

Article

# Population and migration statistics transformation in England and Wales, research overview: 2023

A summary of our research on the future of population and migration statistics in England and Wales, underpinning our consultation on the proposed new system.

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Release date:  
26 June 2023

Next release:  
To be announced

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# 1 . Main points

- The research summarised in this article gives us confidence in our ability to transition to our proposed new population and migration statistics system, as set out in the public consultation launching on 29 June 2023.
- We have demonstrated our ability to produce more timely population statistics that can sustain a better level of quality over time than census-based estimates; this month we delivered our updated admin-based population estimates (ABPEs) to produce experimental mid-2022 population estimates, and we will use improved methods to produce provisional mid-2023 estimates in December 2023.
- We are now routinely producing official statistics on international migration that are derived from administrative data; in May 2023 we published estimates for 2022 using Home Office data to measure long-term migration of non-EU visa holders, and, for the first time since transforming, asylum seekers.
- We have updated our topics research to compare our outputs with Census 2021 estimates including ethnic group, housing stock and those living at private and communal addresses.
- We have developed methods to produce new insights on specific population groups including armed forces veterans and refugees, and expanded our research to produce admin-based census-related outputs on travel to work, health indicators, and deliver research showing progress towards priority user needs on daytime population insights.
- The Refugee Integration Outcomes Cohort Study shows the potential for delivering new insights into the outcomes experienced by refugees.

## 2 . Population and migration statistics transformed system research overview

This article summarises our research on the future of population and migration statistics. This research underpins our [consultation on the future of population and migration statistics in England and Wales](#), launching on 29 June 2023, which informs the National Statistician's forthcoming recommendation. This overview helps users respond to the consultation and should be read alongside our other articles published on the research, please see [Section 8: Related links](#).

### Evaluation criteria to summarise research

To summarise our research, we describe how we have developed our methods to meet the following evaluation criteria:

- the ability to meet the core needs of users
- flexibility and resilience
- acceptability to stakeholders

### Ability to meet the core needs of users

Our users have told of us of the need for our statistics to be:

- consistent in their quality over time
- produced on a more timely basis to help quickly detect changes in population size and structure
- more frequent, detailed statistics about population and housing characteristics, providing information at lower levels of geography on a more regular basis

## Population and migration statistics

Our national to local population and migration statistics need to be high quality, producing estimates by age, sex and for local authorities for England and Wales, including patterns of internal and international migration.

Our population and migration estimates are now classified as [Experimental Statistics](#) with plans in place to move them to National Statistics. We have improved these statistics further by producing provisional population estimates six months earlier than we currently produce. This shows strong potential for moving to a new transformed system.

## Population sub-groups and characteristics

Our statistics about population characteristics need to deliver high quality estimates of the size and distribution of population sub-groups in England and Wales down to a local level, covering protected characteristics (for example, disability, ethnicity) and special interest groups.

We have demonstrated our ability for some topics to move to a transformed system, and have shown we can produce multivariate statistics using administrative data. [Further research is required in specific areas including some protected characteristics](#) such as disability and sexual orientation, and we will use the outcome of the consultation to help prioritise our ongoing research plans in line with priority user needs.

## Housing, housing characteristics and living arrangement

Our housing, housing characteristics and living arrangement statistics need to deliver high quality estimates of the housing stock (occupied and vacant) in England and Wales by type, size and tenure. They are set against estimates of the size of the population in private households and communal establishments by composition, for example, family units, split households and vulnerable types, such as elderly people living alone.

We have demonstrated strong potential for moving to a transformed system for many housing characteristics and for estimating the number and size of occupied addresses. Further research is planned to improve the statistics to meet core user needs, such as communal establishments, family relationships and tenure.

