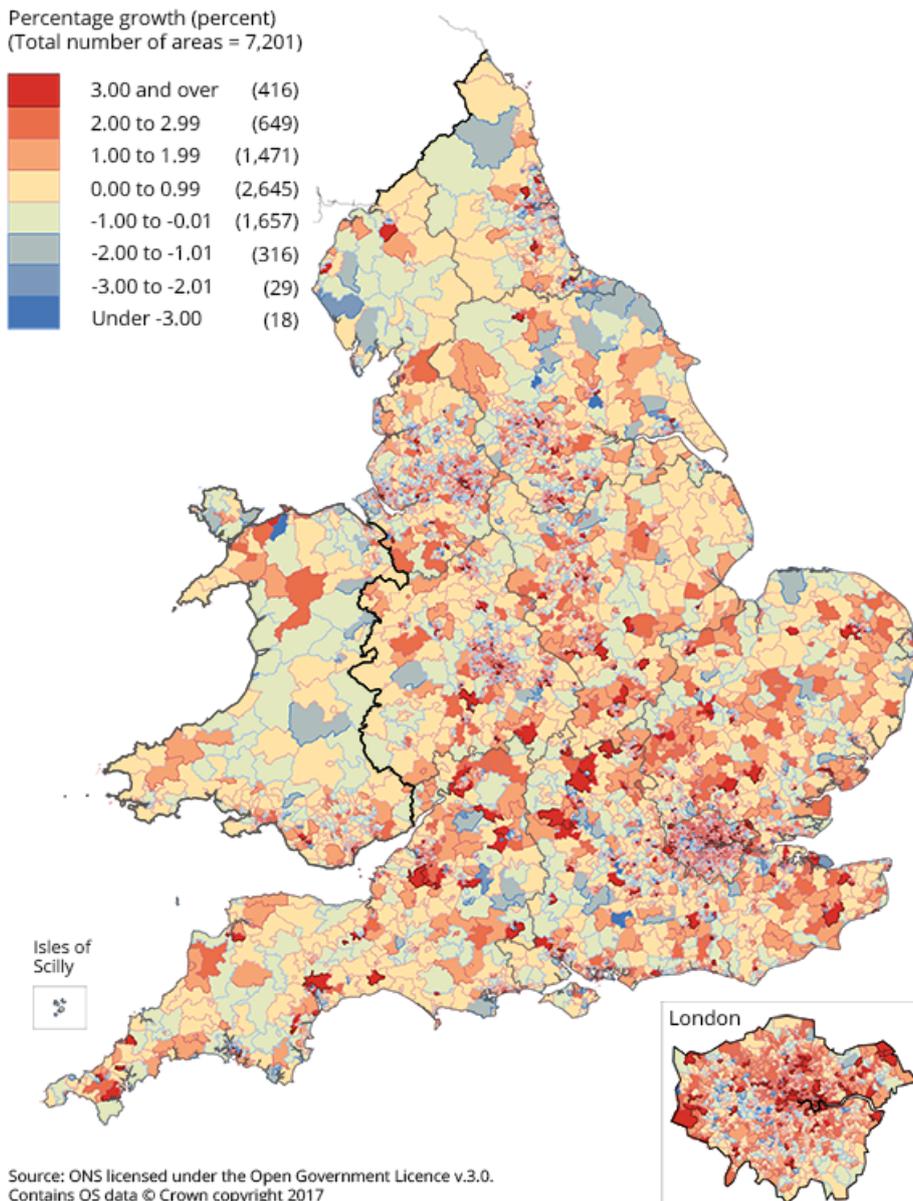


**Source: Office for National Statistics**

Figure 3 shows the percentage change in population between mid-2015 and mid-2016 for MSOAs in England and Wales. This echoes many of the same patterns of change seen at the local authority level, notably, that many parts of London experienced relatively high levels of population growth while growth across the rest of England and Wales and particularly in coastal areas, was lower. Many of the areas with the largest negative population change have relatively old age populations (as indicated by Figure 2), in these areas there are likely to be relatively fewer births and relatively higher numbers of deaths.

Further, Figure 3 shows that within local authorities, patterns of growth can vary widely. For example in Conwy, North Wales, two adjacent MSOAs have experienced different patterns of population change, one growing by more than 3% and one shrinking by more than 8%.

**Figure 3: Percentage change in population by middle layer Super Output Areas , England and Wales, mid-2015 to mid-2016**



Source: Office for National Statistics

## 4 . Clinical commissioning group population estimates – National Statistics

Clinical commissioning groups (CCGs) are responsible for deciding how NHS funds are spent in their local area. They were introduced, for England only, by the Health and Social Care Act 2012 as part of a [new structure for NHS organisation](#), which came into force on 1 April 2013.

CCGs replaced the former health geography areas, known as Primary Care Organisations (PCOs). Following a [formal consultation](#) we discontinued the production of population estimates for PCOs.

The mid-2016 CCG population estimates, referred to in this bulletin, are direct aggregations of mid-2016 lower layer Super Output Area (LSOA) estimates. They are consistent with population estimates for the national total for England. These estimates are classified as [National Statistics](#).

CCGs are organised into the higher level of health geography of NHS England (Region, Local office) and NHS England (Region). These geographies are formed from groups of CCGs and therefore population estimates for these areas are also created by directly aggregating LSOA estimates.

