

Article

Feasibility research on producing UK armed forces veteran statistics for England and Wales: 2021

Feasibility research on producing statistics on the population who have previously served in the UK armed forces in England and Wales using the Service Leavers Database and Census 2021.

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1 . Main points

- This research demonstrates the feasibility to produce veteran statistics using administrative data to support the government commitment to improve the collection and analysis of data on veterans to inform future policy as set out in the strategy action plan for 2022 to 2024 produced by the Office for Veterans' Affairs (OVA).
- The research has allowed us to identify some limitations to the methods and data used, and therefore areas where we can develop our methods in future.
- Census 2021 provides data on veterans of the UK armed forces as of Census Day (21 March 2021); the Service Leavers Database (SLD) provides data on those who left the UK armed forces in more recent years to produce regular statistics as we get further away from Census 2021.
- By linking veteran data from the SLD and Census 2021 to the Statistical Population Dataset version 4.2 (SPD V4.2), we identified that 3.6% of the SPD V4.2 aged 16 years and over in England had previously served in the UK armed forces, and 4.2% in Wales, as of 30 June 2021.
- The proportions of veterans in our feasibility research are similar to the Census 2021 estimates for England (3.6% and 3.8%, respectively) and for Wales (4.2% and 4.5%, respectively), and by age, sex, region and local authority.
- The proportion of veterans identified by the SLD is highest for those aged 25 to 34 and 35 to 44 years, who are likely to have left the UK armed forces in more recent years.

People who have previously served in the regular or reserve UK armed forces are often known as veterans. In this article, we refer to usual residents aged 16 years and over who have served in the UK armed forces as the veteran population.

These are not official statistics of the veteran population, nor are they used in the underlying methods or assumptions in the production of official statistics, and they should not be used for policy- or decision-making. They are published as outputs from research into a methodology which is different to that currently used in the production of official veteran statistics.

2 . About our transformation research

The Office for National Statistics (ONS) does not currently produce annual statistics on people that have previously served in the UK armed forces who are living in England and Wales. The only official statistics available are from Census 2021, as found in our [UK armed forces veterans, England and Wales: Census 2021 bulletin](#).

For the first time, Census 2021 included a question asking people aged 16 years and over if they had previously served in the regular or reserve UK armed forces, or both. This question was added to better meet the needs of service providers and others who support veterans, in line with the [Armed Forces Covenant](#). This covenant is a promise by the nation, ensuring that those who serve or who have served in the armed forces, and their families, are treated fairly.

We have identified a user need for ongoing veteran statistics. There is a government commitment to improve the collection and analysis of data on veterans to inform future policy, as set out in the [Office for Veterans' Affairs \(OVA\) Strategy Action Plan: 2022 to 2024](#). Our feasibility research aims to address this need by exploring the potential of using administrative data from the Ministry of Defence's (MoD) Service Leavers Database (SLD), which provides information on service personnel that have left the UK armed forces, to produce annual statistics of veterans of the UK armed forces by age and sex at local levels for the usually resident population of England and Wales. This will also act as a first step to meet a longer-term aim to produce a dataset for longitudinal analysis on outcomes for the veteran population.

Our work also supports the [agreement we have along with the OVA and the MoD to produce data on veteran suicides](#), by showing an initial approach for using administrative data to produce statistics for the veteran population in England and Wales. This will be a route to the ongoing production of statistics to better understand the experiences of veterans.

Census 2021 has provided us with a valuable source of data on veterans of the UK armed forces as of Census Day (21 March 2021), while the SLD covers veterans who left the UK armed forces at any time since 1975. The expected benefit from using both data sources to produce veteran statistics going forward is that Census 2021 data can be rolled forward providing important information. This includes older UK armed forces veterans who left service before 1975, and which are therefore not covered in the SLD. In turn, the SLD includes data on those who left the armed forces in more recent years, particularly as we get further away from Census 2021.

Scotland and Northern Ireland have devolved responsibility for producing veteran statistics, so are not covered by this research. However, we will proactively engage with colleagues in the devolved administrations who are also researching this topic.

This research forms part of our [population and social statistics transformation programme](#), which aims to provide the best insights on population, migration and society using a range of data sources. The findings will form part of the evidence base for the National Statistician's forthcoming recommendation on the future of population and social statistics in England and Wales.

3 . Method used to produce the veteran statistics

In order to assess the coverage and quality of these data sources to produce statistics, we used our 2021 [Statistical Population Dataset version 4.2 \(SPD V4.2\)](#) for England and Wales, filtered to those aged 16 years and over, as our population base for linkage. This has a reference date of 30 June 2021. It contains around 45.4 million usual residents of England and 2.4 million usual residents of Wales.