## Flexibility and resilience

We are building flexibility and resilience into our methods and processes to enable us to be sustainable and responsive to future and emerging needs by:

- considering the need for alternative population bases and our ability to produce estimates beyond the usual resident definition that impact on local services such as circular or seasonal migrants and daytime populations
- developing small area multivariate analyses on topics that are not currently covered at this level, for example, income by ethnic group
- improving the scope of longitudinal outputs to provide new insights through innovative methods and integration of multiple sources and enhancing longitudinal data to support the understanding of outcomes over time

We have proven the feasibility for producing statistics that meet user needs with flexibility built into the approaches. Future planned development in specific areas will provide our stakeholders with greater confidence. These areas are outlined in our various evidence updates and we will use the outcome of the consultation to help prioritise our ongoing research plans in line with priority user needs.

## Acceptability to stakeholders

During our methodological research, we have investigated current best methods used across other National Statistical Institutions (NSIs) and academia, and developed new methods where required. We have secured quality assurance and peer review from experts, and have received favourable feedback.

All our methodological work has been presented to our independent [Methodological Assurance Review Panel \(MARP\)](#), chaired by Sir Bernard Silverman and consisting of a panel of recognised experts. MARP have provided external, independent assurance and guidance on our developing methods and all papers presented to the panel are available on the [Papers section of the UK Statistics Authority website](#).

We have regularly published our research developments, seeking feedback from users throughout our programme of work. We have gathered this feedback in different ways, including direct feedback to our publications, engagement events with users and stakeholders, and through conferences and webinars. Most recently, we have run a series of round table events with a wide range of users and stakeholder groups. We have used this feedback and insights on our research findings to update and refine our methods and inform our use of different data sources.

Our research and processes are ethically and legally compliant, demonstrated by completed ethics assessments for each research project. We will publish an Equality Impact Assessment on 29 June 2023 to fulfil the requirements of the Public Sector Equality Duty as set out in section 149 of the Equality Act 2010.

## 3 . Population and migration statistics evidence

### Admin-based population estimates (Experimental Statistics)

#### Meeting core user needs

Our population and migration estimates are now classified as [Experimental Statistics](#) with plans in place to move them to National Statistics, highlighting our confidence in moving to a new transformed system.

The [dynamic population model](#) (DPM) produces admin-based population estimates (ABPEs) within 0.6% of our Census 2021-based mid-year estimates for England and Wales. For local authorities, over 90% are within plus or minus 3.8% of the Census 2021-based estimates.

For the first time, we have produced some initial Lower layer Super Output Area (LSOA) population estimates which have been constrained to the ABPEs local authority (LA) estimates, demonstrating the potential to meet the need for more frequent small area population estimates. We have published a series of LA case studies to show how admin-based statistics can help users understand the changing make-up of their areas.

Our ABPE methods update shows that, compared with the current system, the ABPEs produce estimates that are consistently high quality over time, because of the data and methods we use. In contrast, the uncertainty of the Mid-Year Estimates (MYEs) increases between census years because of the accumulation of error over time. Our analysis shows achieving a consistently high level of quality in the ABPEs depends on our ability to adjust for coverage error in the [Statistical Population Dataset](#) (SPD). While we are developing a robust method for this, we have produced a proxy adjustment (admin-based future estimate) showing the regular quality that users can expect. See our [Admin-based population estimates: provisional estimates for local authorities in England and Wales, 2011 to 2022 article](#).

A strength of our ABPEs is that we can produce more timely estimates than the current system. Our statistical modelling approach can produce provisional estimates six months after the reference point. This is around six months quicker than the current system. Early insight into how the population is changing is important for users to ensure they are providing the right services to the right population groups both nationally and locally.

## Flexibility and resilience

The DPM modelling approach provides flexibility in adapting to changes in user needs and resilience to adjust for changes in the data sources that feed into the model. For example, our latest mid-2022 estimates have been produced despite quality issues in our underlying data sources, by adapting the model and drawing strength from other sources. This is a significant benefit compared with our current official MYEs, which have been delayed in 2023 because of a data issue. By using the best available data, we can incorporate both national and local level data to help us capture hard-to-reach population groups more accurately.

