Effect of the coronavirus pandemic on the quality of mid-year population estimates for England and Wales

An assessment of how the coronavirus (COVID-19) pandemic affected the production and quality of population estimates for England and Wales.

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1 . Overview

Mid-year population estimates (MYEs) are some of the most widely used and valued statistics produced by the Office for National Statistics (ONS). They measure the usually resident population, which is people who live in a specific country continuously for 12 months or more. MYEs provide a denominator to enable the production of other important statistics produced by the ONS. At a national and local level, they support decisions about public services, funding, planning and policy.

In May 2026, the Office for Statistics Regulation (OSR) published a review of the Mid-year population estimates for England and Wales, which assesses the extent to which the estimates continue to meet the standards of Trustworthiness, Quality and Value of the Code of Practice for Statistics. It highlights the challenges the coronavirus (COVID-19) pandemic had on the census and population estimates, which is a matter that some users of population estimates have raised concerns about.

The review recognises our decision to refocus efforts on continuous improvements to the current methods used for producing population estimates, particularly to address challenges in measuring migration flows into and out of local areas. The plans for these improvements have also been published in our Population estimates for England and Wales: mid-2025 bulletin.

This article helps users of population estimates better understand the impact that the pandemic had on the quality of the statistics. We previously explored the impact the pandemic had on Census 2021 in our Impact of the coronavirus (COVID-19) pandemic on England and Wales Census 2021 outputs article.

We consider the impact it has on the census as the base of official population estimates, as well as the quality of the different components of population change (births, deaths and migration), and any steps taken to mitigate these effects.

Mid-year population estimates are subject to statistical uncertainty related to the measurement of the census base they are rolled forward from, and from the measurement of each component of population change. Statistical uncertainty is lowest immediately following a census, and greatest immediately before the next census, as error accumulates over time. We describe this more in our mid-year population estimates: quality and methods guide.

The scale of population change, together with sudden changes to data collection and processing, introduced greater uncertainty in official population estimates since the pandemic.

Where known error was introduced because of the pandemic, we took steps to correct for these. However, effects of error and uncertainties in statistics are not always possible to quantify, meaning there remains some uncertainty in how much the population has changed since the pandemic. Despite these uncertainties, we are still confident that our MYEs are the best current estimate of the population of England and Wales. Users should continue to use the MYEs, but be mindful of the additional information about uncertainty and quality indicators that accompany the estimates.

We have published this article alongside our Population estimates for England and Wales bulletin. To accompany the bulletin, we have also published:

- our Mid-year population estimates for England and Wales quality and methods guide
- our Population statistics and sources guide
- our Local authority quality of population estimates for England and Wales supporting methodology article
- our Subnational long-term international migration methodology article
- our Improving population estimates for England and Wales supporting methodology

2 . How the population of England and Wales is estimated

We produce estimates of the usually resident population on 30 June every year. The estimates start with the census, which takes place every 10 years. The most recent censuses were held on 21 March 2021 in England, Wales and Northern Ireland, and on 20 March 2022 in Scotland.

Census 2021 is the base for official England and Wales mid-year population estimates (MYEs). To produce mid-2021 population estimates, we took the 2021 Census estimates and rolled them forward to the mid-year point (30 June 2021) by accounting for population ageing, births, deaths, and internal and international migration.

Subsequent years are then estimated by rolling forward components of change from the rolled forward census. These comprise three major components: natural change (births, deaths and ageing), migration (both internal and international), and special populations. We describe these methods in full in our Population estimates for England and Wales mid-2024: methods guide. We rebase our population estimates every 10 years, following the subsequent census.

The rebasing exercise was particularly important following Census 2021 because the coronavirus (COVID-19) pandemic is likely to have increased the uncertainty around the MYEs more than would ordinarily be the case. It is likely that many people's movements in 2021 and 2022 may not reflect longer-term trends.

There was variation between rolled forward 2011 estimates and Census 2021-based mid-year estimates across local authorities, as shown by our Reconciliation of mid-year population estimates with Census 2021 at local authority level article. There were no consistent patterns that indicated issues specific to any particular type of local authority.