As at 1 April 2017, there were 207 CCGs, 14 NHS England Region Local offices and four NHS England Regions.

At mid-2016, the mean population of CCGs was 266,995 with population sizes ranging from 68,187 in NHS Corby CCG to 898,025 in NHS Northern, Eastern and Western Devon CCG.

## **CCGs in London continue to experience the fastest population growth**

Of the 10 CCGs with the largest percentage increases in population between mid-2015 and mid-2016, seven were in London. The CCG with the largest percentage increase in population was NHS Tower Hamlets at 3.3%.

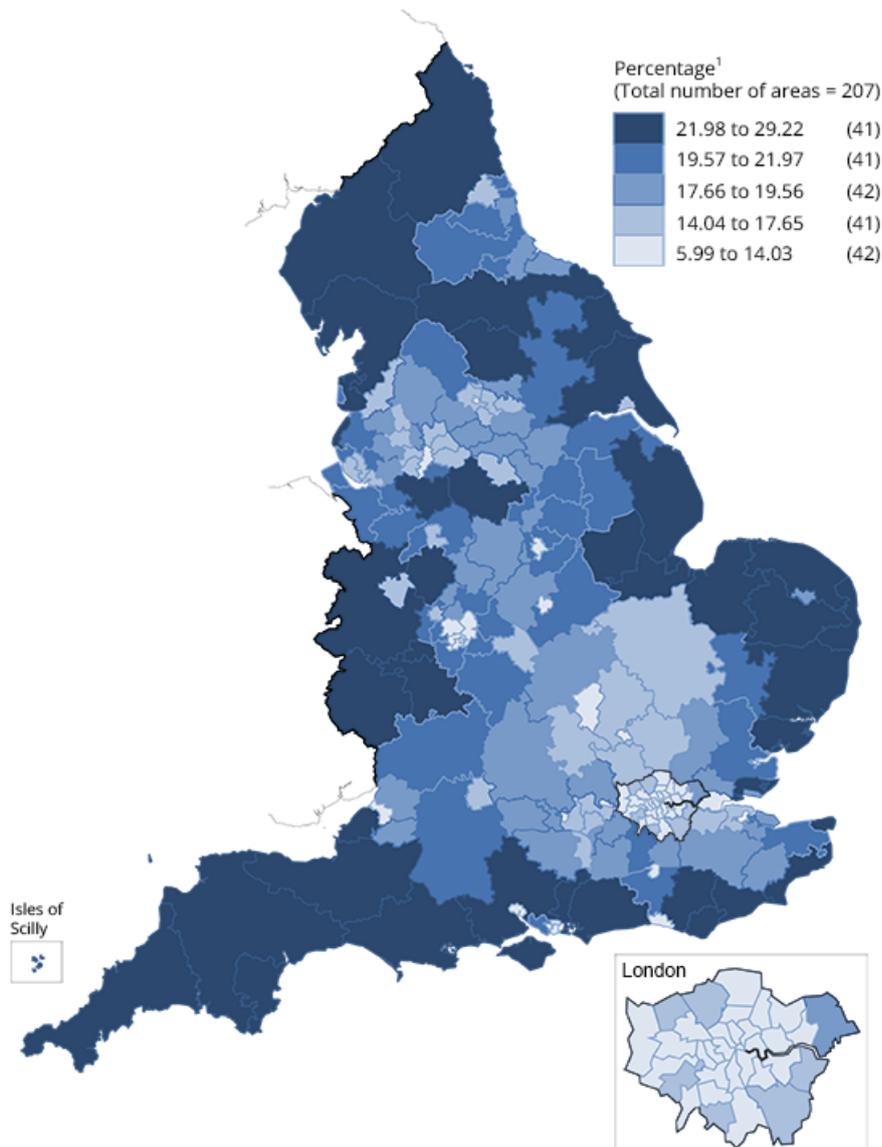
Only three CCGs had a population decrease between mid-2015 and mid-2016, with the greatest decrease being 0.5% in NHS Harrogate and Rural District CCG.

## **Wide variation in age structure of population across CCGs**

The age distribution of the resident population in a CCG is likely to impact on both the overall level of demand for health services and the type of health services required. Areas with a large percentage of older people in their population are likely to have different demands on health services than those with a predominantly younger population.

In mid-2016, the population of England aged 65 or over was 17.9%. By comparison, the population in NHS North Norfolk CCG aged 65 or over was 29.2%. Figure 4 shows the percentage of the population aged 65 or over by CCG.