Using administrative and other types of data opens opportunities to measure temporary resident populations such as "daytime populations" and a diverse range of migration patterns such as seasonal migrants. We have produced experimental research outputs on these alternative definitions showing how we are responding to the needs of a rapidly changing population. Our [Population and migration estimates- exploring alternative definitions article](#) provides further examples of this research, including [Estimating population by time of day](#).

## Future developments

The ABPEs are Experimental Statistics meaning they are still being developed. We will seek National Statistics status once we have developed the methods for producing the ABPEs to an appropriate standard and after further consultation with users.

We have published initial LSOA population estimates and will explore methods to produce LSOA and Output Area (OA) estimates directly from the DPM in the future.

We will continue to improve the data sources and methods that feed into the DPM.

One of these data sources is the [admin-based migration estimates \(ABMEs\)](#) (flows). We are continuing to improve the quality of these estimates and expanding their range and granularity. We will develop a method to adjust SPD (stocks) for coverage error to further improve the accuracy of the ABPEs and better understand the quality of our estimates.

We are improving methods for generating estimates of uncertainty to provide information to users about the quality of the ABPEs. We are also developing a set of [quality standards \(PDF, 223KB\)](#) and will use these to evaluate the ABPEs as we develop them further.

## Admin-based migration estimates (Experimental Statistics)

We have made significant improvements to our [ABMEs](#). These are an important contributor to our DPM. Our next step is to ensure our population and migration statistics are coherent.

We have long acknowledged that the International Passenger Survey (IPS), which underpinned historical, pre-coronavirus (COVID-19) pandemic international migration estimates, had been stretched beyond its original purpose. Since 2020, we have accelerated our plans to transform migration statistics and they are now published using administrative based data, rather than survey data based on intentions.

We are continually improving and evolving methods to allow us to produce the best ABMEs. In our [Long-term international migration, provisional: year ending December 2022 bulletin](#), we included asylum seekers in our estimates for the first time since the coronavirus pandemic. This includes some irregular migrants who arrived via small boat crossings who subsequently applied for asylum.

To support users to understand how latest estimates compare with the period before, during and after the coronavirus pandemic, we have provided provisional estimates back to December 2018. These estimates are subject to change as we continue to develop our methods and make use of new data sources. Census 2021 has shown what net migration was likely to have been over the decade. As we always do after a census, we are revising our historic migration statistics to rebase population estimates and will publish these in September 2023. We have recently published a [statement informing users of our population statistics timetable for the rest of this year](#).

The ABMEs are [Experimental Statistics](#) in that they are recently developed, with methods undergoing evaluation. As our methods stabilise and continue to be endorsed by experts, we are exploring removing the experimental badging before the end of 2023. Like for the ABPEs, as we finalise methods, we will seek National Statistics status in 2024, working extensively with the Office for Statistics Regulation (OSR) and consulting with our users throughout.

## 4 . Population sub-groups and characteristics evidence

We have focused our research to deliver proofs of concept for a number of important topic areas. These demonstrate what users can expect to get from the new population and migration statistics system in the future.

In addition to work that we have published in the last six months and refer to in this summary, we have also published our [Feasibility research into admin-based labour market status for England and Wales article](#) and [Admin-based qualification statistics, feasibility research article](#).

Our [Population and migration statistics transformation in England and Wales, population characteristics update](#) outlines what users can expect in future for a far wider range of topics. The outcome from the consultation will help to prioritise our research programme over the coming years.

Our local authority (LA) case studies show how our proofs of concept meet these core needs by comparing them with Census 2021 estimates, where possible. We describe how these statistics help us build a picture of local areas.

### Admin-based ethnicity statistics (ABES)

#### Meeting core user needs

Users need regular and local statistics on ethnicity to target support and services more effectively. For example, to inform policies within local and central government to support and understand the populations of particular ethnic groups.