3 . How the pandemic affected the Census 2021 base

The England and Wales Census of 2021 was carried out during the coronavirus (COVID-19) pandemic and gives a unique snapshot of the population on 21 March 2021. A response rate of 97% was achieved across England and Wales, with at least 88% achieved in all local authorities, with more than half achieving above 97%. This was higher than in 2011, where the census achieved a 94% response rate.

The census was designed to enumerate people at their usual place of residence. Census 2021 accurately reflects society during the pandemic which, for some topics, may be different at other times. Following Census 2021, we have taken active steps to robustly estimate the population and account for post-pandemic changes such as students returning to study, fluctuating immigration, and greater internal migration within the UK. Alongside our usual validation and quality assurance checks, we strengthened collaboration with local authorities and, where available, used administrative data to quality assure census estimates.

We have previously published our impact of the coronavirus (COVID-19) pandemic on England and Wales Census 2021 outputs article, which provides a summary of published information about the pandemic's impact on Census 2021 outputs, describes topic-specific impacts, and highlights implications of these for users of census statistics.

How the census was adjusted to mitigate the effect of the pandemic

During the pandemic, some people temporarily lived away from their usual residence. We treated these as displaced individuals. Once the restrictions that were put in place to mitigate the effects of the pandemic were lifted, some people changed their location of residence again. Groups that were particularly affected by this were students and those in urban areas. We adjusted for this by counting the displaced students in their term-time addresses on Census Day, where this information was available.

The temporary displacement of students is an example of where uncertainty is introduced in estimates of the usually resident population. One important approach applied in processing the census data was the "student method", an adjustment made in addition to the traditional census adjustments.

Where a student who appeared in the census response at their out of term-time address stated they also had a term-time address, we copied their data to the provided term-time address if no response had been received from them at that address. This process identified and reassigned over 90,000 students to a different address, improving alignment with our population definitions and providing a more accurate estimate of the term-time student population.

This adjustment is consistent with patterns seen in administrative data from the Higher Education Statistics Agency (HESA). More information on the student adjustmentis available in our Census 2021: general report full version for England and Wales.

The higher than usual changes in residence also likely affected the number of people within communal establishments and the characteristics of those individuals. This was particularly true for student halls of residence, where occupancy levels and resident characteristics may have differed from those seen in non-pandemic years because of:

- international travel restrictions
- disruption to in-person teaching
- students not being present at their term-time accommodation on Census Day

Admin data sources, either collated by the Office for National Statistics (ONS), or sourced from other public bodies, were used to correct population undercounts. The largest impact of these estimation methods was among people aged 10 to 29 years, reflecting the substantial number of students estimated into halls of residence. Although halls of residence experienced the largest absolute increase in estimated residents, this largely reflects their size, as they are the most populous type of communal establishment. More information is available in our Communal establishment (CE) estimation and adjustment: Census 2021 methodology.

Local quality assurance processes

As well as the standard checks during collection and processing of census data in 2021, we also had closer collaboration with local government during validation and quality assurance as part of our Local Authority Insight initiative. More information is available in our Maximising the quality of Census 2021 population estimates article.

We worked with local authorities (LAs) to develop validation plans both before and during data collection. LAs bring valuable local knowledge and expertise, which helped improve data quality and ensure results were interpreted in the correct local context. This enabled the LAs to highlight areas where other evidence suggested estimates should be reviewed as part of the quality assurance process.

We also invited all LAs, county councils and combined authorities with controlled early access to indicative, rounded census estimates, in line with the Code of Practice for Statistics. More information is available in Section 5 of our How we assured the quality of Census 2021 estimates methodology.

Representatives of LAs were asked to compare these estimates with their own local data sources and identify any inconsistencies. Their feedback was incorporated into the validation process alongside ongoing investigations. In total, 255 organisations, represented by 554 individuals, took part. Feedback was received from 172 organisations, including cases where no inconsistencies were identified.