For each individual in the SPD V4.2, we linked on veteran information from Census 2021 and the Service Leavers Database (SLD) where there was an exact NHS number match. Based on the information from Census 2021 and the SLD, a flag was added to the SPD V4.2 indicating whether an individual had previously served in the UK armed forces as of 30 June 2021.

From this point onwards, references to the Statistical Population Dataset version 4.2 (SPD V4.2) refers to the SPD V4.2 population aged 16 years and over.

For an individual to be included as a veteran in these feasibility veteran statistics, they had to be in the SPD V4.2 and link to an SLD record, or be in the SPD V4.2 and link to a Census 2021 record where they responded that they had previously served in the UK armed forces, or both.

There were 141,210 veterans identified by Census 2021 that did not link to the SPD V4.2 (8.0% of veterans). Around half of these did not link as we were unable to attach an NHS number. There were 81,625 veterans in the SLD with an NHS number that did not link to the SPD V4.2. One reason for this is that the SLD includes veterans who may currently live in Northern Ireland or Scotland, so they will not link to the SPD V4.2 for England and Wales. This number will also include veterans who are no longer in the population because of migration or death.

The datasets that we have used to produce our veteran feasibility statistics have several strengths, such as:

- the SLD covers veterans that have left the UK armed forces since 1975, therefore it is a very good data source for the feasibility research if we can successfully link the SLD to the SPD V4.2
- the Census 2021 dataset provides information on veterans in England and Wales as of Census Day (21 March 2021), therefore for those who left the UK armed forces prior to 1975, we can identify them using the Census 2021 data; more information can be found in our [UK armed forces veterans quality information for Census 2021 methodology](#)
- the SLD also provides the opportunity to capture veterans who entered the population since Census Day

As this is initial feasibility research there are several factors which affect the quality of the veteran feasibility statistics we are currently able to produce, but we aim to improve on in future work. Further details of this is set out in [Section 7: Future developments](#).

Users of this research should note that:

- the SPD V4.2 includes [coverage error](#); we will explore using other population bases currently in development for future iterations
- our current linkage method to link the SLD to the SPD V4.2 uses NHS number; this is currently available on 23.2% of all records in the SLD, however there have been improvements in the coverage over time to over 50% of records for years 2003 onwards, and 73.2% by 2021; future work will explore alternative methods for this linkage in addition to considering using other population bases currently in development
- we are currently not able to identify if an individual returns to the UK armed forces after leaving, these individuals would still be classified as a veteran in our feasibility statistics which differs to the Census 2021 definition; we will explore whether it would be possible to identify these individuals in the future [Note 1]
- not everyone who has a record in the Census 2021 data will successfully link to the SPD V4.2 because of linkage issues, and some records in the SPD V4.2 will link to a Census 2021 record with missing veteran information, for example, because of item non-response; we will be looking to improve the linkage process between Census 2021 data and the SPD V4.2
- it is not currently possible to provide a breakdown of the veteran population by whether they previously served in the regular or reserve UK armed forces, or both, because this information is not available from the SLD data we hold; we will explore whether this could be possible in future

Notes for Section 3, Method used to produce the veteran statistics

1. The Census 2021 definition excluded those who returned to the armed forces after leaving and applied extra quality assurance processes to correct responses from currently serving personnel who had incorrectly identified themselves as previously serving. Some of these individuals will however get classified in the feasibility veteran statistics as a veteran, even if they were still in service as of 30 June 2021, if they have linked to their SLD record from their initial period of service.

4 . Coverage of the feasibility veterans statistics

Our method identified 3.6% of the [Statistical Population Dataset version 4.2 \(SPD V4.2\)](#) in England had previously served in the UK armed forces, and 4.2% of the SPD V4.2 in Wales (Table 1) as of 30 June 2021.

Of the SPD V4.2, 80.8% of individuals in England were identified as not having previously served in the UK armed forces according to Census 2021, and did not link to a Service Leavers Database (SLD) record. For Wales, this figure was 80.2%.