We have produced 2021-based admin-based ethnicity statistics (ABES) for England and Wales for the [Census 2021 ethnic groups](#), combining a range of administrative data sources. Our research shows we can produce ABES within a year of the reference period, and down to small areas (Lower layer Super Output Area (LSOA)). This is an improvement to the current survey-based estimates, which cannot be produced for small areas or cross tabulated with other information, such as income.

Building on previous research in our [Developing admin-based ethnicity statistics for England and Wales: 2020 article](#), we have improved the coverage by introducing new data sources including Welsh hospital data and updating our base population (Statistical Population Dataset (SPD) version 4.0).

Our comparisons between the ABES and both Census 2021 outputs and the Annual Population Survey (APS), at both the England and Wales level, show the ABES are closer to the census outputs than the APS for most categories. Our LA case studies include comparisons between Census 2021 ethnic group estimates and ABES. When comparing ABES with the official estimates, there are explanations for some of the differences. Our [Population and migration statistics transformation in England and Wales, technical topic guide: 2023](#) explains these in more detail.

#### Future steps for development

We are engaging with data suppliers to encourage the use of the [Government Statistical Service harmonised standard](#). This will improve our ability to produce consistent and comparable statistics over time.

We have assessed the quality of our estimates by analysing the linked census to ABES outcomes. Our next steps include exploring opportunities to incorporate additional data sources to improve the population coverage and methods to adjust for missingness, lag between reference and reporting periods and definitional differences.

## **Admin-based income statistics (ABIS)**

### **Meeting core user needs**

Income statistics are important in monitoring poverty and inequalities across the population and informing central government on policy development by identifying areas of deprivation and affluence. This is particularly important given the current rising cost of living. The census does not ask questions about income, and so does not meet this need.

We have produced [Admin-based income statistics, data for occupied addresses](#) and [Admin-based income statistics, data for individuals](#) for England and Wales for LSOA, for the tax year ending 2018, by combining a range of administrative data sources.

Our research shows the potential for producing small area ABIS within a similar timeframe to the current system (two years after the reference date) subject to data availability. We have also demonstrated the potential for producing these more frequently (annually), and more granularly (LSOA) than our [Income estimates for small areas, England and Wales](#) that are published every two years, for Middle Super Output Area (MSOA).

Building on our previous ABIS research outputs, on 28 June 2023 we will publish a progress update on our research towards using administrative and survey data to produce income data that can be integrated with the data collected on Census 2021. This update is being shared with users as a step towards delivering against the associated [census white paper Help Shape Our Future \(PDF, 976KB\)](#) commitment.

### **Future steps for development**

We will continue research into expanding the ABIS to capture additional income components currently missing from our measures.

We will build on our early research to develop a census income output, ultimately delivering against the census white paper commitment, and providing users with income data for the Census 2021 population.

## **Multivariate statistics: admin-based income by ethnicity statistics (ABIES)**

### **Meeting core user needs**

Our users need information that describes combinations of topics at local levels to improve targeted service provision. Statistics on gross and disposable income by ethnicity at a local level will allow users to identify clusters of deprivation for those with protected characteristics and target efficient support and services.

By combining admin-based income and admin-based ethnicity datasets, using the SPD as a base, we have produced proof of concept [income by ethnicity research outputs for tax year ending 2018](#). For the first time, we have produced individual income percentiles for ethnic groups for all geographies down to LSOA, demonstrating our ability to produce detailed information on income by ethnic group. Our LA case studies show how ABIES can help us understand the make-up of a local area.

### **Future steps for development**

We will improve the measures that are used to produce the admin-based income by ethnicity statistics (ABIES), to continue to explore limitations of the ABIES dataset, explore ABIES data by occupied address, and explore methods to adjust for missingness.



