

Statistical bulletin

# Population estimates by output areas, electoral, health and other geographies, England and Wales: mid-2019

National population estimates broken down into small geographical areas (Super Output Areas, health geographies, electoral wards, Parliamentary constituencies and National Parks).



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# 1 . Main points

- There continues to be wide variation in the age structure of the population across England and Wales, with coastal and rural areas tending to have older populations than cities and urban areas; at the extremes, in the coastal Lower layer Super Output Area (LSOA) of Eastbourne 012B, the median age was 71.5 years whereas in the urban LSOA of Salford 016E the median age was 15.2 years.
- The proportion of people aged 65 years and over living in areas served by different Clinical Commissioning Groups (CCGs) in England ranged from 6.4% in NHS Tower Hamlets CCG to 28.3% in NHS Isle of Wight CCG.
- The proportion of people aged 85 years and over ranged from 0.8% in NHS Tower Hamlets CCG to 4.4% NHS Southport and Formby CCG.
- The population estimates in this release are consistent with the [Mid-year population estimates](#) published on 24 June 2020.

## 2 . Super Output Area population estimates

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 of a consistent population size and are not subject to boundary changes between censuses.

Super Output Area (SOA) population estimates include:

- [National Statistics](#) for Lower layer Super Output Areas (LSOAs) by broad age groups and Middle layer Super Output Areas (MSOAs) by quinary (five-year) age groups
- 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

### Middle layer Super Output Area population estimates (MSOA)

The age structures of populations at a local level can vary widely – indicating different requirements for public services provision – and median age provides a useful measure of this. The age structures of the 50 MSOAs with the highest median age and the 50 MSOAs with the lowest median age are shown in Figure 1.

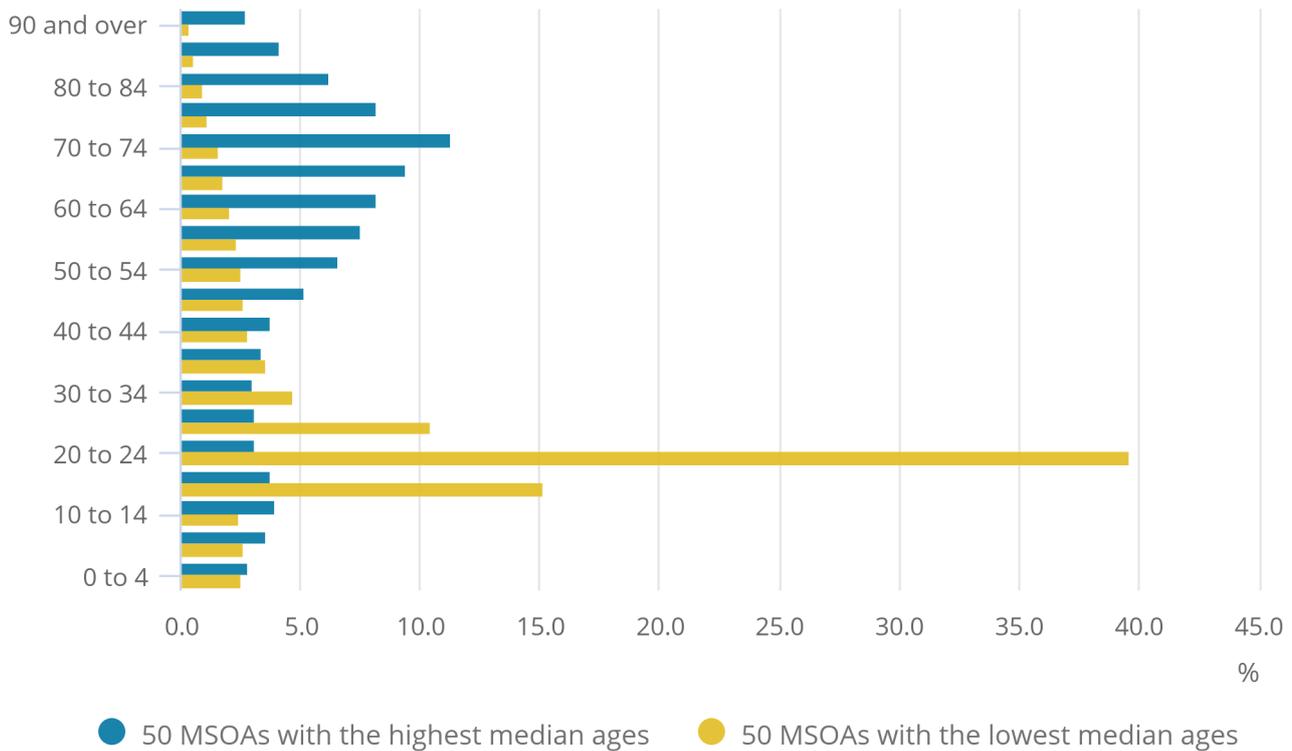
In mid-2019, in the 50 MSOAs with the lowest median ages, 39.6% of the population were aged between 20 and 24 years, with a further 15.2% aged between 15 to 19 years; 1.9% were aged 80 years and over. A large number of the areas with the lowest median ages are home to large student populations. Conversely, the 50 MSOAs with the highest median ages are mostly in rural and coastal areas. In these MSOAs, 37.0% of the population were between 60 to 79 years and 13.1% were aged 80 years and over; 3.1% were aged 20 to 24 years.