**Figure 4: Percentage of population aged 65 or over, by clinical commissioning group, England, mid-2016**



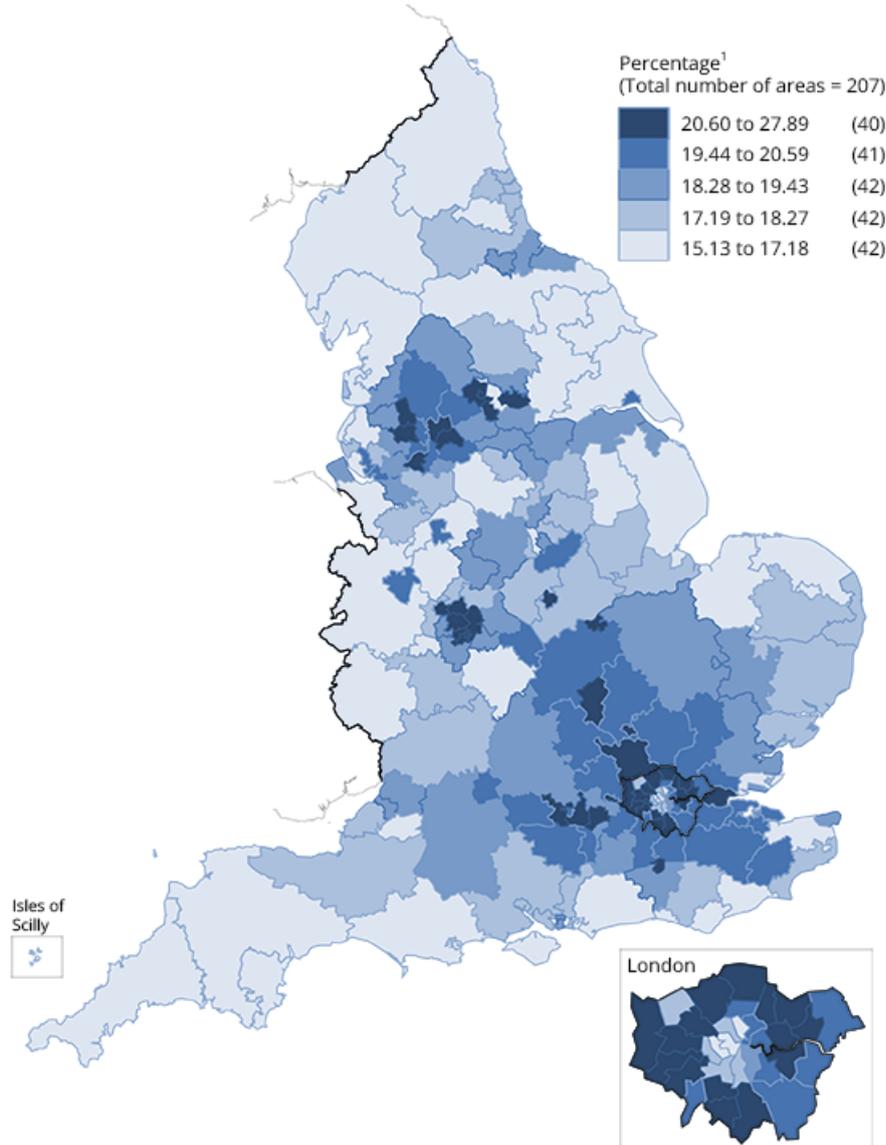
<sup>1</sup> Clinical Commissioning Group (CCG).  
Source: ONS licensed under the Open Government Licence v.3.0.  
Contains OS data © Crown copyright 2017

**Source: Office for National Statistics**

The percentage of the population who are children may also impact on requirements for health service provision. In mid-2016, the population of England aged 0 to 15 was 19.1%. By comparison, 27.9% of the population in NHS Bradford City CCG were aged 0 to 15, closely followed by NHS Barking and Dagenham CCG (27.4%).

Figure 5 shows the percentage of the population aged 0 to 15 by CCG.

**Figure 5: Percentage of population aged 0 to 15, by clinical commissioning group, England, mid-2016**



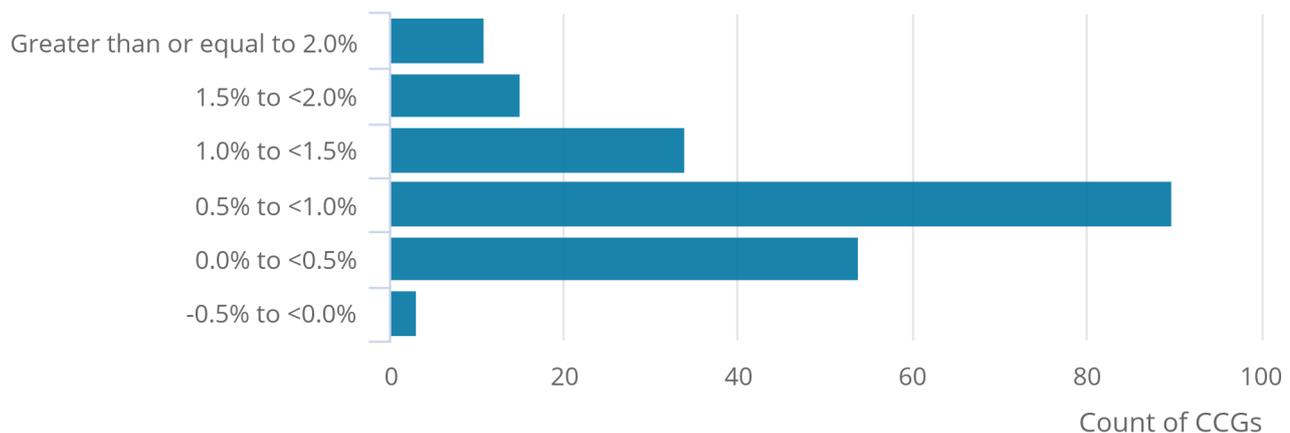
<sup>1</sup> Clinical Commissioning Group (CCG).  
Source: ONS licensed under the Open Government Licence v.3.0.  
Contains OS data © Crown copyright 2017

**Source: Office for National Statistics**

As shown in Figure 6, the large majority of CCGs (94.7%) had an annual population change of less than 2%, with 147 (71.0%) increasing (or decreasing in three CCGs) by less than 1% in the year to mid-2016.

