

# Population Estimates by Marital Status and Living Arrangements, Information document.

July 2015

## Q1 What is marital status?

Marital status indicates whether a person is legally married or not.

There are 5 categories of legal marital status

- *Single*: People who have never been legally married or civil partnered
- *Married*: People who are currently legally married (including those who are separated). This can be either opposite or same sex marriage
- *Civil partnered*: People who are currently in a legal civil partnership (including those who are separated)
- *Divorced*: People who were legally married but have been legally divorced, or had their marriage annulled, and have not since remarried or entered into a civil partnership; this category includes those who have been in a civil partnership which has now been legally dissolved, and have not since entered into a civil partnership or marriage
- *Widowed*: People who were legally married until the death of their partner, and have subsequently neither remarried nor entered into a civil partnership; this category includes those who are a surviving civil partner and who have not since entered into a civil partnership or marriage

## Q2 What are living arrangements?

Living arrangements describe whether people are living with a partner or not, irrespective of their legal marital status. The 2 categories used are 'Living in a couple' and 'Not living in a couple'. Within the published tables these categories are then broken down further by 'married or civil partnered' (living in a couple only), 'never married or civil partnered' and 'previously married or civil partnered'.

## Q3 What were these estimates previously known as?

These estimates were previously known as the Population Estimates by Marital Status.

## Q4 What is new in the latest release of data (July 2015)?

The latest release contains population estimates by marital status for the years 2002 to 2014 that have been calculated using a new methodology.

Because the methodology has changed, the release also contains a [comparison table](#) which looks at the differences in the estimates produced using the old and the new methods for the years 2002 to 2010.

The latest release also includes population estimates by living arrangements which the old publication did not include.

### **Q5 What was the old method?**

The estimates published previously for the years 1971 to 2010 (last published November 2011) use a method known as the Cohort Component method.

This involved:

- Taking the previous year's estimate by marital status (or census population by marital status in a census year)
- Adjusting for late registrations of marriages and deaths
- Adding back previous year England & Wales Armed Forces personnel (including their wives and children) stationed overseas by marital status
- Ageing-on (making the whole population older) by 1 year by marital status
- Adding in births
- Subtracting deaths by marital status
- Adding net migration (including Asylum Seekers and Visitor Switchers) by marital status
- Adding or subtracting marriages
- Adding or subtracting divorces
- Adding or subtracting new widows and widowers
- Subtracting current year England & Wales Armed Forces personnel (including their wives and children) stationed overseas by marital status
- Applying an adjustment for marriages abroad; this was around 74,000 marriages in 2010

The old methodology can be found in more detail [here](#).

### **Q6 What is the new method?**

The Population Estimates by Marital Status and Living Arrangements are now calculated by taking the legal marital status and living arrangement distributions from the Labour Force Survey (LFS) and applying them to the Mid-Year Population Estimates (by age groups and sex) for England and Wales.

Estimates from the LFS by age group and sex are calculated for each year and for each legal marital status or living arrangement. The estimates from the LFS are then converted into percentages for each age group by marital status. Mid-Year Population Estimates for each year are then grouped into the corresponding age groups. Finally the percentage of people in each age group by marital status or living arrangement is multiplied by the number of people in the mid-year population in the corresponding age group.

The method that has been described above can be explained further using an example. If 95% of men aged 20 to 24 are single (never married) and 5% are married according to the LFS, and we know that there are 2 million men aged 20 to 24 in England and Wales, we can estimate that 1.9 million men aged 20-24 are single and 100,000 are married.

### **Q7 Why was the methodology changed?**

The methodology has been updated for the estimates relating to the year 2002 onwards. This is because of:

- societal changes which were not being captured using the previous methodology, for example;
  - Civil partnerships were introduced in England and Wales in December 2005 and administrative statistics on civil partnership formation and dissolution are available but the previous method had not been able to be updated to reflect this; this is primarily because the old method relied on the 2001 Census population by marital status as a starting point, but at the time of the 2001 Census civil partnerships did not exist and so the population was adjusted each year from 2001 without taking civil partnerships into account
  - In addition, cohabitation has become much more common, either as a precursor to, or an alternative to marriage. Estimates of the cohabiting population were not possible using the previous method as there is no requirement to formally register cohabiting relationships

- concerns over quality of the survey estimates of the number of marriages occurring abroad and concerns over the quality of marital status information, including civil partnerships, collected from migrants

The methodology change also creates efficiencies in the time taken to produce and publish the Population Estimates by Marital Status and Living Arrangements. It will also make it easier to incorporate any new marital status or living arrangement categories into the estimates in future.

