

Statistical bulletin

Childbearing for women born in different years, England and Wales: 2017

The changing composition of families over time, comparing the fertility of women of the same age and the number of children they have had.



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Table of contents

1. [Main points](#)
2. [Statistician's comment](#)
3. [Things you need to know about this release](#)
4. [The average completed family size has fallen below 1.90 for the first time](#)
5. [Nearly one in five women from the 1972 cohort were childless at the end of their childbearing years](#)
6. [Women are becoming less likely to have children before their 25th birthday](#)
7. [Most common age at childbirth continues to increase](#)
8. [Links to related statistics](#)
9. [Quality and methodology](#)

1 . Main points

- The average completed family size for women in England and Wales who reached the age of 45 years in 2017 was 1.89 children, the lowest level recorded to date.
- Of the women who reached the age of 45 years in 2017, 18% were childless at the end of their childbearing years compared to 10% a generation before (born 1945).
- The most common age of childbirth for women born in 1972 who reached age 45 years in 2017 was 31 years, compared to between 23 and 24 years for women born in 1945.
- A quarter of women who reached age 25 years in 2017 had at least one child – the lowest percentage on record.

2 . Statistician's comment

"Looking at women who reached the age of 45 in 2017, we can see that they had smaller families than earlier generations, with an average completed family size of 1.89 children. Two children remains the most common completed family size for women born in 1972. However, the proportion of women with two children was lower, while the proportion of women with one child or no children was greater, than for women born a generation before, in 1945. There are signs that women who are still in their childbearing years are showing similar patterns of delaying their childbearing until their 30s and having fewer children overall."

Paula Guy, Population Statistics Division, Office for National Statistics.

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3 . Things you need to know about this release

This release presents statistics on childbearing among women in England and Wales by the year of birth of the mother, rather than year of birth of the child. A group of women with the same year of birth are referred to as a "cohort" throughout.

"Cohort fertility" analyses compare the fertility levels of current generations of women of childbearing age with previous generations. This covers changes in average family size, levels of childlessness and the proportions of women having one, two or more children.

Completed family size is the average number of live-born children for women who are assumed to have completed their childbearing.

Childlessness is estimated as the proportion of women who had not had a live birth by a specific age.

A woman's childbearing is assumed to start at age 15 years and end at the age of 45 years (the day before her 46th birthday). The estimates have been updated with 2017 births, which means that completed family size for women born in 1972 (women reaching age 45 years in 2017) is presented for the first time. Women born in 1987, who reached age 30 years in 2017, are also used as a comparison group, as age 30 years may be considered the mid-point of a woman's childbearing years.

The ages of women are presented in “exact years”. Therefore, figures should be interpreted as the average number of children a woman has had up to that birthday. Childbearing up to exact age 30 years includes cumulative fertility through her lifetime up to the day before her 30th birthday. Any childbearing in the 12 months from her 29th birthday onwards will be included in fertility up to exact age 30 years.

4 . The average completed family size has fallen below 1.90 for the first time

Women born in England and Wales in 1972, that is those who turned 45 years in 2017, had an average completed family size of 1.89 children per woman, the smallest since the series began for women born in 1920. In comparison, women from the previous generation born in 1945 (who we assume to be the mothers of the women born in 1972 based on the average age of mothers at childbirth in 1972 being 27 years), had an average completed family size of 2.19 children per woman. Average completed family sizes have been generally decreasing since a high point of 2.42 for women born in the mid-1930s.