# Feasibility UK armed forces veteran statistics

## Meeting core user needs

Statistics about the UK armed forces veterans and the size of the veteran population are important in understanding and addressing areas of inequalities when compared with other groups of the population and to understand and meet their housing, health and social care needs. There is also a requirement for certain public bodies to meet commitments and inform the implementation of the [Armed Forces Covenant](#). For the first time, Census 2021 collected information about whether people have previously served in the UK armed forces, specifically in the regular or reserve armed forces. Our [Feasibility research on producing UK armed forces veteran statistics article](#) provides more information on the need for this information.

We have produced feasibility outputs on the UK armed forces veteran population by age, sex, region and LA by combining Ministry of Defence (MoD) data with Census 2021 information, for England and Wales. This demonstrates our ability to produce ongoing statistics on a special interest group with a high policy need.

Our initial exploration shows the feasibility of producing UK armed forces veteran statistics using administrative data.

## Future steps for development

We will continue to explore alternative methods and variables for linking MoD data, improving the linkage between Census 2021 and the population base and exploring other population bases that are in development.

## Travel to work research

### Meeting core user needs

Travel to work, and more broadly, mobility statistics help users to understand travel patterns and changes in travel behaviours. These are used to inform planning and infrastructure at local and national levels for transport provision and services. This need is currently met every 10 years by the census, but information quickly becomes out of date.

Using aggregate spatial modelling approaches, we have produced an alternative [estimation of the travel to work matrices](#), which bridges the 10-year gap between censuses. We have produced experimental data for each year from 2012 to 2021 at MSOA level for England and Wales. When new data become available, the model can estimate the travel to work matrices from 2022 onwards. This will provide complementary statistics to Census 2021 travel to work data collected during the coronavirus pandemic, which contains a mixture of pandemic and pre-pandemic behaviours. These modelled estimates are the first release in a planned work programme of incremental improvements to the model and outputs.

The analysis is an important indicator for what is driving changes in the daytime population in local areas, which informs service needs. The need for more frequent and timely information on travel to work patterns is emphasised further by the [quality of the Census 2021 travel to work estimates](#). The national lockdown, associated guidance and furlough measures will have affected the travel to work topic.

### Future steps for development

One limitation of the estimated travel to work matrices is the lack of validation, which has not been possible in the absence of a representative survey of travel to work for 2021. To help validate the model, we are working on obtaining alternative data sources including mobile phone data.

We will expand this research to include more data sources such as household and travel surveys and non-survey data such as financial transaction data and geospatial data to maximise the use of this modelled approach to produce further insights in population mobility (such as more reasons for travel and different modes of transport). This approach shows great potential for developing scenario-based analysis to help users develop and evaluate policy. Further information on the potential areas for further research can be found in [Estimation of travel to work matrices from a modelling approach, MSOA in England and Wales, 2021](#).



# Comparing self-reported morbidity responses with electronic health records

## Meeting core user needs

Statistics on morbidity are needed to inform and implement health policy and target support to improve people's health. In particular, they are needed to plan and evaluate strategies aimed at preventative health care and reduce mortality rates in the population.

As part of methodological work conducted to inform analyses supporting the coronavirus pandemic response, we have compared Census 2021 responses with health measures derived using administrative data, in this case, electronic health records. See our [Comparing self-reported morbidity with electronic health records, England: 2021 article](#). We have validated both the census-based and admin-based measures using administrative data on hospital admission and mortality, along with self-reported data on employment characteristics.

These results show strong potential for developing more timely health measures than the decennial census models and improving predictors for morbidity. This supports health services in identifying and targeting health programmes.

## Population sub-groups and characteristics: flexibility and resilience

For each of these proofs of concept, we have built flexibility into our methods by being adaptable in how we bring in new data sources and adjust for changes in the data we use, for example, changes in data classifications.

Where feasible, we have built stability into our methods by introducing data pipelines and automated processes. Through this flexibility, and our ongoing engagement with stakeholders, we continue to look to identify and address gaps in information needs as they emerge.

