

2014-based Subnational Population Projections: Questions and Answers

This document provides answers to some questions we think users may ask which are specific to the 2014-based subnational population projections.

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1 . Introduction

Questions about projections in general may be answered by the general projections [Frequently Asked Questions document](#), and specific methodological questions may be answered by the [subnational population projections methodology document](#). Information relating to quality can also be found in the [Quality and Methodological Information Note](#).

If you cannot find the answer to your question in these documents, please send your query to projections@ons.gsi.gov.uk or telephone +44 (0)1329 44 4652.

2 . About Subnational Population Projections Data

Where can I find the latest subnational population projections?

The latest subnational population projections for England, the [2014-based subnational projections](#), are located on the ONS website. Subnational population projections for other UK countries are the responsibility of the respective devolved administrations: for Scotland by [National Records for Scotland](#), for Wales by the [Statistical Directorate of the Welsh Government](#), and for Northern Ireland by the [Northern Ireland Statistics and Research Agency](#).

What information is available to help me understand what is happening in my local authority?

The 2014-based Subnational Population Projections Statistical Bulletin provides an overview of the results as well as interactive maps and population pyramids. It also signposts other helpful information such as:

- [Data tables](#)
- [Methodology document](#)
- [Quality and Methodology Information document](#)
- [Generic frequently asked questions document](#)
- [Consultation response document](#)

Table 1: 2014-based Subnational Population Projections for Regions in England	Population figures for mid-2014 to mid-2039 for persons, males and females in five year age groups for regions in England (Excel sheet)
Table 2: 2014-based Subnational Population Projections for Local Authorities in England	Population figures for mid-2014 to mid-2039 for persons, males and females in five year age groups for local authorities in England (Excel sheet)
Table 3: 2014-based Subnational Population Projections for Clinical Commissioning Groups in England	Population figures for mid-2014 to mid-2039 for persons, males and females in five year age groups for clinical commissioning groups in England (Excel sheet)
Table 5: 2014-based Subnational Population Projections with Components of Change (Births, Deaths and Migration) for Regions and Local Authorities in England	Components of change, births, deaths and migration for mid-2014 to mid-2039 for regions and local authorities in England (Excel sheet)
SNPP Z1: 2014-based Subnational Population Projections. Local Authorities in England, mid-2014 to mid-2039	Population figures by single year of age for persons, males and females for local authorities (zipped CSV with supporting txt file)
SNPP Z2: 2014-based Subnational Population Projections. Clinical Commissioning Groups in England, mid-2014 to mid-2039	Population figures by single year of age for persons, males and females for clinical commissioning groups (zipped CSV with supporting txt file)
SNPP Z3: 2014-based Subnational Population Projections. Births by Age of Mother, mid-2014 to mid-2039	Births by age of mother for local authorities (zipped CSV with supporting txt file)
SNPP Z4: 2014-based Subnational Population Projections. Deaths, mid-2014 to mid-2039	Deaths by single year of age for persons, males and females for local authorities (zipped CSV with supporting txt file)
SNPP Z5: 2014-based Subnational Population Projections. Internal Migration, mid-2014 to mid-2039	Internal migration by single year of age for persons, males and females for local authorities (zipped CSV with supporting txt file)
SNPP Z6: 2014-based Subnational Population Projections. Cross Border Migration, mid-2014 to mid-2039	Cross border migration by single year of age for persons, males and females for local authorities (zipped CSV with supporting txt file)
SNPP Z7: 2014-based Subnational Population Projections. International Migration, mid-2014 to mid-2039	International migration by single year of age for persons, males and females for local authorities (zipped CSV with supporting txt file)
Table of State Pension Age Factors Pensions Act 2014	Factors to calculate the population of state pension age for use with the subnational population projections (Excel sheet)

Are single year of age data available?

A set of tables containing males, females and persons, by five year age groups, for all years, for regions, counties, local authorities, and clinical commissioning groups are available. We are also publishing summary components of change tables for regions, counties and local authorities. The data in these tables are rounded to the nearest 100 persons. Unrounded subnational population projection data by single year of age and components of change are also available as part of the Open Data initiative to make more data available to users.

What is the quality of single year of age data?

Subnational population projections data at single year of age is not as robust as projections data at greater levels of aggregation. However, making projections data available in this way allows users to aggregate data to the age groups that they require, which may be different from the standard five year age groups. We advise that the data should be aggregated to five year age groups or larger and rounded to the nearest 100 people if quoted in any publication, presentation or documentation.

Do you still produce subnational population projections data by broad age group?

We no longer publish subnational population projections by the broad age groups that used to be available in Table 4. Instead we publish the [single year of age data](#) so that users can aggregate to their own age bands.

How do I calculate the subnational population projections for state pension ages?

The formula for calculating subnational population projections for state pension ages is available in [Table of State Pension Age Factors Pensions Act 2014](#).

For what levels of geography are the subnational population projections available?

Subnational population projections are available for regions (formerly government office regions), counties, local authorities and clinical commissioning groups in England.

Which set of geographic boundaries are used? Are projections available on old boundaries?