**Figure 6: Distribution of clinical commissioning groups by percentage population change, England, mid-2015 to mid-2016**

Figure 6: Distribution of clinical commissioning groups by percentage population change, England, mid-2015 to mid-2016



Source: Office for National Statistics

## 5 . Westminster Parliamentary constituency population estimates – Experimental Statistics

Westminster Parliamentary constituencies are the areas used to elect Members of Parliament (MPs) to the House of Commons, the primary legislative chamber of the UK. The current boundaries were introduced for the May 2010 General Election and include 533 constituencies in England and 40 in Wales. Parliamentary constituency estimates are classified as [Experimental Statistics](#).

At mid-2016, the mean population of Parliamentary constituencies in England and Wales was 101,887 with population sizes ranging from 58,641 in Aberconwy to 180,321 in West Ham. On average, English constituencies have larger populations than Welsh constituencies with mean populations of 103,692 and 77,829, respectively.

### Annual population change

Parliamentary constituencies with the greatest increases in population over the one-year period tend to be concentrated in London, the South East of England and city areas in the Midlands and north of England. The area with the greatest increase was Manchester Central at 4.6%.

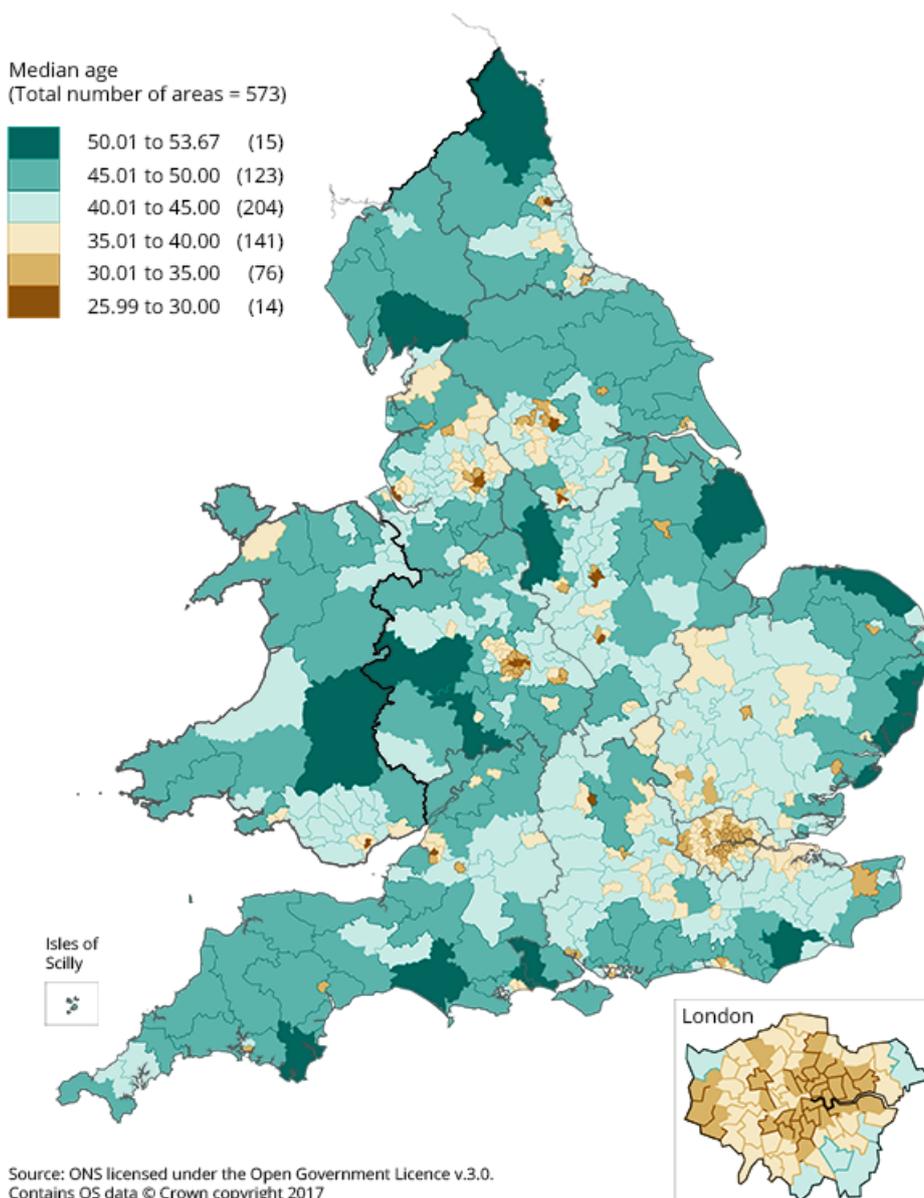
Population decreases at Parliamentary constituency level occur across the country, but are generally concentrated in the north of England, and Wales, with the largest decrease (-0.7%) in Ceredigion.