# 5 . Housing, housing characteristics and living arrangements evidence

## Meeting core user needs

We have focused our research to deliver proofs of concept for a number of topics in the housing, housing characteristics and living arrangements domain. These demonstrate what users can expect to get from the new population and migration statistics system in the future. We have complemented this with a [review of all the topics not yet researched](#) to outline what users can expect in future. The outcome from the consultation will help to prioritise our research programme. Our local authority (LA) case studies show how our proofs of concept compare with Census 2021 estimates and inform users on the make-up of local areas.

# Admin-based occupied address dataset (ABOAD) and Communal Establishment (CE) statistics

## Meeting core user needs

Our users need information on the number of dwellings by family structure and household composition, to understand interdependencies across addresses, such as financial or care needs, and services used by transient residents.

Statistics on communal establishments (CEs) are important to users so they can inform local area housing strategies and plans, and to understand areas of inequalities of those staying in CEs.

We have produced outputs on the number and size of the population living in residential addresses by LA and age in 2021 for England and Wales. Based on the [Statistical Population Dataset \(SPD\)](#), the admin-based occupied address dataset (ABOAD) assigns SPD records to an address, and is our best approximation of Census 2021 household population estimates. This is similar to the approach taken by countries who produce their statistics based on registers and other government-held data, who typically use a dwellings-based definition of households.

These statistics can be produced more frequently (annually) than the decennial census estimates and for lower levels of geography than the survey-based estimates ([Labour Force Survey](#)), which are produced on a regional basis, because of its sample size.

Our comparisons show broad agreement in the distributions between ABOAD 2021 and Census 2021 for household numbers and size. However, there are some expected differences such as SPD coverage issues and definitional differences. Our [Population and migration statistics transformation in England and Wales, technical topic guide: 2023 methodology](#) explains these in more detail.

To fully understand how people live together, we also need to consider people living in non-private households (with full-time or part-time supervision) which we refer to as CEs. We have produced initial CE outputs using information from Higher Education Statistics Agency (HESA), Ministry of Justice (MoJ) and the ABOAD to assign SPD records to the CEs. By producing figures on the CE population, we are able to exclude them from the "household" measures (required for household survey weighting) and produce more frequent and timely statistics than the census estimates. Producing data on the CE population will help address a gap identified in [Recommendation 3, inclusive data task force recommendations](#). These CE outputs are comparable with similar Census 2021 estimates, see our [LA case studies](#) for further information.

## Future steps for development

We will work on improving our understanding of the residents within addresses, including the identification of familial, and non-familial, relationships.

As well as seeking to acquire more address data, teams across the Office for National Statistics (ONS) are engaging with data suppliers to standardise the format of address information. This work, along with the development of new address matching algorithms, will give us increased confidence that we are enumerating people at the correct address.

## Admin-based housing stock (ABHS)

### Meeting core user needs

Statistics on housing and accommodation inform housing policy so that users can meet the housing needs of a changing population and make accurate decisions on planning and investment in new and existing accommodation. Between censuses, the Valuation Office Agency (VOA) publish annual statistics on housing stock. The Department for Levelling Up, Housing and Communities (DLUHC) and Welsh Government [publish annual dwelling stock estimates down to LA level for England and Wales](#) respectively, but the methodology and variable coverage differs between countries.

We have produced housing stock statistics using VOA administrative data including accommodation type, number of bedrooms and number of rooms for both occupied and vacant addresses. We have already added value from this research by showing that VOA data on "number of rooms" was of sufficient quality to replace the number of rooms question on Census 2021. See our [Valuation Office Agency property attribute data: quality assurance of administrative data used in Census 2021 methodology](#). We have increased the breadth of housing statistics by reporting on number of bathrooms and "build period", which are not collected in the census.

Building on previous research, we have produced 2021 ABHS at LA level, with the potential to produce census-like statistics more frequently for both England and Wales, and to lower levels of geography such as Lower layer Super Output Area (LSOA).