We were not able to establish whether an individual was a veteran or not for 15.6% of individuals resident in England and 15.5% of individuals resident in Wales in SPD V4.2. Individuals are in this group for one of the following reasons:

- the individual had an NHS number in the SPD V4.2, but did not link to Census 2021 or the SLD; this comprised 12.1% of the SPD V4.2 for England, and 11.0% for Wales
- the veteran information was missing on Census 2021 and these individuals also did not link to the SLD; this comprised 2.6% of the SPD V4.2 for England, and 3.9% for Wales
- the individual did not have an NHS number on the SPD V4.2; this comprised 0.9% of the SPD V4.2 for England, and 0.6% for Wales

Table 1: Number and proportion of people in the 2021 Statistical Population Dataset version 4.2 (SPD V4.2) with information on whether they previously served in the UK armed forces

Categories	England		Wales	
	Number	Percentage	Number	Percentage
Population base	45,432,955	100.0	2,430,680	100.0
UK armed forces veteran	1,614,155	3.6	102,790	4.2
Did not previously serve in the UK armed forces	36,722,145	80.8	1,950,440	80.2
Unknown whether previously served in the UK armed forces or not	7,096,655	15.6	377,450	15.5
Census 2021 veteran information missing and did not link to SLD	1,185,530	2.6	94,875	3.9
NHS number present on SPD V4.2 but did not link to Census 2021 or SLD	5,490,245	12.1	267,135	11.0
NHS number missing on SPD V4.2	420,880	0.9	15,435	0.6

Source: Office for National Statistics and Ministry of Defence

Notes

1. Numbers and proportions may not sum to totals because of rounding.
2. "UK armed forces veteran" are records in the SPD V4.2 that linked to a SLD record and/or linked to a Census 2021 record where the individual said they were a veteran. This is our 2021 feasibility veteran statistics count and proportion.,
3. "Did not previously serve in the UK armed forces" are records in the SPD V4.2 that did not link to a SLD record and linked to a record in Census 2021 where the individual said they were not a veteran.
4. "Unknown whether previously served in the UK armed forces or not" groups together those in the SPD V4.2 who linked to a Census 2021 record but the veteran information was missing and these individuals also did not link to the SLD, those who had an NHS number present on the SPD V4.2 but did not link to a SLD record or Census 2021, and those in the SPD V4.2 who did not have an NHS number so could not be linked to either data source.

Figure 1 shows the proportion of people in the SPD V4.2 with information on whether they previously served in the UK armed forces, by age.

The proportion of SPD V4.2 records that did not link to Census 2021 varies by age. Those aged 24 to 31 years were least likely to link because:

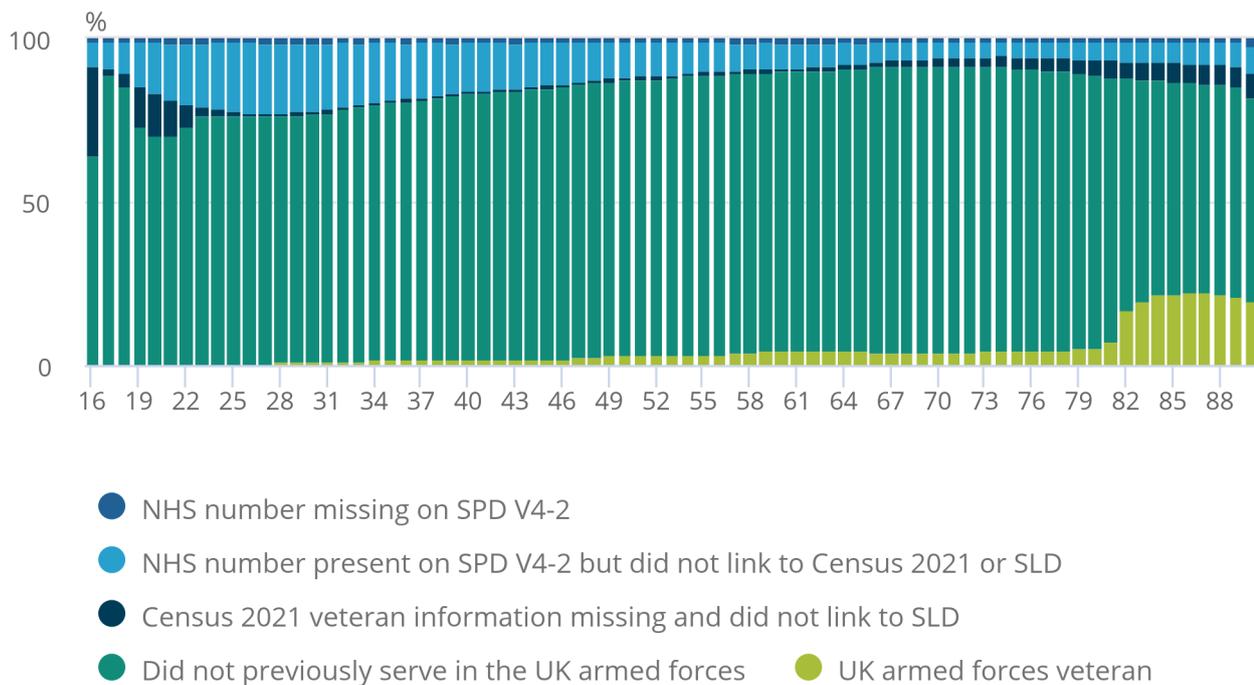
- for these ages there was a higher proportion of people in Census 2021 that we could not link an NHS number to compared with other ages; one reason for this could be younger people being less likely to interact with health services and therefore less likely to have up-to-date information needed for the linkage
- these ages may be more affected by new entrants to the population since Census 2021 because of migration
- there appears to be some [over coverage](#) in the SPD V4.2 for these ages, these might be temporary residents who have interacted with a service and therefore have been included in the SPD V4.2 but were not still in England and Wales as of Census Day (21 March 2021)