Parliamentary constituencies are classified into two broad types of area: borough constituencies, which are defined as predominantly urban areas and county constituencies, which are partly or mostly rural areas. The designation of a constituency as either borough or county is made by the relevant Boundary Commission. Overall, 55% of constituencies are classified as county constituencies and 45% are classified as borough constituencies.

## Wide variation in age structure of population across Parliamentary constituencies

Figure 7 shows how the median age of the population varies across the 573 Parliamentary constituencies in England and Wales. Median age is the age that divides a population into two numerically equal groups – that is, half the people are younger than this age and half are older. Median age provides a useful summary measure of the age structure of the population. In London and the majority of other urban areas across England and Wales, the median age tends to be lower than in the more rural and coastal areas. In 2016, Sheffield Central had the lowest median age (just under 26 years) and Christchurch and North Norfolk both had median ages above 53 years.

**Figure 7: Median age of population by Westminster Parliamentary constituency, England and Wales, mid-2016**



Source: Office for National Statistics

## Voting age

In England and Wales in mid-2016, there were 45,968,034 persons aged 18 and over, making up 78.7% of the total usual resident population. In mid-2016, at Parliamentary constituency level, the percentage of the population aged 18 and over ranged from 67% in Birmingham, Hodge Hill to 87% in Liverpool, Riverside.

The population of voting age in a Parliamentary constituency is not the same as the population who are entitled to vote, as it includes people who are not eligible to vote. For example, European Union citizens (excluding British citizens; and Irish, Cypriot and Maltese citizens who are qualifying Commonwealth citizens) are not entitled to vote in Westminster Parliamentary elections, but are included in the population estimates if they are resident in the UK for 12 months or more.

[Electoral statistics](#), providing counts of the number of persons registered to vote in each Parliamentary constituency, are available.

## 6 . Electoral ward population estimates – Experimental Statistics

Electoral wards are an important building block of UK administrative geography. They are the spatial units used to elect local government councillors in metropolitan and non-metropolitan districts, unitary authorities and London boroughs in England; and unitary authorities in Wales. In some unitary authorities in England they are legally termed as “electoral divisions”, however, they are frequently referred to as wards and are referenced as such throughout this bulletin. The five parishes of the Isles of Scilly are also treated as electoral wards for statistical purposes.

Electoral wards are subject to annual updates and boundary changes that make comparisons over longer periods more difficult. Mid-2016 population estimates are provided for 8,297 electoral wards in England and Wales as at 31 December 2016, excluding the 18 wards that do not meet the minimum population requirements for data confidentiality (40 resident households and 100 resident people in the 2011 Census). Electoral ward estimates are classified as [Experimental Statistics](#).

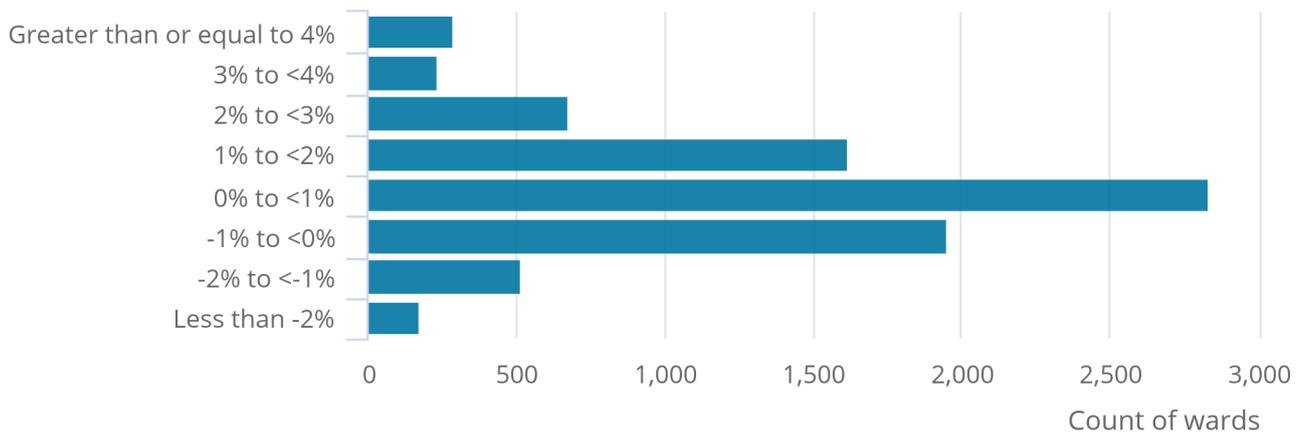
At mid-2016, the mean population of wards in England and Wales was 7,036. However, population sizes vary widely across the country ranging from 157 in St. Martin’s ward in the Isles of Scilly to 42,249 in City and Hunslet ward in Leeds. On average, wards in England have larger populations than those in Wales, with mean populations of 7,424 and 3,654, respectively.

### Annual population change

Figure 8 shows that the majority of wards (83.5%) had an annual population change of less than 2% in the year to mid-2016, whereas 4,786 (57.7%) wards had a population change of less than 1%. There were 169 wards that had an annual population change of more than 5% over the same period.