Some local authorities also conducted their own research into the impact of the pandemic on the population. The Greater London Authority (GLA) analysed population change in London during the pandemic (PDF, 2.9MB) and found that the population decreased as a result of the pandemic, but indicated that these changes may have been temporary. They attributed this to factors such as young adults leaving London during lockdown, and a decrease in international immigration because of travel restrictions.

4 . How the pandemic impacted components of population change in mid-year population estimates

Population estimates are produced using a cohort component method. This is a standard demographic method that uses the highest quality data sources available to inform estimates of the components of population change. Components of change for the mid-year population estimates (MYEs) comprise three major components: natural change (births, deaths and ageing), migration (both internal and international), and special populations. We describe the impact of the coronavirus (COVID-19) pandemic on each of these components individually and how this impact feeds through to the MYEs.

Because many of the components of population change are based on administrative data, there were changes to the way that they were collected, which happened simultaneously with the coronavirus pandemic. This may have had an impact on the mid-year estimates. It is difficult to disentangle the effect of some of these planned transformations and planned method changes from the effects of the pandemic. We highlight the impact on quality where possible.

Birth registrations

In normal circumstances, births should be registered with the General Register Office (GRO) within 42 days of the birth occurring. Birth registrations in England and Wales were temporarily suspended in March 2020, during the pandemic. Registrations resumed from June 2020 where it was safe to do so. However, the reopening of services varied across local areas depending on the severity of restrictions, including both local and national lockdowns.

Overall, the impact of the pandemic on births as a component of change was limited and well understood. The data collection was affected because of the suspension of birth registrations. Births in 2020 included 99.8% of births in the reference period, omitting approximately 1,120 births. Therefore, there was a slight undercount in the original mid-2020 births, however, an updated data extract was taken for the rebased population estimates. These births have now been correctly included and have negligible effects on the quality of MYEs.

While the pandemic affected the timeliness of births data collection, there is little evidence to suggest that it had a meaningful impact on the overall quality of the MYEs, with any uncertainty largely confined to the original releases and subsequently resolved through revisions.

You can find out more information on the impact of the pandemic on birth registrations in our Birth statistics user guide.

Death registrations

Mortality statistics are based on death registrations collected through the civil registration system in England and Wales. Deaths are legally required to be registered, and data are supplied to the Office for National Statistics (ONS) by the Local Registration Service in partnership with the General Register Office (GRO). Information is recorded from the death certificate once it is issued, including demographic details and cause of death, for which coding is carried out using internationally standardised classifications.

Mortality statistics are compiled primarily on a registration basis (the date a death is registered rather than when it occurred), although both dates are recorded. As a result, although deaths data are considered a high-quality component of change, some uncertainty exists around the timing of registration.

There can be delays between when a death occurs and when it is registered, particularly in cases requiring coroner investigation, meaning that early estimates may be provisional and subject to revision as further registrations are received. To understand the effect of these delays, we publish data on the impact of late death registrations for each calendar year.

During the pandemic, while the registration system remained robust, the scale and volatility of mortality increased the importance of these timing effects. This is particularly relevant when interpreting short-term trends and year-on-year comparisons in MYEs, where aligning deaths to the correct reference period is important.

In addition, the longer-term impact of the pandemic on mortality trends remains uncertain. Some excess deaths may represent mortality displacement, whereby deaths that would otherwise have occurred in the near future were brought forward by the pandemic. Indirect effects such as delayed access to healthcare, and the longer-term health outcomes of those who survived coronavirus (COVID-19), may influence future mortality patterns.

An adjustment for late registrations should ensure that, over time, deaths occurring within the population are fully reflected in the MYEs. However, because some registrations are received after the reference period, a small proportion of deaths may be attributed to a different year than that in which they occurred. While mortality levels increased substantially during the pandemic, available evidence suggests that the death registration system remained relatively robust. Consequently, any uncertainty is more likely to arise from the timing of registrations than from systematic gaps in data coverage.