Figure 1: The proportion of people in the Statistical Population Dataset version 4.2 (SPD V4.2) we could not link to Census 2021 or the SLD was highest for those aged 24 to 31 years

Proportion of people in the 2021 Statistical Population Dataset version 4.2 (SPD V4.2) with information on whether they previously served in the UK armed forces by age, England

Figure 1: The proportion of people in the Statistical Population Dataset version 4.2 (SPD V4.2) we could not link to Census 2021 or the SLD was highest for those aged 24 to 31 years

Proportion of people in the 2021 Statistical Population Dataset version 4.2 (SPD V4.2) with information on whether they previously served in the UK armed forces by age, England



Source: Office for National Statistics and Ministry of Defence

Notes:

1. “UK armed forces veteran” are records in the SPD V4.2 that linked to a SLD record and/or linked to a Census 2021 record where the individual said they were a veteran in Census 2021. This is our 2021 feasibility veteran statistics proportion.
2. “Did not previously serve in the UK armed forces” are records in the SPD V4.2 that did not link to a SLD record and linked to a record in Census 2021 where the individual said they were not a veteran.
3. Age is as of 30 June 2021.
4. For those aged 16 years, 26.8% for England and 27.7% for Wales linked to a Census 2021 record that had missing veteran information and these individuals also did not link to the SLD. For the majority of these records (93.8% for England and 89.3% for Wales) this is because they were still aged 15 years at Census Day and therefore were not asked the veteran question in Census 2021.
5. The proportion that linked to a Census 2021 record where the veteran information was missing was higher for student ages compared with other ages, this is because of the way student information is captured and processed in Census 2021 and our current linkage method. Further information can be found in [Section 10: Data sources and quality section](#). We will be making improvements to our linkage which will help to ensure we correctly capture students' veteran information.

5 . Veterans by data source

We identified 1.6 million veterans in England and 103,000 veterans in Wales in the [2021 Statistical Population Dataset version 4.2 \(SPD V4.2\)](#). To better understand the feasibility veteran statistics, we categorised veterans in the SPD V4.2 depending on whether they were identified by either the Service Leavers Database (SLD), or the Census 2021, or both. Where individuals have only been identified by one of the two data sources, this is likely to be because of the different time periods the data sources cover or linkage issues. In addition, reservists are likely to currently only be captured by the Census 2021 data because the Ministry of Defence (MoD) are not the lead care providers for reservists, and therefore their NHS number is unlikely to be populated in the SLD data.

Table 2: Number and proportion of veterans in the 2021 feasibility veteran statistics by data source, England and Wales

Categories	England		Wales	
	Number	Percentage	Number	Percentage
UK armed forces veteran	1,614,155	100.0	102,790	100.0
UK armed forces veteran in SLD but not Census 2021	83,330	5.2	6,015	5.9
UK armed forces veteran in Census 2021 and SLD	220,000	13.6	14,895	14.5
UK armed forces veteran in Census 2021 but not in SLD	1,310,830	81.2	81,880	79.7

Source: Office for National Statistics and Ministry of Defence

Notes

1. Numbers and proportions may not sum to totals because of rounding.
2. "UK armed forces veteran" are records in the SPD V4.2 that linked to a SLD record and/or linked to a Census 2021 record where the individual said they were a veteran in Census 2021. This is our 2021 feasibility veteran statistics count and proportion.