**Figure 1: In 50 MSOAs with the lowest median ages, just under 40% of the population are aged 20 to 24 years**

Comparison of MSOA population age structures for the 50 MSOAs with the highest and lowest median ages, mid-2019

**Figure 1: In 50 MSOAs with the lowest median ages, just under 40% of the population are aged 20 to 24 years**

Comparison of MSOA population age structures for the 50 MSOAs with the highest and lowest median ages, mid-2019



Source: Office for National Statistics – Population Estimates

**Lower layer Super Output Area population estimates (LSOA)**

There is still a wide variation in the age structure of the population across England and Wales. At Lower layer Super Output Area (LSOA) level, the highest median age was 71.5 years in Eastbourne 012B, and the lowest median age was 15.2 years in Salford 016E. In mid-2018 these two LSOAs also had, respectively, the highest and lowest median ages. Data on median age by LSOA is available from the [single year of age LSOA population estimates](#).

At LSOA level, the proportion of children aged 0 to 15 years ranged from 52.0% in Salford 016E to 0.6% in Leeds 111A. The proportion of those aged 65 years and over ranged from 0.2% in Sheffield 073E to 61.3% in East Devon 012B and Eastbourne 012B. Across England and Wales as a whole the proportion of those aged 65 years and over was 18.5%, with 19.1% of the population aged 0 to 15 years.

## Population density

Population density gives the population per square kilometre. It shows that areas in London and other major cities, particularly around Birmingham, are the most densely populated. Table 1 shows the LSOAs with the highest population densities in mid-2019.

Tower Hamlets 032D, located on the western side of Millwall Inner Dock on the Isle of Dogs in London, had the highest population density of 106,716 people per sq km. Most of the less densely populated areas were found in the North of England and Wales, particularly in areas covered by National Parks. The least densely populated area, an area partly covered by the Northumberland National Park and encompassing Kielder Water, was Northumberland 019C, with a population density of 2.5 people per sq km. [Population estimates for National Parks](#) are available.

LSOAs were designed to have similar [population sizes](#) and this means the land area they cover can vary considerably. The smallest in terms of land area, Kensington and Chelsea 021C (just under 2 hectares, an area including the World's End Estate), is around the twice the size of Trafalgar Square in London, while the largest, Northumberland 019C (67,284 hectares) is larger than the majority of local authorities.