**Q8 Was there a consultation about the changes?**

A consultation asking users of the statistics about the changes to the reference tables and the methodology was run between 3 June 2014 and 11 July 2014. A response document was published in October 2014. The consultation and response can be found on the ONS website [here](#).

**Q9 How was the decision made about the new data sources and methodology?**

We conducted research into the options for the production of the Population Estimates by Marital Status and Living Arrangements. Numerous papers, detailing the options and advantages and disadvantages, were discussed with internal users and methodologists on several occasions. Once a potential method was agreed it was then taken forward in the form of a consultation with users to ensure they were supportive of the method and tables that were specified in the consultation document.

The decision about which data source to use started with three possible data sources which were considered. These included the Labour Force Survey (LFS), Annual Population Survey (APS) and the Integrated Household Survey (IHS). Survey estimates from the IHS were compared with data from the 2011 Census to ensure that survey estimates were a robust source for the production of the Population Estimates by Marital Status and Living Arrangements.

The IHS as a data source option was dropped quite early on due to a reduction in the core questions that would be asked; this meant that the data that would be needed to produce the Population Estimates by Marital Status and Living Arrangements could not be guaranteed for the future.

ONS looked at 4 main factors when deciding the best source of data:

- timeliness - the LFS is more timely than the APS, with the quarterly dataset being available two to three months after the April to June reference date. The equivalent APS dataset is available around nine months after the January to December reference date
- sample size - the LFS has a sample size of 43,000 households; the APS has a larger sample size of 143,000 households
- quality - although the APS has a larger sample size than the LFS the stability of the percentages produced does not differ greatly between the two sources
- time series - the LFS has a longer time series than the APS, with comparable time series going back to 1996; APS data are only available from 2004

These factors were evaluated, and on balance it was decided that the LFS was the best source because the Population Estimates by Marital Status and Living Arrangements would be timely and robust.

**Q10 The Labour Force Survey (LFS) only covers private households – what about the marital status of people living in communal establishments and the effects this has on the Population Estimates by Marital Status and Living Arrangements?**

The LFS does not cover the population living in communal establishments. We acknowledge that marital status distributions are different for those living in communal establishments and those living in households. Marital status data from the 2011 Census for those living in communal establishments suggests they are more likely to be single or widowed than those

living in households. However, the 2011 Census showed that a vast majority ([98%](#)) of the population live in a household in England and Wales. This means the marital status distribution of the household population is very similar to that of the total population.

At ages 65+, the 2011 Census shows that less than [4%](#) of people live in communal establishments, and at age 85+ it is [15%](#). Although we are not capturing the marital status of those living in communal establishments, because of the small proportions living in these, even at the oldest ages the marital status estimates will apply to the vast majority of the population. In addition Census data show that the proportion of older people living in communal establishments has decreased between 2001 and 2011. More older people are staying in private households until later ages.

We have decided not to adjust the Population Estimates by Marital Status and Living Arrangements to account for the population living in communal establishments because the marital status of people living in communal establishments would need to be taken from the Census and this would quickly go out of date.

#### **Q11 What is the Labour Force Survey (LFS)? What other demographic data are produced using the LFS?**

The LFS is a social survey of the private resident population in the UK. It covers people in private households, NHS accommodation and students in halls of residence whose parents live in the UK. Such students are included through proxy interviews with their parents. People who live in other communal establishments are not covered. LFS interviewers attempt to interview all adults resident at selected addresses. The key purpose of the LFS is to provide information on the UK labour market but it includes data on a variety of other variables such as marital status, living arrangements, families and households.

We also publish estimates of [Families and Households](#), [Families in the Labour Market](#) and [Young adults living with their parents](#) from the LFS.

#### **Q12 What are the annual Mid-Year Population Estimates?**

The annual Mid-Year Population Estimates provide an estimate of the number of people by single year of age and sex who are usually resident in England and Wales on 30 June of the reference year. They are calculated and published annually in June by ONS. The data published each year refer to the previous mid-year. They are the official population estimates for England and Wales.