**Figure 8: Distribution of wards by percentage population change, England and Wales, mid-2015 to mid-2016**

Figure 8: Distribution of wards by percentage population change, England and Wales, mid-2015 to mid-2016



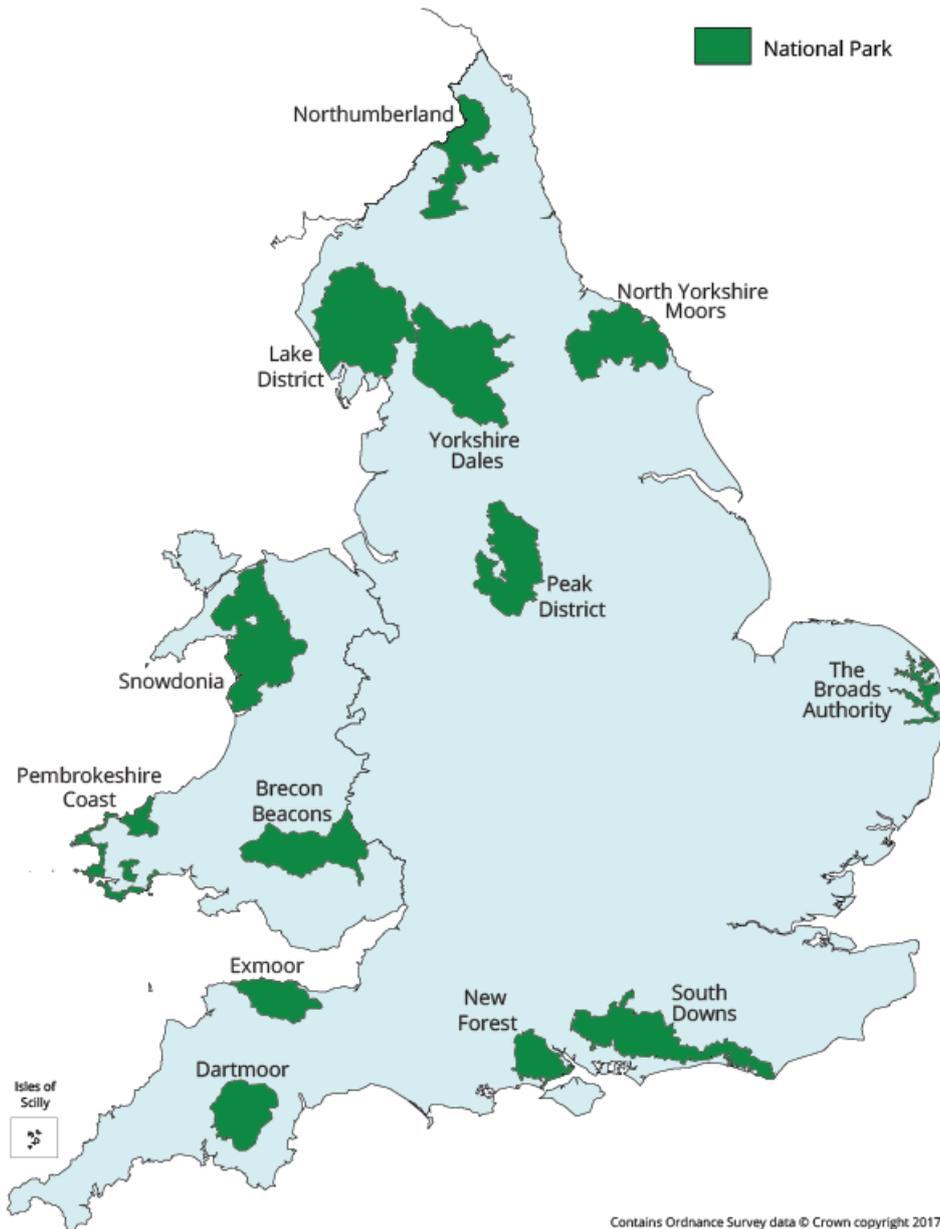
Source: Office for National Statistics

## 7 . National Park population estimates – Experimental Statistics

National Parks are designated areas of protected countryside aimed at conserving the natural beauty, wildlife and cultural heritage of the area. Each National Park has a National Park Authority (NPA) responsible for conservation, planning, recreation management and fostering the social and economic well-being of local communities.

The Broads Authority does not have a National Park designation, but is included in this set of statistics, as it is part of the National Parks family. The Broads Authority has similar responsibilities to NPAs, but with additional powers relating to navigation. In total there are 13 National Parks in England and Wales (including The Broads Authority).