Table 1: LSOAs with highest population density, mid-2019

Rank	LSOA code	LSOA name	Population density (persons per sq. km)
1	E01032773	Tower Hamlets 032D	106,716
2	E01032779	Tower Hamlets 028H	65,705
3	E01033487	Islington 011F	61,107
4	E01002842	Kensington and Chelsea 021C	55,301
5	E01004739	Westminster 024E	54,914
6	E01033493	Islington 006F	52,376
7	E01032789	Hammersmith and Fulham 023E	51,505
8	E01033711	Hackney 027I	50,272
9	E01032770	Tower Hamlets 032B	50,068
10	E01033276	Sheffield 073E	49,992

Source: Office for National Statistics – Population Estimates

Table 2: LSOAs with lowest population density, mid-2019

Rank	LSOA code	LSOA name	Population density (persons per sq. km)
1	E01027503	Northumberland 019C	2.5
2	E01027373	Northumberland 007D	4.0
3	E01027375	Northumberland 003B	4.4
4	E01027512	Northumberland 037E	4.7
5	W01000083	Gwynedd 015D	5.0
6	E01027773	Richmondshire 005E	5.0
7	W01000450	Powys 014C	6.2
8	E01027511	Northumberland 019D	6.5
9	E01019736	High Peak 013B	6.7
10	W01000474	Powys 020B	6.8

Source: Office for National Statistics – Population Estimates

## Countryside and suburban areas have the highest proportions of those aged 85 years and over

One way of understanding how the population varies across England and Wales is to use the [2011 LSOA area classification](#); this classifies each LSOA in England and Wales according to its demographic characteristics based on the 2011 Census. Table 3 gives a summary of the population for each type of LSOA.

This supports the story that rural areas (described as Countryside living under the area classification) have older populations (26.5% aged 65 years and over) and much lower population densities (62 people per square km) but also shows that suburban areas (Suburban living) have a high proportion of older people (25% aged 65 years and over). Countryside living and suburban living also have the highest median ages of 50.1 and 48.1 years respectively.

LSOAs classified as Cosmopolitan student neighbourhoods have the lowest median ages (26.3 years) but also the lowest proportion of those aged 0 to 15 years (9.9%). The relatively low median age in these areas is explained by their high proportion of 18- to 22-year-olds (25.6%) compared with other areas.

Using this classification highlights the variation in population density in different parts of England and Wales. In areas classified as inner city cosmopolitan, the population density is nearly 172 times higher than in areas classified as countryside living.

Table 3: Summary of population by LSOA area classification, England and Wales, mid-2019

	Population	Age 0 to 15 years	Age 18 to 22 years	Age 16 to 64 years	65 years and over	70 years and over	85 years and over	Median age (years)	Population density
<b>England and Wales</b>	59,439,840	19.10%	5.90%	62.30%	18.50%	13.50%	2.50%	40.2	394
<b>Cosmopolitan student neighbourhoods</b>	2,465,618	9.90%	25.60%	81.50%	8.50%	6.20%	1.40%	26.3	4,172
<b>Countryside living</b>	7,577,751	16.40%	4.20%	57.20%	26.50%	19.30%	3.20%	50.1	62
<b>Ethnically diverse professionals</b>	8,974,744	20.00%	5.10%	63.10%	16.90%	12.40%	2.60%	39.5	2,019
<b>Hard-pressed communities</b>	7,845,734	22.60%	5.70%	62.20%	15.20%	10.80%	2.00%	36.4	3,059
<b>Industrious communities</b>	11,714,299	18.30%	4.70%	59.80%	21.90%	16.20%	3.00%	44.2	1,096
<b>Inner city cosmopolitan</b>	4,185,133	18.70%	5.50%	71.70%	9.60%	6.70%	1.30%	34.0	10,651
<b>Multicultural living</b>	7,283,904	24.40%	6.30%	64.90%	10.70%	7.40%	1.40%	33.6	5,118

Source: Office for National Statistics - Population Estimates

### 3 . Clinical Commissioning Group population estimates (National Statistics)

Clinical Commissioning Groups (CCGs) are responsible for deciding how NHS funds are spent in their local area. Following a major [reconfiguration in April 2020](#) there are 135 CCGs; prior to April 2020 there were 191.