#### **Q13 Why are there not any data about people who are Living Apart Together (LAT)?**

Couples who are living apart together can be divided into two groups:

- the person in the household has a legal marital status other than married or civil partnered, and is in a relationship with someone who is outside the household; currently data surrounding these relationships are not available through the Labour Force Survey and other household surveys, this is because they only collect information on people living in the household; we acknowledge the growing existence of these relationships and the need to collect and supply data on them
- the person in the household has a legal marital status of married or civil partnered, but their partner is living outside the household, for example due to work, prison or being in a care home; current survey questions and coding would mean these individuals would appear in the marital status table in the 'Married' category and in the living arrangements table in the 'Not living in a couple: Previously married or civil partnered' category; we make this clear to users in a footnote to the table

#### **Q14 Why are there not any data about people in same sex marriages?**

The Marriages (Same Sex Couples) Act 2013 made provision for the marriage of same sex couples in England and Wales from 29th March 2014 onwards. No married same sex couples were randomly selected in the interview sample in the April to June 2014 quarter of the Labour Force Survey (LFS). Therefore statistics on same sex married couples will not be reported on within the publication covering the years 2002 to 2014.

In the future an annual estimate of same sex couples who are married by sex will be published when at least three people in same sex couples who are married have been surveyed in the LFS (to protect their privacy). Until sample sizes become large enough to produce robust estimates, data are unlikely to be available by age group. This will be reviewed annually.

**Q15 Are data available at a lower level of geography?**

We do not routinely publish Population Estimates by Marital Status and Living Arrangements for geography below England and Wales. Survey estimates for lower levels of geography (down to Local Authority) are available on request.

**Q16 What data are available for the rest of the UK/Europe?**

National Records of Scotland (NRS) have published equivalent estimates for Scotland up to and including estimates for mid-2008, which are produced using similar methods to the old methodology used for England and Wales. However, following a user consultation, publication of Population Estimates by Marital Status was suspended and demand for these estimates is currently being reviewed by NRS. Further information can be found on the [NRS webpage for marital status population estimates](#).

Population estimates by marital status for Northern Ireland are not produced as the Northern Ireland Statistics and Research Agency (NISRA) has not identified a current user requirement for such estimates.

Population estimates by marital status for selected European countries are available on the [Eurostat website](#) (Table:demo\_pjanmarsta)

**Q17 Why do the estimates based on the new methodology only go back to 2002?**

Estimates produced using the new methodology go back to 2002 to align with the 2001 Census (marital status estimates are available from the 2001 Census) and so that figures for 2002 to 2010 could take into account the latest information from the 2011 Census.

The consultation which was run in 2014 showed that the majority of respondents required estimates from 2002 onwards to be published rather than 2011 onwards. They suggested that a longer time series would be helpful for understanding trends, and understanding any possible differences created by changes to the methodology.

**Q18 Why are the data only available in age groups and not by single year of age?**

The testing of survey data showed that the estimates were more robust in 5 year age bands. This grouping helps to limit the fluctuations due to sampling error in the data trends over time.

**Q19 Why are the age groups different in the marital status table and the living arrangements table?**

The age groups used in the marital status tables and the living arrangement tables are different because it has not been possible to produce robust survey estimates for both detailed living arrangement categories and detailed age groups. This affects mainly the youngest and oldest ages where the proportions of the population in some living arrangement categories are small. This is a potential limitation for the use of these statistics.

**Q20 Can confidence intervals be calculated to provide an indication of the accuracy of the Population Estimates by Marital Status and Living Arrangements?**

For users to gain an understanding of the level of accuracy of the Population Estimates by Marital Status and Living Arrangements it may be possible to produce confidence intervals around the survey estimate component only. We will consider producing confidence intervals for the survey component in the future depending on the user demand for these.

Research into producing confidence intervals around population estimates is continuing; should these become available in the future, users would be able to gain an understanding of the overall accuracy of the Population Estimates by Marital Status and Living Arrangements rather than only the survey component.

Please contact us by emailing [families@ons.gsi.gov.uk](mailto:families@ons.gsi.gov.uk) if you would like to express your interest in having confidence intervals around the survey estimate component of the Population Estimates by Marital Status and Living Arrangements.

**Q20 Where can I find more information on the quality of the data?**

More information about the quality of the Population Estimates by Marital Status and Living Arrangements can be found in the [Quality and Methodology Information document](#).

**Q21 If I have any further questions or if I have some feedback, who can I contact?**

Please contact the Demographic Analysis Unit either by email: [families@ons.gsi.gov.uk](mailto:families@ons.gsi.gov.uk) or by phone: +44 (0)1329 447890.