Our analysis shows broad agreement between ABHS 2021 and Census 2021 for important housing variables, however there are several factors to consider when comparing these data, such as definitional differences and quality of the administrative data over time. Our [Population and migration statistics transformation in England and Wales, technical topic guide: 2023](#) explains these in more detail.

### Future steps for development

Beyond the analyses by housing type, we are exploring measures to help users better understand the availability of standards of housing homes (including number of bathrooms and floor area or overcrowding) and support analysis for meeting net zero policies.

We are working collaboratively across the Government Statistics Service to improve the quality of the underlying data sources and reference frameworks. We are also exploring the potential for new data sources to help us determine whether an address is occupied.

Currently, [Subnational annual estimates of dwellings and households by tenure](#) for each LA are produced by combining surveys and the latest census. We are exploring ways of using administrative data to improve the accuracy and geographic granularity of these estimates and our ability to combine them with other data to produce new insights such as planning authorities and housing policy makers.

We will consider improvements that we can make to the [Energy efficiency of housing in England and Wales statistics](#), that are published on an annual basis, using the ABHS.

## Multivariate statistics: admin-based housing by ethnicity dataset (ABHED)

### Meeting core user needs

Our users need information across combinations of topics at local levels for policy development and to improve target service provision. For example, understanding the housing needs of different ethnic groups and which ethnic groups and characteristics are likely to live in multi-generational homes. Currently, users get a rich picture of their local areas every 10 years from the census, but only limited information at regional levels in between.

We have built on our previous research to produce a linked admin-based housing by ethnicity dataset (ABHED) by combining the 2021 versions of:

- admin-based ethnicity dataset (ABED)
- admin-based occupied address dataset (ABOAD) and,
- admin-based housing stock (ABHS)

The trends in accommodation type by ethnic group and number of bedrooms by ethnic groups are broadly comparable with Census 2021 trends.

Our research shows potential for producing this cross-topic analysis for local areas on a more regular (annual) basis than is currently possible from the decennial census and providing more timely updates to these statistics.

Please see our [LA case studies](#) for comparisons with Census 2021 estimates.

### **Future steps for development**

We will explore building more multivariate small area statistics, developing further the occupied address level housing by ethnic group.

### **Flexibility and resilience**

We have produced address level admin-based housing stock, which is linkable to survey and other record level information. This rich source allows for more regular and inclusive statistics including overcrowding measures for England and Wales.

Our approach allows us to build in new information about people living in addresses. We can build on this to include characteristics about the people living together including familial relationships that are complex.

## **6 . Analysis of outcomes over time evidence**

### **Refugee Integration Outcomes (RIO) Cohort Study**

#### **Meeting core user needs**

Information on longitudinal outcomes helps users to inform decision making, policy development and target services to address inequalities. It also helps users to assess the effectiveness of interventions over time and make adjustments as needed to improve people's lives and outcomes. Currently the [Office for National Statistics \(ONS\) Longitudinal Study](#) contains census data linked to life events data for 1% of the population.

Information on the integration outcomes for refugees are important for users to allocate resources and vulnerable populations, provide services for these populations including access to benefits, housing and education, and also to increase public awareness of societal issues.

The Refugee Integration Outcomes (RIO) Cohort Study is a collaboration between the Home Office and the ONS. The study provides unique insights into the integration outcomes for approximately 113,000 resettled and asylum refugees who were resettled under the Vulnerable Persons and Vulnerable Children's Resettlement Schemes or were granted asylum in England and Wales between 2015 and 2020. There are plans to expand this study to later refugee cohorts and other humanitarian and protection routes in the future, subject to data availability, data supplier agreement, data quality and funding.

This study aims to address a need for evidence on integration outcomes for refugees to support policy, planning and service delivery.

#### **Flexibility and resilience**

This research shows the potential for innovative methods and integration of multiple sources to deliver new insights into the outcomes experienced by refugees. This proof of concept demonstrates potential for creating new data assets (such as the [Longitudinal Population Dataset \(LPD\)](#)), previously described as the Census 2021 Data Asset, that support research to improve people's lives, while ensuring privacy and confidentiality.