At mid-2019, the average population of CCGs was 416,940, with population sizes ranging from 96,564 in NHS Surrey Heath CCG to 1,860,111 in NHS Kent and Medway CCG. The highest median age was 50.6 years in NHS Isle of Wight CCG and the lowest was 30.1 years in NHS Manchester CCG.

#### Annual population change

Between mid-2018 and mid-2019 the rate of population change varied across England and Wales. Of the 135 CCGs in England the population increased in 125 and decreased in 10. As with the year to mid-2018 the fastest increase, 2.5%, was in NHS Central London (Westminster) CCG. The largest percentage decrease was 0.5% in NHS Luton CCG; this follows a 0.3% reduction in population the year before.

Between mid-2018 and mid-2019 the two CCGs with the fastest population increases were in London, NHS Central London (Westminster) CCG (2.5%) and NHS Tower Hamlets CCG (2.2%). Of the remaining 10 CCGs with the greatest percentage increases in population, five are found in the East or West Midlands; this reflects the patterns of population growth shown in [Mid-2019 population estimates release](#).

Table 4: CCGs with largest increases in population, mid-2019

<b>Rank</b>	<b>CCG name</b>	<b>CCG code</b>	<b>Annual population change (%) mid-2018 to mid-2019</b>
1	NHS Central London (Westminster) CCG	E38000031	2.5
2	NHS Tower Hamlets CCG	E38000186	2.2
3	NHS Salford CCG	E38000143	1.7
4	NHS Bedfordshire CCG	E38000010	1.5
5	NHS South Warwickshire CCG	E38000164	1.4
6	NHS Coventry and Rugby CCG	E38000038	1.4
7	NHS West Leicestershire CCG	E38000201	1.3
8	NHS East Staffordshire CCG	E38000053	1.2
9	NHS Telford and Wrekin CCG	E38000183	1.2
10	NHS Heywood, Middleton and Rochdale CCG	E38000080	1.1

Source: Office for National Statistics – Population Estimates

Table 5 shows the 10 CCGs with percentage decreases in population between mid-2018 and mid-2019. There are two distinct groups within the top 10, one along the south coast of England formed of NHS Fareham and Gosport CCG, NHS Southampton CCG and NHS Portsmouth CCG and one in West London formed of NHS Brent CCG, NHS Hammersmith and Fulham CCG and NHS Ealing CCG.

Table 5: CCGs with decreases in population, mid-2019

Rank	CCG name	CCG code	Annual population change (%) mid-2018 to mid-2019
1	NHS Luton CCG	E38000102	-0.5
2	NHS Hull CCG	E38000085	-0.3
3	NHS Brent CCG	E38000020	-0.3
4	NHS Leicester City CCG	E38000097	-0.3
5	NHS Fareham and Gosport CCG	E38000059	-0.3
6	NHS North East Lincolnshire CCG	E38000119	-0.2
7	NHS Hammersmith and Fulham CCG	E38000070	-0.2
8	NHS Southampton CCG	E38000167	-0.1
9	NHS Portsmouth CCG	E38000137	-0.1
10	NHS Ealing CCG	E38000048	-0.1