Of the total veteran population identified by linking the two data sources to the SPD V4.2, 18.8% of veterans in England and 20.3% in Wales were identified by the SLD only or both data sources. Currently, around 2% of veterans identified by the SLD only had left the UK armed forces after Census Day (21 March 2021). In future years as we get further away from Census 2021 day, we expect a higher proportion of veterans only identified by the SLD.

Figure 2 shows that, for the aged 25 to 34 years group, 69.3% of veterans were identified by the SLD only or both data sources, with the remaining 30.7% of veterans identified by Census 2021 only. Similarly, for the aged 35 to 44 years group, 61.0% of veterans were identified by the SLD data only or both data sources, 39.0% were identified by Census 2021 only. This shows that the SLD identifies a higher proportion of veterans who are likely to have left the UK armed forces in more recent years.

In general, the proportion of veterans identified by the SLD decreases as age increases. However, in the aged 16 to 24 years group, there is a high percentage of veterans identified by Census 2021 only (56.6%). This is likely to be because of the incompleteness in NHS number data in the SLD data since 2019. Further information on this can be found in [Section 10: Data sources and quality](#). We will be exploring alternative methods for linking the SLD data to the SPD V4.2 to overcome this issue.

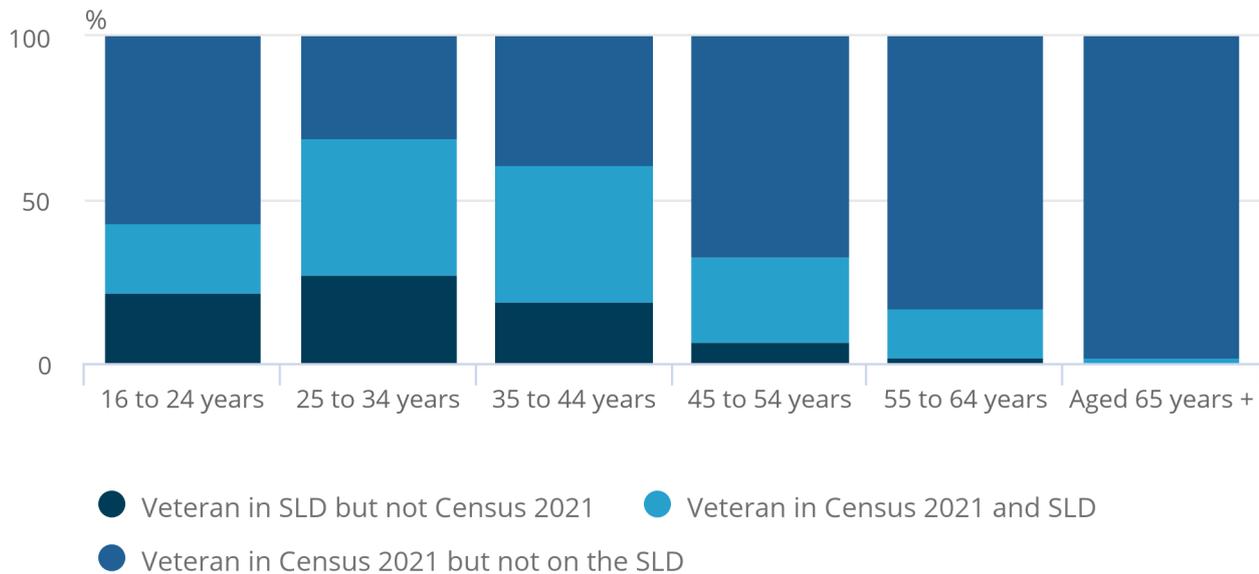
Figure 2 also shows that Census 2021 data captures older veterans who are more likely to have left the UK armed forces prior to the period covered by the SLD (before 1975), or left the UK armed forces during years where, in our current method, NHS number has low coverage in the SLD for England. The same is seen for Wales.

Figure 2: The Service Leavers Database (SLD) identifies the largest proportion of veterans in the aged 25 to 34 years group

Proportion of veterans in the 2021 feasibility veteran statistics by data source and age group, England

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Proportion of veterans in the 2021 feasibility veteran statistics by data source and age group, England



Source: Office for National Statistics and Ministry of Defence

Notes:

1. Age is as of 30 June 2021.

Proportions of veterans by data source have been produced for region and local authority (LA) and can be found in the accompanying [dataset](#).