## Future steps for development

We will build on this early research to extend the coverage of the study to include later refugee cohorts and other humanitarian and protection routes in the future, subject to data availability, data supplier agreement, data quality and funding. Developing our linkage methods to improve the coverage of this study to other refugee cohorts will improve our understanding of the outcomes of this group and ensure policy makers have timely and inclusive information for their integration policies and practices. We will build on this learning to increase the value of the LPD as a resource to understand the outcomes of the wider population.

## 7 . A quality strategy for the future population and migration statistics system

Essential to meeting our evaluation criteria is a quality strategy to ensure that outputs meet the needs of users, and to help users understand the strengths and limitations of the statistics. We are developing a [quality strategy for the future population and migration statistics system](#) that covers the framework and tools we are using to assess and manage quality including the quality of data sources, processes and methods, and the resulting statistical outputs.

The [Code of Practice for Statistics](#) states that quality means that statistics fit their intended uses, are based on appropriate data and methods are not materially misleading. The strategy focuses on statistical quality throughout the statistical journey from data collection to the use of our statistics.

## 8 . Related links

[Population and migration statistics transformation in England and Wales, technical topic guide: 2023](#)

Methodology | Released 26 June 2023

Supplementary information on research using administrative data for the future of population and migration statistics.

[Population and migration statistics transformation in England and Wales, population characteristics update: 2023](#)

Article | Released 26 June 2023

Assessment of our progress towards producing admin-based estimates of population characteristics.

[Case studies for the population and migration statistics transformation: England and Wales, 2023](#)

Article | Released 29 June 2023

Find out what we can learn about our local areas using admin-based statistics in England and Wales.

[Admin-based population estimates: provisional estimates for local authorities in England and Wales, 2011 to 2022](#)

Article | Released 28 February 2023

Admin-based population estimates for all local authorities in England and Wales from the dynamic population model.

[Admin-based income statistics, England and Wales: tax year ending 2018](#)

Article | Released 20 December 2022

Experimental gross and net, individual and occupied address income statistics for small areas using administrative data from Pay As You Earn, Self Assessment and benefit systems.

[Developing admin-based ethnicity statistics for England and Wales: 2020](#)

Article | Released 7 February 2023

Research update on producing population statistics by ethnic group for England and Wales from administrative data, with comparisons with Census 2021 estimates.

[Developing subnational multivariate income by ethnicity statistics from administrative data, England and Wales: tax year ending 2018](#)

Article | Released 20 February 2023

Update on feasibility research producing income by ethnic group statistics for England and Wales from administrative data.

[Admin-based housing stock profile for England and Wales: 2020](#)

Article | Released 5 December 2022

Summary statistics demonstrating the feasibility of producing census-like housing stock statistics using the admin-based housing stock version 1.0 (ABHS V1.0) dataset for 2020.

[Developing subnational multivariate housing by ethnicity statistics from administrative data, England and Wales: 2020](#)

Article | Released 16 February 2023

Feasibility research on producing housing by ethnicity statistics for England and Wales from administrative data.

[UK armed forces veterans, England and Wales: Census 2021](#)

Bulletin | Released 10 November 2022

UK armed forces veterans population who have either previously served in the regular forces, reserve forces or both, Census 2021 data.

[Travel to work quality information for Census 2021](#)

Methodology | Released 8 December 2022

Known quality information affecting travel to work data from Census 2021 in England and Wales to help users correctly interpret the statistics.

[Refugee Integration Outcomes \(RIO\) data linkage pilot](#)

Methodology | Released 15 June 2022

Methods used to link refugee data to various administrative data in a pilot study led by the Office for National Statistics (ONS) and the Home Office.



## 9 . Cite this article

Office for National Statistics (ONS), released 26 June 2023, ONS website, article, [Population and migration statistics transformation in England and Wales, research overview: 2023](#)