Source: Office for National Statistics – Population Estimates

## 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 younger populations.

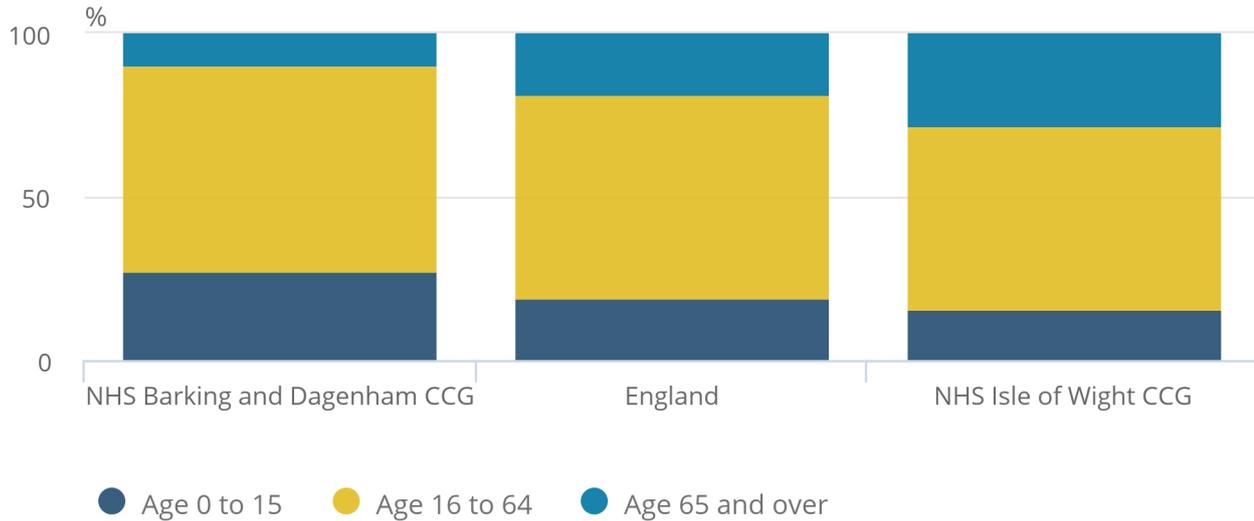
Figure 2 shows the broad age structure for England, Barking and Dagenham (the CCG with the highest proportion of those aged 0 to 15 years) and the Isle of Wight (the CCG with the highest proportion of those aged 65 years and over), to highlight the variation in age structures between CCGs. Across England as a whole, 19.2% of the population were aged 0 to 15 years, with 62.4% aged 16 to 64 years and 18.4% aged over 65 years. However, in NHS Barking and Dagenham CCG the proportion of those aged 0 to 15 years is 27.2% and 9.3% were aged 65 and over. This contrasts with NHS Isle of Wight CCG where 28.3% of the population were aged 65 years and over and 15.5% were aged 0 to 15 years.

**Figure 2: Barking and Dagenham has the highest proportion of 0- to 15-year-olds, and the Isle of Wight the highest of those aged 65 years and over**

Comparison of age structure of NHS Barking and Dagenham CCG with NHS Isle of Wight, Mid-2019

Figure 2: Barking and Dagenham has the highest proportion of 0- to 15-year-olds, and the Isle of Wight the highest of those aged 65 years and over

Comparison of age structure of NHS Barking and Dagenham CCG with NHS Isle of Wight, Mid-2019



Source: Office for National Statistics – Population Estimates

In mid-2019, the population aged 65 years or over in England was 18.4%. As Table 6 shows, 28.3% of the population in NHS Isle of Wight CCG was aged 65 years or over, the highest in any CCG. The CCG with the lowest proportion of people aged 65 years or older was NHS Tower Hamlets CCG (6.4%).

Table 6: CCGs with the highest percentage of population aged 65 years and over

<b>Rank</b>	<b>CCG code</b>	<b>CCG name</b>	<b>Percentage (%) of population</b>
1	E38000087	NHS Isle of Wight CCG	28.3
2	E38000226	NHS Fylde and Wyre CCG	27.7
3	E38000170	NHS Southport and Formby CCG	27.4
4	E38000052	NHS East Riding of Yorkshire CCG	26.3
5	E38000235	NHS East Sussex CCG	25.9
6	E38000045	NHS Dorset CCG	25.4
7	E38000089	NHS Kernow CCG	25
8	E38000241	NHS North Yorkshire CCG	24.9
9	E38000150	NHS Somerset CCG	24.9
10	E38000239	NHS Norfolk and Waveney CCG	24.9

Source: Office for National Statistics – Population Estimates

The percentage of the population who are children may also impact on requirements for health service provision. In mid-2019, the population of England aged 0 to 15 years was 19.2% but ranged from 27.2% in NHS Barking and Dagenham CCG to 15.4% in NHS Brighton and Hove CCG.