Overall, while the pandemic had a substantial impact on mortality levels, the effect appears limited on the quality of the deaths component of the MYEs. The main uncertainty relates to the interpretation of mortality patterns during and after the pandemic, rather than to the incorporation of deaths into the estimates themselves. Consequently, deaths are unlikely to have been a major source of uncertainty in the overall quality of the MYEs. Uncertainty remains around the interpretation of mortality patterns during the pandemic years (particularly 2020 to 2022), and the extent to which these may have influenced mortality trends in subsequent years.

Long-term international migration

Changes to methods

Before 2020, long-term international migration (LTIM) estimates were primarily derived using the International Passenger Survey (IPS). However, it has long been acknowledged that the IPS was stretched beyond its original purpose. We planned to transform the way that the IPS measures international migration, and move away from the survey towards an estimate based solely on administrative data.

The suspension of the IPS, which began on 16 March 2020 because of the pandemic, meant that we were no longer able to produce our usual migration estimates and therefore accelerated the transformation programme. This involved shifting towards the use of administrative data sources, supported by statistical modelling, to LTIM estimates. The last set of LTIM estimates predominantly based on the IPS were published in our Migration Statistics Quarterly Report: August 2020, covering the period up to year ending (YE) March 2020. Because of the suspension of the IPS a few weeks before the end of the reporting period, the weighting was changed for March 2020 to compensate for the missing data.

The acceleration of the transformation of LTIM estimates because of the pandemic meant that there was a period where the IPS was suspended, and the replacement LTIM methods had not yet been fully developed. Therefore, a modelling approach was developed during the pandemic to estimate long-term international migration for YE March 2020 and YE June 2020. These were included in our Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2020, and were acknowledged as methodologically inconsistent with previous estimates. Since then, population estimates have used the new transformed methods to measure international migration as a component of population change.

The transition to these new methods involved the introduction of multiple administrative datasets to replace the IPS. These include:

- Home Office borders and immigration data – which provide information on visa holders and travel patterns
- Department for Work and Pensions (DWP) Registrations and Population Interaction Database (RAPID) – which captures population interactions with the benefits and tax system

These sources allow migration to be inferred from observed behaviour rather than stated intentions, representing a conceptual shift in how migration is measured.

However, the pandemic presented challenges in data collection and therefore the sources used to produce LTIM estimates were affected. Specifically, visa data from the Home Office and National Insurance Registrations from the DWP were affected.

During the pandemic, both visa applications and National Insurance registrations were suspended in March 2020, so prospective migrants were unable to progress their applications to move to the UK during this period. These services were gradually reopened from June 2020 where possible.

The pandemic also resulted in temporary changes to immigration arrangements for some people already resident in the UK. While such measures had the potential to affect migration patterns and the interpretation of administrative data, their impact on migration estimates was mitigated because affected individuals continued to be identified within the underlying data sources used to measure migration.

Additional data sources were included in RAPID as measures of economic activity following the rollout of the Coronavirus Job Retention Scheme (CJRS) and Self-Employment Income Support Scheme (SEISS). This included activity of those who were furloughed as a direct result of the pandemic or those who were self-employed. These schemes ran from March 2020 (backdated from the time it was set up) through to September 2021, meaning that they were only included in LTIM estimates using RAPID for these periods. More information about how administrative data are used to estimate LTIM is available in our Methods to produce provisional long-term international migration estimates methodology.

You can find out more about how different administrative data sources were impacted by the pandemic in our International migration and mobility: what's changed since the coronavirus pandemic article.

During the pandemic, the UK also left the European Union, and a new immigration system came into effect from 1 January 2021. This new immigration system meant that the way that people migrated changed and new data were available for EU nationals. As a result of this, coupled with the pandemic and planned transformation, migration estimates produced during this period were subject to increased uncertainty.

There was greater reliance on assumptions about future behaviour of migrants and modelling, and reduced comparability with prepandemic estimates. It is difficult to disentangle the effect of each of these to try and quantify any effect that the pandemic had on long-term international migration.

The rapid development and implementation of these methods during the pandemic also has implications for interpretation. The need to produce migration estimates in the absence of the IPS meant that new approaches were developed and applied over a relatively short period, increasing reliance on assumptions and modelling in early iterations. However, this reflects an acceleration of an existing programme of transformation rather than a fundamental change in direction.