The administrative geographic boundaries used were effective as at mid-2014. The subnational population projections are not available on any other boundaries. The clinical commissioning group boundaries are also those as at mid-2014.

Are subnational population projections available for areas smaller than local authority?

ONS does not produce subnational population projections for areas smaller than local authority. Some local authorities and other analysts do produce their own projections for specific smaller geographic areas.

Why are components of change data not available for clinical commissioning group geographies?

As projections for clinical commissioning groups are not modelled directly but based on the projections created for local authorities, components of population change are not available for these areas. In many cases, clinical commissioning group areas are coterminous with local authorities or aggregations of local authorities, in which case population projections for these areas are calculated by aggregating the appropriate local authority projections. Where areas are not coterminous, clinical commissioning group projections are produced by apportioning local authority level projections, based on estimates of clinical commissioning group populations, by age and sex, for each year of the projections.

Does ONS produce variant subnational population projections?

ONS currently only produces one set of subnational population projections. However we are aware that it would be helpful to users to see variant subnational population projections. Research into the feasibility of producing these variants is underway and a research report will be published later this year.

When will the next set of subnational population projections be published?

Subnational population projections are usually published every two years approximately 6 months after the national population projections. All planned future releases are announced on the [release calendar](#). It is likely that the next set of subnational population projections will be published in the first half of 2018.

What was the outcome of the consultation in terms of whether ONS produce projections every two years or change to publishing every three years?

Since the majority of users asked for us to continue to produce subnational population projections every two years, we shall continue to do so. This supports the findings of the [consultation on changes to ONS Products 2015](#), where the majority of respondents said that a move to projections every three years would be problematic.

Are subnational population projections available by characteristics such as ethnicity or country of birth?

ONS do not currently produce subnational population projections by characteristics such as ethnicity or country of birth. This is because the methodology and data sources used do not currently support the production of projections at this additional level of detail.

3 . How are the subnational population projections produced?

The subnational population projections methodology is based on the internationally recognised cohort component method which takes the population at the start of the year and adjusts for births, deaths and migration to calculate the population at the end of the year. The births, deaths and migration figures used are calculated from rates derived from trends over the previous 5 to 6 years. The overall results are constrained to be consistent with the national population projections. For more detail about the methodology, please see the [methodology document](#) of this release.

What population base was used in these subnational population projections?

The base year data used in these subnational population projections are the [mid-2014 population estimates](#) published on 25 June 2015.

What data sources are used to set the assumptions?

Registrations of births and deaths collected by the civil registration system at the General Register Office are used to calculate fertility and mortality rates. Internal migration estimates and cross-border migration estimates are based on administrative data. International migration estimates are based on data from the International Passenger Survey, together with asylum seeker data from the Home Office and National Asylum Support Service. The mid-2014 population estimates and the revised back series of population estimates, which are used in the calculation of trends, reflect the results of the 2011 Census. For more information, please refer to the [methodology document](#) of this release.

What is the difference between internal, cross-border and international migration?

Internal migration covers movement of people between different local areas within England. Cross-border migration covers movement of people between the constituent countries of the UK, that is between England and Wales/Scotland/Northern Ireland. International migration covers movements of people to/from a local authority from/to outside the UK according to the United Nations definition of an international long-term migrant. That is, someone who changes their country of usual residence for a period of at least a year, so that the country of destination effectively becomes the country of usual residence.

Are these subnational population projections consistent with the national population projections produced by ONS?

The 2014-based subnational population projections are consistent with the [2014-based national population projections](#) published on 29 October 2015. Across all subnational areas, they sum to the national principal projection for England in terms of population (by single year of age and sex) and components of change (births, deaths, cross-border and international migration). For more detail, please refer to the [methodology document](#) of this release.

How are the subnational population projections constrained to the national population projections?

For information on the methodology used to constrain the subnational population projections to the national population projections and the impact that this may have on the subnational population projections, please see the [methodology document](#) of this release.

I live in an area with large numbers of armed forces – how are they projected?

Armed forces personnel are treated as a 'static population' such that they retain the same size and age-sex structure as the base year throughout the period of the subnational population projections. The 2014-based National Population Projections make allowance for the planned return of Armed Forces and their dependants from Germany to the UK over the years 2015-2018.

The 2014-based subnational population projections have distributed these armed forces across all local authorities according to the distribution of international migrants with the exception of a specific adjustment made to the Armed Forces population in Wiltshire (the most affected LA). Further information on the adjustment can be found in the [Quality and Methodology Information](#) document.

What assumptions have been made to calculate these subnational population projections?

Assumptions about numbers of births, deaths and migration are based on trend data and constrained to the 2014-based national population projections. For more detail about the methodology, please refer to the [methodology document](#) of this release.

Does ONS use local information to improve the subnational population projections?

Subnational population projections are projections not forecasts and, as such, do not attempt to predict the impact that government policies, development aims, changing economic circumstances or other factors might have on demographic behaviour. The projections do not consider the capacity of an area to accommodate changes in its population, nor do they attempt to predict how any local level information may affect the projections. The projections simply indicate the population levels and age structure that would result if the assumptions and trends based on observed estimates were to be realised. A departure from the trend based approach is only considered where the calculated trend observed in one or more of the migration components is demonstrably biased in some way - possibly because of unusual patterns in the 5 to 6 year period on which the trends are based.