Table 7: CCGs with the highest percentage of population aged 0 to 15 years

<b>Rank</b>	<b>CCG code</b>	<b>CCG name</b>	<b>Percentage (%) of population</b>
1	E38000004	NHS Barking and Dagenham CCG	27.2
2	E38000102	NHS Luton CCG	24.5
3	E38000185	NHS Thurrock CCG	23.3
4	E38000014	NHS Blackburn with Darwen CCG	23.1
5	E38000107	NHS Milton Keynes CCG	23.1
6	E38000232	NHS Bradford District and Craven CCG	23.0
7	E38000144	NHS Sandwell and West Birmingham CCG	23.0
8	E38000135	NHS Oldham CCG	22.5
9	E38000138	NHS Redbridge CCG	22.4
10	E38000224	NHS East Berkshire CCG	22.2

Source: Office for National Statistics – Population Estimates

## 4 . Population estimates for other geographies

This bulletin has described estimates for LSOAs, MSOAs and Clinical Commissioning Groups but data for a range of other geographical entities are also available. As part of this release data for output areas and LSOAs by single years of age and sex is published. Using this data alongside geography lookups from the [Office for National Statistics \(ONS\) Open Geography Portal](#) enables estimates for additional geographic breakdowns to be produced.

### Nomis

Population estimates for mid-2011 to mid-2019 are also available through [Nomis](#). Nomis holds additional geographic breakdowns not published on the ONS website such as major towns and cities, built-up areas, Travel to Work areas (2011) and some data on historic ward boundaries.

## 5 . Population estimates by output areas, electoral, health and other geographies data

### [Lower layer Super Output Area population estimates \(supporting information\)](#)

Dataset | Released 9 September 2020

Mid-year (30 June) estimates of the usual resident population for Lower layer Super Output Areas (LSOAs) in England and Wales by single year of age and sex.

### [Lower Layer Super Output areas by broad ages \(National statistics\)](#)

Dataset | Released 9 September 2020

Mid-year (30 June) estimates of the usual resident population for Lower layer Super Output Areas (LSOAs) in England and Wales by broad age groups and sex.

### [Middle Super Output Area population estimates \(supporting information\)](#)

Dataset | Released 9 September 2020

Mid-year (30 June) estimates of the usual resident population for Middle layer Super Output Areas (MSOAs) in England and Wales by single year of age and sex.

### [Middle Layer Super output areas, by quinary ages \(National Statistics\)](#)

Dataset | Released 9 September 2020

Mid-year (30 June) estimates of the usual resident population for Middle layer Super Output Areas (MSOAs) in England and Wales by quinary age groups and sex.

### [Clinical commissioning group population estimates \(National Statistics\)](#)

Dataset | Released 9 September 2020

Mid-year (30 June) estimates of the usual resident population for clinical commissioning groups in England.

### [Census Output Areas by regions by single year of age \(supporting information\)](#)

Dataset | Released 9 September 2020

Mid-year (30 June) estimates of the usual resident population for 2011 Census Output Areas (OAs).

### [Parliamentary constituency by single year of age and sex \(Experimental Statistics\)](#)

Dataset | Released 9 September 2020

Mid-year (30 June) estimates of the usual resident population for Westminster Parliamentary constituencies in England and Wales.

### [Ward-level population estimates by single year of age and sex \(Experimental Statistics\)](#)

Dataset | Released 9 September 2020

Mid-year (30 June) estimates of the usual resident population for electoral wards in England and Wales.

### [National Parks by single year of age and sex \(Experimental Statistics\)](#)

Dataset | Released 9 September 2020

Mid-year (30 June) estimates of the usual resident population for the 13 National Parks in England and Wales.

## 6 . Glossary

### Population estimates

Population estimates provide statistics on the current size and age structure of the population in the UK at country, region, county and local authority level. They are the official source of estimated population size in between censuses and inform a wide range of National Statistics.

## Mid-year

Mid-year refers to 30 June of any given year.