Over time, the incorporation of additional administrative data sources and ongoing refinement of methods has led to improvements in the quality and robustness of administrative-based migration estimates. These additional data have led to revisions for LTIM estimates and have been incorporated into releases of the MYEs once available. MYEs then subsequently include revisions to previous years back to the same revision period of LTIM estimates (currently, this is from mid-year 2021 onwards).

As migration is an important component of population change, these revisions have had a corresponding impact on MYEs. The scale of these revisions reflects the uncertainty associated with measuring migration during a period characterised by unprecedented changes in migration behaviour, significant policy change following the UK's exit from the European Union, and ongoing methodological transformation.

Consequently, international migration represents one of the largest sources of uncertainty in MYEs for the pandemic period (between 2020 and 2021), and population estimates for these years should be interpreted in the context of both genuine demographic change and the evolving evidence base used to measure it.

For post-pandemic periods (from mid-year 2022 onwards), users can be more certain that the quality of the LTIM estimates are less subject to impacts of the pandemic, as the data are less susceptible to extraordinary changes that occurred during the pandemic.

Internal migration

Internal migration is measured predominantly using address change information from the NHS Personal Demographic Service (PDS) data. Estimates are primarily based on data that identify when people change their address with their doctor. Since most people change their address soon after moving, these data are considered to provide a good proxy indicator of migration.

During 2020, the PDS showed a considerable decrease in moves and GP registrations concurrent with lockdown restrictions. However, during the vaccine rollout during the spring and summer of 2021, there was a campaign for people to ensure that their contact information was up to date with NHS systems. This was to allow them to receive the vaccine as soon as they were able. This campaign led to an increase in address updates during this time, particularly for younger people. Some of the increase in address updates during spring and summer of 2021 is likely to reflect lagged moves, where there is a delay between a move taking place and the associated change of address being recorded in administrative data.

Younger adults typically take longer than other age groups to update their address with a GP and therefore may have been more likely to have outdated information recorded on the PDS. The rollout of coronavirus (COVID19) vaccines, and the introduction of the COVID pass created a far greater level of interaction with NHS systems than would normally be expected for this population. This provided an opportunity for previously unrecorded address changes to be captured.

Consequently, some of the address updates recorded during 2021 are likely to have reflected moves that occurred in earlier reference periods rather than genuine migration events taking place at the time they were recorded. However, it is likely that the increase also reflected genuine moves occurring during the mid2021 period, making it difficult to distinguish delayed updates from real changes in migration behaviour.

Internal migration estimates are derived from address changes recorded on the PDS, so an increase in lagged moves being captured during 2021 may have affected both the volume and timing of internal migration flows. This issue is likely to have been most pronounced during the latter stages of the vaccine rollout, when most of the population had become eligible for vaccination and there was a greater incentive to ensure NHS records were up to date. As a result, some moves occurring during 2020 and early 2021 may not have been recorded until later in 2021, increasing uncertainty around the timing of internal migration estimates and their contribution to the MYEs.

Consequently, the period from the introduction of pandemic restrictions through to the widespread rollout of vaccines and the COVID pass, represented a period of heightened uncertainty for internal migration estimates. During this period, both migration behaviour and the administrative processes used to measure it differed from normal patterns, making it more difficult to distinguish genuine migration events from delayed address updates.

To produce internal migration flows for Census 2021 to the mid-year point needed for MYEs, steps were taken to remove probable lagged moves. Where a change of address recorded on the PDS after Census Day moved an individual into the same local authority in which they were enumerated by the census, this provided strong evidence that the move had already occurred before Census Day but had not yet been reflected in the administrative data. These moves were therefore excluded from the final internal migration estimates. This helped to mitigate some of the impact of the timing of the vaccine rollout for 2021 mid-year estimates.