4 . How accurate are the projections and what are they used for?

Why is the 2014-based population projection of this area different to the 2012-based projection?

We would expect the population projections to be different and the reasons include:

- changes in the population estimate, used as the base year in the projections, between mid-2012 and mid-2014,
- changes in the subnational trends (births, deaths and migration),
- changes in assumptions for fertility, mortality and migration at a [national level](#).

How accurate are the projections?

As a result of inherent uncertainty of demographic behaviour, any set of projections will inevitably be proved wrong, to a greater or lesser extent, as a forecast of future demographic events or population structure. Projections are uncertain and become increasingly so, the further they are carried forward in time, particularly for smaller geographical areas. Care should be taken in interpreting these data, particularly when broken down by age and sex. The projections are more robust at greater levels of aggregation, either by age or by area, since more detailed levels mean smaller counts contributing to the projection process. Accuracy assessments are made periodically comparing the early years of the projected period in previous sets of projections with corresponding mid-year estimates. The most recent [subnational population projection accuracy report](#) was published in August 2015.

This release includes unrounded subnational population projection data by single years of age, allowing users to aggregate the data as they wish. However, users should note that subnational population projections are more robust at greater levels of aggregation. We advise that the data should not be aggregated to less than 5 year age groups and rounded to the nearest 100 people if quoted in any publication, presentation or documentation.

Will the 2014-based subnational population projections of mid-2015 differ from the mid-2015 population estimates when they are available?

Yes. The mid-2015 population estimates will be based on the mid-2014 population estimates and will take account of the recorded number of births, deaths, and estimated migration in the year from mid-2014 to mid-2015. The population projections are based on the mid-2014 estimates that have been rolled forward to mid-2015 using components based on recent trends rather than current data that would be used in the production of the estimates.

How accurate are population projections for small areas or small population numbers?

Population estimates for the Isles of Scilly and to a lesser extent the City of London, are considered to be less reliable given the small population in these areas. Certain individual populations (specific age groups in specific local authorities) may also be very small. The population projections employ the same basic methodology across the country, so these areas are treated consistently. However projections for these areas should be treated with particular caution.

Some people are often slow to re-register with a doctor when they change address. As this information is used in the production process, does this affect the accuracy of the subnational population projections?

ONS are aware of the delay observed in some young people when they re-register with a doctor after changing their address. This is likely to have an impact on the internal migration estimates and the population of working age groups in some areas. We have not made an adjustment to the 2014-based subnational population projections to address this issue because it has not been possible to develop a transparent method that can be applied across all areas within our timescales. However, ONS is working on a project to make improvements to the methodology to estimate internal migration and this work will help us to develop a more comprehensive adjustment that will address this issue. For further information on this issue, please see the [methodology document](#) of this release.

What is Unattributable Population Change?

Following the 2011 Census, the rolled forward population estimates were rebased so that the population estimates for mid-2011 were in line with the 2011 Census. After making allowances for methodology changes made during the decade, the remaining difference is referred to as Unattributable Population Change (UPC). Research has found that UPC is likely to be due to either sampling variability and/or other methodology issues that may have occurred in the following:

- international migration estimates,
- census estimates (both 2001 and 2011), or
- internal migration estimates (at subnational level only).

How does Unattributable Population Change affect the 2014-based subnational population projections?

No adjustment was made to the 2012-based subnational population projections for Unattributable Population Change (UPC) since it could not be demonstrated that UPC measured a bias in the trend data that will continue in the future.

The effect of UPC would have less of an effect on the 2014-based subnational population projections since three years of the trend data are not affected by UPC. Following the approach taken with the 2012-based projections, the 2014-based subnational population projections do not include an adjustment for UPC.

Who are the main users of the subnational population projections, and what are they used for?

The subnational population projections are used as an input into household projections, and are used by central and local government for planning education and health services provision. They are also used by local authorities for local planning or as a basis for producing their own projections. The subnational population projections are used to inform local level policy and planning. Other uses include, but are not limited to:

- emergency service provision,
- business development (including construction of new developments),
- reviews of policy by officials, individuals and special interest groups,
- survey design and development,
- planning local events,
- calculation of local rates, measures and indicators,
- academic research, and
- market research.

Were users or experts consulted about the subnational population projections?

A consultation was held from 18 January 2016 to 26 February 2016 to improve our understanding of what users need from subnational population projections and related outputs so that we can focus our resources appropriately. The consultation was conducted in line with the [UK Code of Practice for Official Statistics](#). The consultation comprised a consultation paper published on the ONS website and a short series of consultation events. The events, held in Manchester, Birmingham and London, gave local authority and county council representatives the opportunity to see the provisional assumptions and projections data for their area. This enabled detailed discussions and informed feedback about the assumptions and resulting projections.

The [consultation documentation](#) is available to download from the ONS website. This now includes a report documenting the responses to the consultation, published as part of this release.