6 . Comparison of the feasibility veteran statistics with Census 2021

We have compared our feasibility veteran statistics against the published Census 2021 estimates, found in our [UK armed forces veterans, England and Wales: Census 2021 bulletin](#). We recognise the limitations in doing this, since the Census 2021 data has been used in the production of the feasibility veteran statistics and the two sets of figures cover different time periods and have a different population base. However, there are no other data sources currently available for us to directly compare our feasibility veteran statistics against. This comparison has been made to check that our current method that uses the Service Leavers Database (SLD) produces reasonable statistics of the veteran population when assessed against the latest official estimate.

It is also important to consider that the feasibility veteran statistics are based on data up to 30 June 2021, while Census 2021 is a snapshot of data as of 21 March 2021. This means that:

- age has been calculated at different time periods; we have not aged up people in the Census 2021 to their age at 30 June 2021
- between the two time periods there may have been population changes, such as death and migration
- people may have returned to the UK armed forces after completing their Census 2021 form
- people who were in service as of Census Day (21 March 2021) and still in service as of 30 June 2021 may have been categorised in the feasibility statistics as being a veteran if they linked to an SLD record from a previous period of service [Note 1]

The feasibility statistics indicate that 3.6% of individuals in England were veterans, the Census 2021 proportion was 3.8%. The proportion of veterans in Wales according to the feasibility statistics was 4.2%, and the Census 2021 proportion was 4.5%.

The 2021 feasibility veteran statistics are slightly below the Census 2021 estimates for both males and females.

As shown in Figure 3, up until age 65 years, our feasibility veteran statistics for England are close to Census 2021. The gap widens slightly for those aged 65 years and over, with the largest difference being for those aged 80 years and over, where a higher proportion of the population are veterans in Census 2021. Wales follows the same trend.

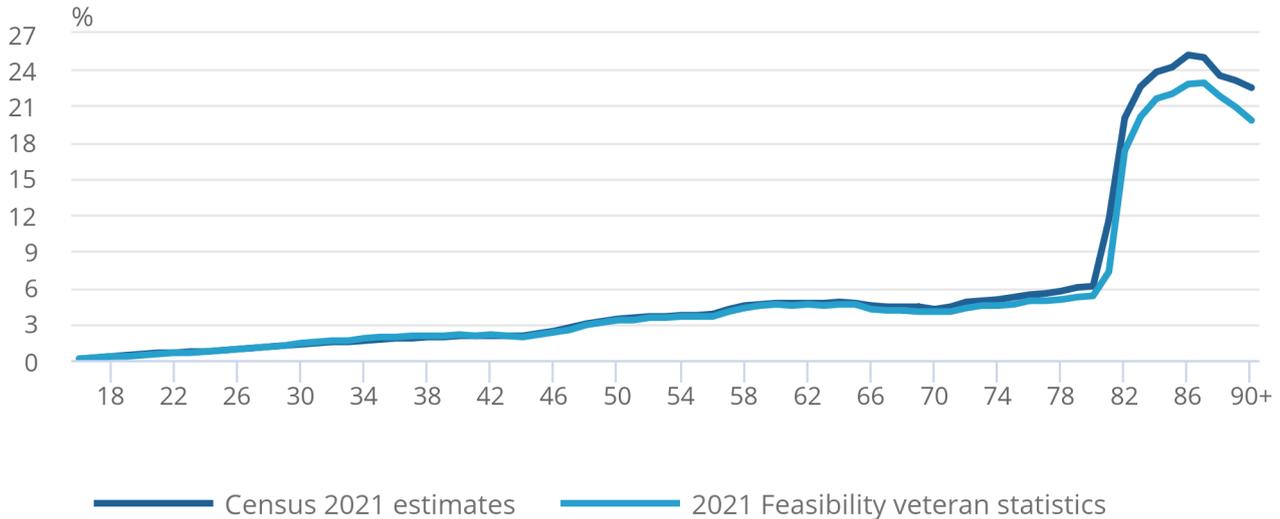
Our feasibility estimates may be lower for older ages because these ages will be more affected by Census 2021 data not linking to the SPD V4.2. For those in the aged 80 years and over group, around 17% of the Census 2021 records that did not link to the SPD V4.2 were veterans. This compares with around 5% for those in the aged 70 to 79 years group. In addition, for older ages, it is unlikely that veterans will be captured by the SLD as we only have data on those who left the armed forces after 1975.