However, while these adjustments reduced the risk posed by known lagged moves around the Census 2021 to mid-year period, it is not possible to identify and correct all delayed address updates within the PDS. There may also be implications for subsequent years. If a backlog of previously unrecorded moves was captured during 2021 and, to a lesser extent during 2022, this could have reduced the number of lagged moves available to be recorded in later years.

As a result, some internal migration flows may have been lower than would otherwise have been expected in the years immediately following the pandemic, introducing further uncertainty into estimates of internal migration. This would be expected to diminish over time as more typical patterns of address updating re-establish and a larger pool of lagged moves accumulates within the system.

We have not identified evidence of a further systematic error requiring correction, but the pandemic increased uncertainty in some parts of the data used to produce internal migration estimates. There may also be some ongoing effects associated with the interaction between Census 2021 and the administrative data used to estimate internal migration.

Misalignment between census and administrative sources can influence migration estimates throughout the intercensal period. For mid-2021, some of this risk is likely to have been mitigated by increased interaction with NHS systems during the vaccine rollout, which may have improved alignment between Census 2021 and PDS records.

However, there may be greater uncertainty for student-aged populations. Census 2021 redistributed approximately 90,000 students from parental addresses to their term-time addresses, whereas PDS records may continue to reflect parental addresses for some students. As these cohorts move through the decade, this misalignment may contribute to a temporary "census escalator" effect, whereby migration flows are generated as administrative records gradually align to census-based locations.

This could result in some overestimation of student populations in university areas and corresponding underestimation elsewhere, although the scale and duration of any such effect are difficult to quantify.

Special populations

Adjustments to the population estimates are made for some special population groups that are not captured by the usual internal or international migration estimates: members of the armed forces and prisoners. During the pandemic:

- prisoner data were not affected, but there was an unrelated change in data supply between 2021 and 2022; the quality was unaffected by this change
- foreign armed forces data continued to be supplied as normal without any quality concerns, however, there were some behaviour changes with dependants of armed forces personnel as they did not travel at the same time as their spouse or parent because of the pandemic
- home armed forces reported no impact on data quality because of the pandemic and data continued to be supplied as previous years

More information about how we collect and process data on these special populations, is available in our Population estimates for England and Wales, mid-2024: methods guide.

5 . What this means for uncertainty

Census 2021

Overall, Census 2021 can be interpreted as a robust estimate of the population at a specific point in time, supported by high response rates and extensive quality assurance processes. However, it reflects the population during a period of atypical behaviour, when some individuals were temporarily living away from their usual residence, and patterns of movement and activity were not representative of longer-term trends.

While targeted adjustments were applied to address known issues, including the treatment of students and the use of administrative data to support estimates for communal establishment populations, the resulting estimates remain a snapshot of the population during the coronavirus (COVID-19) pandemic. For some groups and characteristics, this may be less representative of typical population structures outside of this period.

As a result, Census 2021 provides a high-quality baseline for population estimation, but should be interpreted with an understanding of the context in which it was conducted. In particular, short-term changes in behaviour and residence during the pandemic may influence comparisons over time, especially where observed patterns reflect temporary displacement rather than longer-term population trends.

Components of change

The evidence available indicates that the impact of the pandemic on population estimates is more readily observed through increased uncertainty than through clear evidence of systematic bias. While the Office for National Statistics (ONS) has taken steps to address known issues, the combination of disrupted or delayed data sources and atypical behaviour means that population estimates during the pandemic period (2020 and 2021) are subject to greater uncertainty than in non-pandemic years.

Increased uncertainty is evident across the components of population change used in the cohort component method. Births and deaths continued to be recorded throughout the pandemic. While birth registrations were affected by temporary disruption to registration services, there is less evidence that the collection of deaths data was substantially affected. Changes in mortality patterns during the pandemic primarily reflect genuine demographic change rather than issues with data quality.

In contrast, migration components were more substantially affected because both migration behaviour and the methods used to measure migration changed during this period.

International migration

International migration estimates were affected by both the suspension of the International Passenger Survey (IPS) and the launch of the new immigration system in January 2021 following Brexit. The suspension of the IPS led to the acceleration of administrative data use and modelling approaches, therefore international migration estimates were affected by both behavioural changes and disruption to administrative data flows.