## Usually resident population

These data estimate the “usually resident population”. This is the standard UN definition and includes only people who reside in a country for 12 months or more, making them usually resident in that country. As such, visitors and short-term migrants are excluded.

## Median age

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).

## Population density

The number of people resident per square kilometre is the population density.

# 7 . Measuring the data

## Ratio change method

While population estimates for local authorities are produced using the cohort component method, the main outputs in this release, Super Output Area (SOA) estimates, are produced using a ratio change methodology. This method uses the change in the population recorded in administrative sources as an indicator of change in the usually resident population, and it is used to produce SOA estimates in intercensal periods. For consistency, Lower layer Super Output Area (LSOA) mid-year population estimates are constrained to Middle layer Super Output Area (MSOA) estimates, which in turn are constrained to local authority estimates.

## Producing output area estimates

LSOA population estimates are the starting point for calculating Output Area (OA) estimates. Administrative data sources are used to distribute the population, by single year of age and sex, between each OA within a single LSOA. Special populations (for example, prisoners and armed forces) are treated separately as they are static populations that are not included in the administrative data sources used to calculate OA estimates.

## Aggregating to higher geographies

- Clinical Commissioning Group (CCG), Sustainability and Transformation Partnership (STP) and NHS England (Region) population estimates are direct aggregations of LSOA estimates
- Ward and Parliamentary constituency population estimates are based on aggregations of whole OA estimates; OA boundaries are not an exact fit (non-coterminous) for current ward or Parliamentary constituency boundaries and are therefore allocated using a best-fit approach

## National Park estimates

National Park population estimates are provided for the exact boundaries of the National Park and therefore cannot be produced by aggregating whole OA estimates. The estimates are produced using a ratio change methodology that uses changes in the population of the wider area around the National Park (based on aggregations of OAs) as an indicator of the change in the true population of the National Park.

## National Statistics and experimental statistics status

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 quinary age groups (five-year age groups) 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 the small area population estimates products relate to a range of different geographic areas and are derived directly from the SOA figures. First, estimates for 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.

## Upcoming changes – transformation of population statistics

It is our mission to provide the best insights on population and migration using a range of new and existing data sources to meet the needs of our users. Our ambition is to deliver a fully transformed system by 2023, making regular improvements to our statistics along the way as more administrative data become available. We will rigorously quality assure new methods and share the impact of any changes made. The [Transformation of the population and migration statistics system: overview](#) gives more information on this work. The resulting improvements will also be incorporated into future sets of population estimates.

## Population estimates for mid-2020

The local authority population estimates for mid-2020 are planned for release in June 2021, these will be followed by population estimates for SOAs later in the year. The coronavirus (COVID-19) pandemic has disrupted the collection of several data sources (such as the International Passenger Survey) that underpin the production of population estimates. Further, the pandemic may have had impacts on how different groups, for example students, are captured on different data sources used in the population estimates. Over the coming months we will be working to further understand the impacts of these issues and will share our findings and consult with stakeholders as we progress.

## 8 . Strengths and limitations

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 \(QMI\) 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 Members of Parliament (MPs). Population estimates by 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-2019 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 GP Patient Register data in 2019 has increased or decreased in a large number of LSOAs and MSOAs compared with 2018 data, which may be because of 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 [Office for National Statistics \(ONS\) Revisions policies on population statistics](#), including the small area population estimates, explains how we implement and categorise revisions to statistics, including following a census.

## 9 . Related links

### [Population Estimates for Small Areas, Northern Ireland](#)

Report | Released 28 November 2019

Population estimates for small areas in Northern Ireland produced by the Northern Ireland Statistics and Regency Agency (NISRA).

### [Small Area Population Estimates Scotland](#)

Report | Released 27 August 2020

Population estimates for small areas in Scotland produced by the National Record of Scotland (NRS).

### [Rural population and migration statistics](#)

Report | Released 27 August 2020

Population and migration statistics for rural and urban areas produce by Department for Environment, Food & Rural Affairs (DEFRA).