Figure 3: The proportion of veterans in the feasibility veteran statistics and Census 2021 are similar for all ages

Proportion of veterans, 2021 feasibility veteran statistics and Census 2021 estimates, by age, England

Figure 3: The proportion of veterans in the feasibility veteran statistics and Census 2021 are similar for all ages

Proportion of veterans, 2021 feasibility veteran statistics and Census 2021 estimates, by age, England



Source: Office for National Statistics and Ministry of Defence

Notes:

1. Age has been calculated at different time periods; we have not aged on people in Census 2021 to their age as of 30 June 2021 so that the Census 2021 estimates are consistent with those we have previously published.
2. The denominator of the 2021 feasibility veteran statistics are the number of people for each age in the SPD V4.2.

Comparing the 2021 feasibility veteran statistics against Census 2021 estimates at region and local authority (LA) level also show the two measures provide similar proportions. These breakdowns can be found in our accompanying [dataset](#).

The feasibility veteran estimates are slightly lower than the Census 2021 estimate for the majority of LAs. This will likely be because 12.6% of records from Census 2021 did not link to the SPD V4.2. There are some LAs where the feasibility veteran estimate is higher than Census 2021, such as Richmondshire (10.7% and 9.5%, respectively), Rutland (7.7% and 6.9%, respectively) and North Kesteven (10.9% and 10.2%, respectively). These areas have higher veteran populations than other LAs, and they tend to have a higher proportion of veterans being identified by the SLD only than those that are lower than the Census 2021 estimate.

Notes for Section 6. Comparison of the feasibility veteran statistics with Census 2021

1. The Census 2021 definition excluded those who returned to the armed forces after leaving and applied extra quality assurance processes to correct responses from currently serving personnel who had incorrectly identified themselves as previously serving.

7 . Future developments

This research has demonstrated the feasibility to produce veteran statistics using administrative data and Census 2021 data. However, this is not a finalised method and there are limitations which affect the quality of the veteran statistics we are currently able to produce, as set out in [Section 2: About our transformation research](#).

We will build on what we have learnt during this research to aid our understanding and quantification of quality considerations identified in this research. We will continue to explore alternative ways to develop the veteran statistics. These include exploring:

- alternative methods and variables for linking the Service Leavers Database (SLD) to the population base, to help overcome issues identified in the completeness of the NHS number variable
- whether there is scope to improve the linkage process between Census 2021 and the population base
- estimation methods that may be able to help address under-coverage of the veteran population, such as Dual System Estimation (DSE)
- ways of using other population bases that are in development, such as a rolled forward Census 2021 dataset, as detailed in our [The Census 2021 Data Asset longitudinal data source for population in England and Wales: design and plans methodology](#)

Once these methods have been further developed, future research will include producing feasibility veteran statistics for 2022 by age and sex at local levels. This will enable us to produce multivariate veteran statistics by other characteristics, and to develop a dataset for longitudinal analysis on outcomes for the veteran population.

8 . UK armed forces veterans England and Wales: data

[Feasibility research on producing UK armed forces veteran statistics for England and Wales](#)

Dataset | Released 20 June 2023

Data for feasibility research on producing statistics of the UK armed forces veteran population in England and Wales using administrative data and Census 2021.

[Previously served in the UK armed forces](#)

Dataset | Updated 26 May 2023

This dataset provides Census 2021 estimates that classify usual residents aged 16 years and over in England and Wales by whether or not they have previously served in the UK armed forces. This does not include people who are currently serving in the UK armed forces. The estimates are as of Census Day, 21 March 2021.

9 . Glossary

Population base

The 2021 [Statistical Population Dataset version 4.2 \(SPD V4.2\)](#) for England and Wales, filtered to those aged 16 years and over.

UK armed forces veteran

People who have previously served in the UK armed forces. This includes those who have served for at least one day in the UK armed forces, either as regular, reserves, or Merchant Mariners who have seen duty on legally defined military operations.

Usually resident population

We are currently adopting the UN definition of "usually resident", which refers to the place at which a person has lived continuously for at least 12 months, not including temporary absences for holidays or work assignments, or intends to live for at least 12 months (United Nations, 2008).

10 . Data sources and quality

We used the [2021 Statistical Population Dataset version 4.2 \(SPD V4.2\)](#) for England and Wales, filtered to those aged 16 years or over, as the population base for our feasibility research on producing veteran statistics. The [quality of the population base](#) will impact on the quality of our feasibility research on producing veteran statistics.