The timing of the pandemic is particularly important in this context. Because COVID-19 occurred close to the end of the intercensal period, it disrupted both the population captured by Census 2021 and the trends used to roll forward estimates. This increases the potential for intercensal drift, as small uncertainties across multiple components of change can accumulate over time, particularly where the assumptions underpinning the cohort component method were weakened by abnormal behaviour and disrupted data flows.

Internal migration

For internal migration, changes in interaction with administrative systems may have had mixed effects on data quality. Increased uptake of digital services, such as the NHS app, led to higher levels of engagement with the Patient Demographics Service (PDS), particularly among younger adult cohorts. This may have resulted in a greater proportion of address updates being captured, potentially improving the timeliness and completeness of recorded movements relative to previous years.

This is also likely to have captured a greater number of lagged address updates too, leading to an overestimation of the number of moves on the PDS. However, these changes in engagement were not sustained and appear to be linked to specific pandemic-related factors, such as the introduction of the COVID pass. As a result, recorded patterns may reflect both underlying population movement and temporary changes in reporting behaviour.

Consequently, while some aspects of internal migration data may be more complete during this period, interpretation remains subject to uncertainty regarding how closely administrative signals align with true changes in usual residence.

Measuring uncertainty in the population of England and Wales

We have already highlighted that both the census and PDS were both affected by the pandemic. These are two main sources used to measure uncertainty within the mid-year population estimates (MYEs).

While we have focused on the estimates in this article, we can also be confident that the uncertainty estimates for the MYEs were also affected by the pandemic, although the precise scale of the impact of the pandemic on uncertainty estimates is also difficult to quantify. For more information on how we measure the uncertainty of our MYEs, please see our Measures of statistical uncertainty in ONS local authority mid-year population estimates article.

6 . How to interpret the estimates

Estimates should continue to be interpreted as the best available measure of the population, but with the understanding that uncertainty may be higher than in non-coronavirus (COVID-19) pandemic years, particularly for components and population groups most affected by the disruption. This uncertainty may be greater for local authorities (LAs) with larger student populations and those more affected by uncertainty in migration estimates during the pandemic period. More information can be found in our Local authority quality of population estimates for England and Wales article.

Adjustments have been applied where specific issues were identified, such as the reassignment of students to their term-time addresses in Census 2021 to better align with the definition of usual residence. Beyond these targeted adjustments, we have not identified evidence of further systematic errors requiring correction.

7 . Continuous improvement for population estimates

We have published an improvement plan Improving population estimates for England and Wales, which describes how we will continuously improve population estimates over the next two years. The plan focuses on reducing the accumulation of uncertainty and error while improving transparency about the quality of the estimates.

Alongside improvements to population estimates themselves, we will develop new approaches to validating estimates in between censuses. This includes a wider range of data sources to compare against population estimates and to identify where estimates diverge from other indicators of population change. This will help us better understand and communicate uncertainty, particularly for population groups where estimating the population is most challenging. We intend to share these findings to provide greater transparency and to support the appropriate use of the statistics in decision making.

8 . Related links

Improving population estimates for England and Wales
Methodology | Released 29 July 2026
An outline of the ONS improvement plan for mid-year population estimates.

Local authority quality of population estimates for England and Wales
Methodology| Released 29 July 2026
This article focuses on uncertainty as a measure of quality, exploring where it can be introduced in the population estimates process and its impact on local authorities.

Population estimates for England and Wales: mid-2025
Bulletin | Released 29 July 2026
National and subnational mid-year population estimates for England and Wales by administrative area, age and sex.

Population estimates for England and Wales, mid-2025: methods guide
Methodology | Released 29 July 2026
National and subnational mid-year population estimates for England and Wales, broken down by administrative area, age, sex and components of population change.

9 . Cite this methodology

Office for National Statistics (ONS), released 29 July 2026, ONS website, methodology article, Effect of the coronavirus pandemic on the quality of mid-year population estimates for England and Wales