**Figure 9: National Parks in England and Wales**

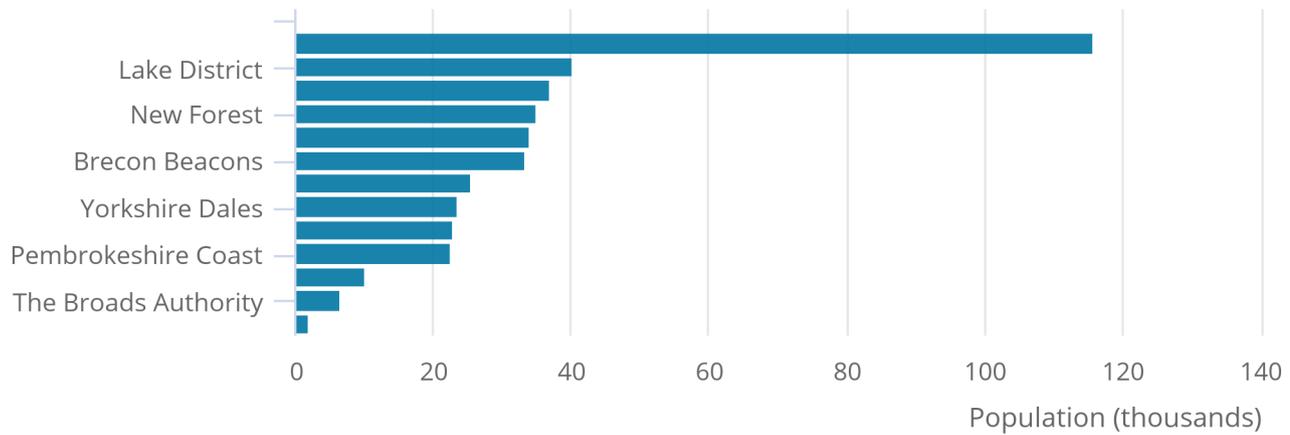


Source: Office for National Statistics

In mid-2016, the mean population size of National Parks in England and Wales was approximately 31,400. However, National Park population totals vary greatly, as shown in Figure 10. The most populous National Park, the South Downs, has 115,936 people compared with only 1,947 in Northumberland National Park. National Parks estimates are classified as [Experimental Statistics](#).

**Figure 10: National Park population estimates, England and Wales, mid-2016**

Figure 10: National Park population estimates, England and Wales, mid-2016



Source: Office for National Statistics

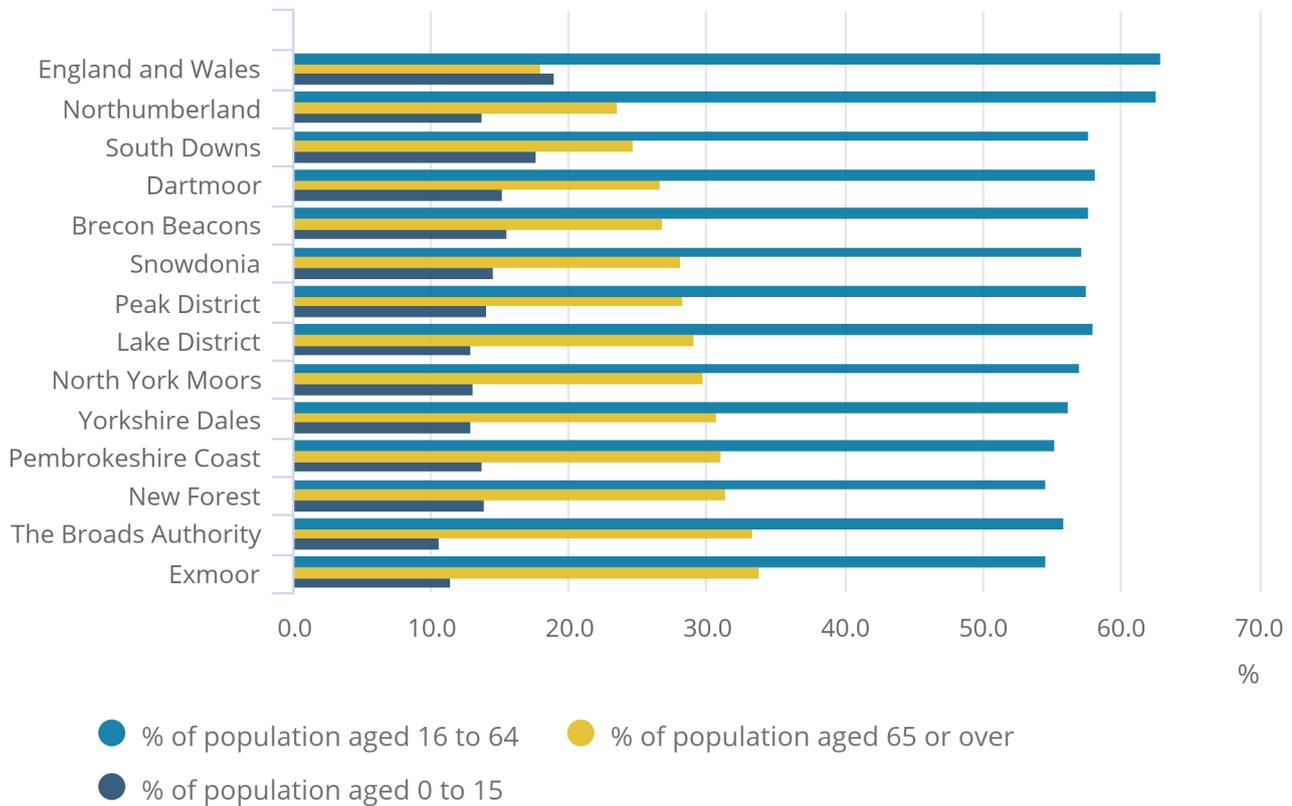
## Age distribution

National Parks have an older age structure than the wider population of England and Wales. In mid-2016, the median age for National Parks within England and Wales varied from 48.3 in the South Downs to 56.4 in Exmoor. In contrast, the median age for England and Wales as a whole was 39.9.