Veterans in the feasibility research have been identified using the following data sources:

- Service Leavers Database (SLD), 1 January 1975 to 30 June 2021: provides information for service personnel that have left the UK armed forces, sourced from legacy personnel systems and the current system, Joint Personnel Administration (JPA); we receive a subset of variables from the SLD for data back to 1975 from the Ministry of Defence (MoD)
- [Census 2021](#): a new question for 2021 was added to the census that asked those aged 16 and over as of Census Day (21 March 2021): "Have you previously served in the UK Armed Forces?" with response options of "Yes, previously served in Regular Armed Forces", "Yes, previously served in Reserve Armed Forces" and "no"

Linkage

Census 2021 to SPD V4.2 linkage

NHS number was attached to the Census 2021 dataset using an existing lookup which used deterministic and probabilistic methods to link the Census 2021 dataset to the Personal Demographics Service (PDS). Our longer-term plan is to explore alternative means to improve the linkage process between Census 2021 and the population base.

We have used the full Census 2021 dataset. We chose not to filter it down to the usually resident population as there will be some people in the Census 2021 dataset who we have veteran information for and who are not considered to be usual residents in Census 2021, but are in the SPD V4.2. For example, an individual may have responded in their Census 2021 questionnaire that they will stay in the UK for less than 12 months, but their activity within the administrative data used to produce the SPD V4.2 indicates that they intend to stay or have stayed longer than 12 months.

Using the PDS linkage we were able to attach an NHS number to 91.2% of Census 2021 records. Census 2021 used [coverage estimation and coverage adjustment to account for missed persons and impute them into the data](#). Records that have been imputed will not have linked to an NHS number. Not all records in the Census 2021 dataset have information on whether the individual has previously served in the UK armed forces because:

- only people aged 16 years and over were asked the veteran question in Census 2021
- some people in Census 2021 did not respond to the veteran question, or the information they provided conflicted with another response they gave; in this instance, their [veteran information was imputed](#) but we have not used imputed veteran information in our feasibility statistics
- as explained in [Students: Census 2021](#), students were counted at both their usual term-time address and their usual out-of-term address if these were different, however they were only asked the veteran question at their term-time address, which may not have been the record their NHS number linked to; this increased the number of records for which the veterans information was missing; we ensure that there is no double-counting when the data are processed for Census 2021 outputs

We were able to link 94.3% of Census 2021 records that had veteran information to an NHS number.

The Census 2021 dataset was then linked to the SPD V4.2 on NHS number. When the linkage between Census 2021 to the PDS was carried out, some of the records in the Census 2021 dataset linked to more than one NHS number. Similarly, some records in the SPD V4.2 linked to more than one NHS number. This meant that when we linked the Census 2021 dataset to the SPD V4.2 there were instances of multiple Census 2021 records linking to one record in the SPD V4.2, or one Census 2021 record linking to multiple records in the SPD V4.2.

These links were removed, and these individuals were treated as not linking to a Census 2021 record. This affected less than 0.2% of Census 2021 records that initially linked. We were able to successfully link 85.2% of Census records to the SPD V4.2.

SLD to SPD V4.2 linkage

The SLD data was linked to the SPD V4.2 using NHS number. We were able to link 79.9% of SLD records with an NHS number to the SPD V4.2.

A valid NHS number was only available on 23.2% of records in the SLD (470,590 of the 2,027,190 records in the dataset) because of high levels of missing NHS number for records prior to 2003. Between 2003 and 2009, at least half of records had a valid NHS number, and from 2010 onwards, at least 70% of records had a valid NHS number. For 2021, 73.2% of SLD records had a valid NHS number.

There are a number of reasons for the change in NHS number coverage over time. Following the Health and Social Care Act 2013, MoD has had a legal requirement to hold an NHS number for regular personnel as service personnel are now a commissioning population. Any NHS numbers for personnel who left prior to 2013 were from research projects and the coverage is therefore limited. It should also be noted, in 1996 everyone was given a new style of NHS number; MoD may only hold the old-style NHS number for some service leavers.

Additionally, MoD are not the lead care providers for reservists and are therefore unlikely to hold their NHS number. In the future there will be improved data interoperability between MoD and the NHS, resulting in MoD having access to reservist NHS numbers. The coverage of NHS number currently limits our ability to link the SLD to the SPD V4.2 for all records, however future work will explore alternative methods for this linkage.

Feedback

We welcome feedback on the feasibility veterans statistics presented in this article and on the planned future developments. Please email your feedback to 2023Consultation@ons.gov.uk.

11 . Related links

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

Statistical 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.

[Developing Statistical Population Datasets, England and Wales: 2021](#)

Article|Released 28 February 2023

Aggregate comparisons between the Statistical Population Dataset version 4.0 (v4.0) and Census 2021.

12 . Cite this article

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