Figure 11 shows the percentage of the population of each National Park aged 0 to 15, 16 to 64 and 65 or over. It shows that all 13 National Parks have a larger proportion of the population aged 65 or over than England and Wales as a whole. In mid-2016, the population of England and Wales aged 65 or over was 18.0%, compared with 23.5% in Northumberland, 33.9% in Exmoor and 33.4% in The Broads Authority. Conversely, 19.0% of the population in England and Wales were aged 0 to 15 compared with only 10.7% in The Broads Authority and 11.5% in Exmoor.

**Figure 11: Distribution of National Park populations by broad age groups, England and Wales, mid-2016**

Figure 11: Distribution of National Park populations by broad age groups, England and Wales, mid-2016



Source: Office for National Statistics

## National Parks population density

Population density, that is, the number of people living per square kilometre, can be used to highlight how sparsely populated National Parks are in comparison with more urban population settlements.

In mid-2016, the population density of England and Wales was 387 persons per square kilometre. Northumberland National Park is the most sparsely populated area with a population density of two persons per square kilometre and the South Downs is the most densely populated area with 70 persons per square kilometre (Table 1).

**Table 1: National Parks population density, England and Wales, mid-2016**

Rank	National Park	Population Density
1	South Downs	70
2	New Forest	63
3	Pembrokeshire Coast	39
4	Dartmoor	36
5	Peak District	26
6	Brecon Beacons	25
7	The Broads Authority	22
8	Lake District	18
9	North York Moors	16
10	Exmoor	15
11	Snowdonia	12
12	Yorkshire Dales	11
13	Northumberland	2
	England and Wales	387

Source: Office for National Statistics

## 8 . Small area population estimates for other UK countries

Population estimates are produced for similar small areas in both Scotland and Northern Ireland, however, they are not produced using the same methodology as for small area population estimates in England and Wales.

National Records of Scotland (NRS) produce population estimates for Scottish data zones, which are slightly smaller areas than lower layer Super Output Areas (LSOAs), designed to contain approximately 500 to 1,000 household residents. NRS use a cohort component-based method to produce estimates for data zones, further information on this methodology and the [latest estimates \(for mid-2016\)](#) are available from their website.

The Scottish data zones are used to produce population estimates for a range of other geographies including Westminster Parliamentary constituencies in Scotland, Scottish Parliamentary constituencies and Nomenclature of Units for Territorial Statistics (the statistical geography used by the European Union). These figures are available from the [Special Area Population Estimates section](#) of the NRS website.

The Northern Ireland Statistics and Research Agency (NISRA) publish population estimates for Super Output Areas in Northern Ireland. These are of similar size to English and Welsh LSOAs, with an average population of 2,100. NISRA uses a mixed methodology based on both cohort component and ratio change approaches. Further information and the [latest estimates published for mid-2016](#) are available from the NISRA website. Population estimates for wards, Neighbourhood Renewal Areas and Census Small Areas in Northern Ireland are also available.

A paper, [Small Area Population Estimates across the UK](#), which provides a broad description of the different methodologies used to produce small area population estimates in each constituent country of the UK, is also available on the NISRA website.

## 9 . Where can I find other information?

This statistical bulletin is part of our [Small area population estimates in England and Wales: mid-2016](#). The publication includes:

- population estimates for lower and middle layer Super Output Areas (LSOAs and MSOAs) in England and Wales; estimates for LSOAs by broad ages and MSOAs by five-year age groups (quinary age) hold National Statistics status; estimates at a greater level of disaggregation by age including quinary age for LSOAs and single year of age for both SOAs are supporting information only; more information can be found in [Small Area Population Estimates: Summary of methodology review and research update](#)
- population estimates for electoral wards, Westminster Parliamentary constituencies and National Parks in England and Wales – these products are classified as Experimental Statistics
- population estimates for health geographies in England (clinical commissioning groups (CCGs), NHS England (Region, Local office) and NHS England (Region)) – these products are also classified as National Statistics

These estimates are consistent with the results of the 2011 Census and are provided for the latest official geographic boundaries in place at the time of publication.

Other related statistics:

- an [Overview of Population Statistics](#) is available
- mid-2016 population estimates for small area geographies in England and Wales are available from the [data section](#) of this release
- [mid-2016 population estimates](#) for the UK and its constituent countries, regions and local authorities are also available

News on our population statistics can be obtained by subscribing to the [quarterly newsletter](#) (email your request to [population.statistics@ons.gov.uk](mailto:population.statistics@ons.gov.uk)) or following the Twitter account @RichPereira\_ONS

## 10 . Quality and methodology

The [Small area population estimates](#) Quality and Methodology Information report contains important information on:

- the strengths and limitations of the data
- the quality of the output: including the accuracy of the data and how it compares with related data
- uses and users
- how the output was created

A [Methodology note on production of small area population estimates](#) details the data sources and methodology applied to producing the England and Wales small area population estimates.

The report [Small Area Population Estimates \(SAPE\) Evaluation: Report on Accuracy Compared to Results of the 2011 Census](#) presents research that evaluates the accuracy of the small area population estimates to inform their broad variety of users. The report also fulfils the commitment to analysis planned after the 2011 Census.

The [ONS Revisions Policy on population statistics](#), including the small area population estimates, explains how we implement and categorise revisions to statistics, including following a census.