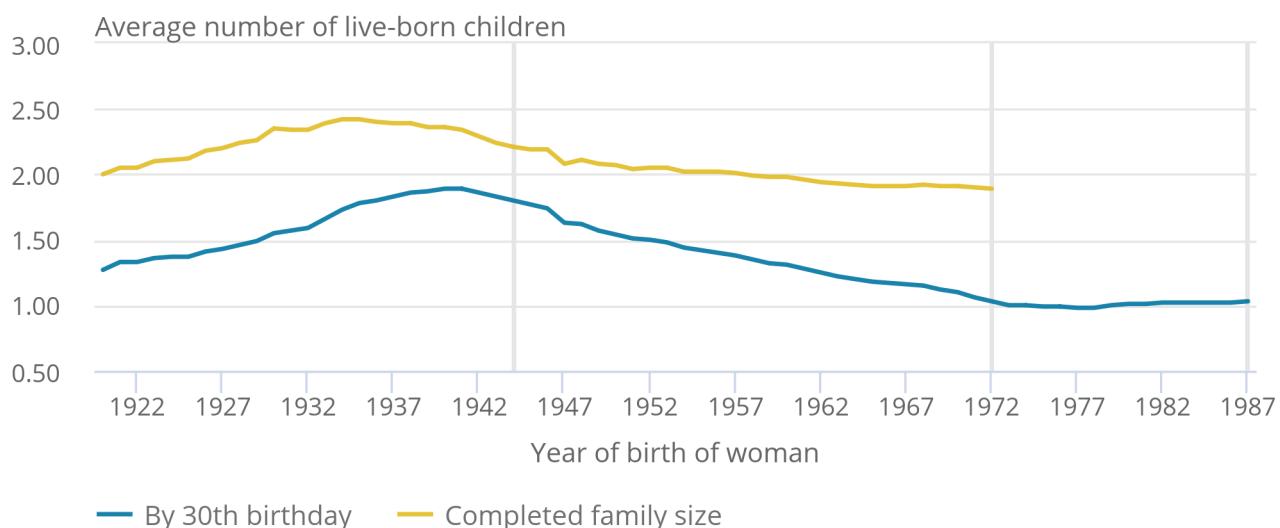
Figure 1: Average number of live-born children by age 30 years and completed family size, by year of birth of woman, 1920 to 1987

England and Wales

Figure 1: Average number of live-born children by age 30 years and completed family size, by year of birth of woman, 1920 to 1987

England and Wales

11



Source: Birth registrations, Office for National Statistics

Notes:

1. The 1945 cohort is assumed to be their mothers' generation because the average age of mothers giving birth in 1972 was 27 years, and so women of that age were assumed to be born in 1945.

The average number of live-born children that women have by their 30th birthday gives an indication of more recent trends in family size. Although, as women delay childbearing to older ages, the number of live-born children a woman may have by her 30th birthday will become less indicative of trends in family size.

Women born in the 1960s onwards have had fewer children by their 30th birthday than previous generations and this postponement of childbearing has subsequently been reflected in smaller completed family sizes. Since the 1979 cohort, however, the average family size by a woman's 30th birthday has increased slightly, reaching 1.03 for the 1987 (latest) cohort, reflecting higher fertility rates for these women in their late 20s than the cohorts which immediately preceded them in the late 1970s. It remains to be seen if this will be reflected in their completed family sizes by age 45 years, or whether it will be offset by lower fertility later on in their childbearing years.

5 . Nearly one in five women from the 1972 cohort were childless at the end of their childbearing years

Table 1 shows that 18% of women who reached age 45 years in 2017 (born in 1972) in England and Wales ended their childbearing years childless compared with just 10% of women born in 1945.

Table 1: Average family size and estimated family size distribution for women who have completed their childbearing, by year of birth of woman, selected cohorts
England and Wales, 2017

Year of birth of woman	Average completed family size	Number of live-born children (percentages) ¹						Total ²
		0	1	2	3	4+		
1945	2.19	10	14	43	21	12	100	
1972	1.89	18	18	37	17	10	100	

Source: Birth registrations, Office for National Statistics

Notes

1. Percentage of women with zero, one, two, three, or four or more children who have completed their families. [Back to table](#)
2. Figures may not add exactly due to rounding. [Back to table](#)

Further comparison of the 1972 cohort with the 1945 cohort shows that the percentage of women having two or more children has decreased for the 1972 cohort, but the percentage having no children or one child has increased compared to the 1945 cohort.

The difference in the average completed family size is most affected by the percentage who remain childless. For the cohorts born since the beginning of the 1950s, there has been a generally increasing proportion of women not having children (Figure 2). For cohorts born prior to 1950, the percentage who were childless by the end of their childbearing years was much lower, with the lowest percentage being 9% for women born in 1946.

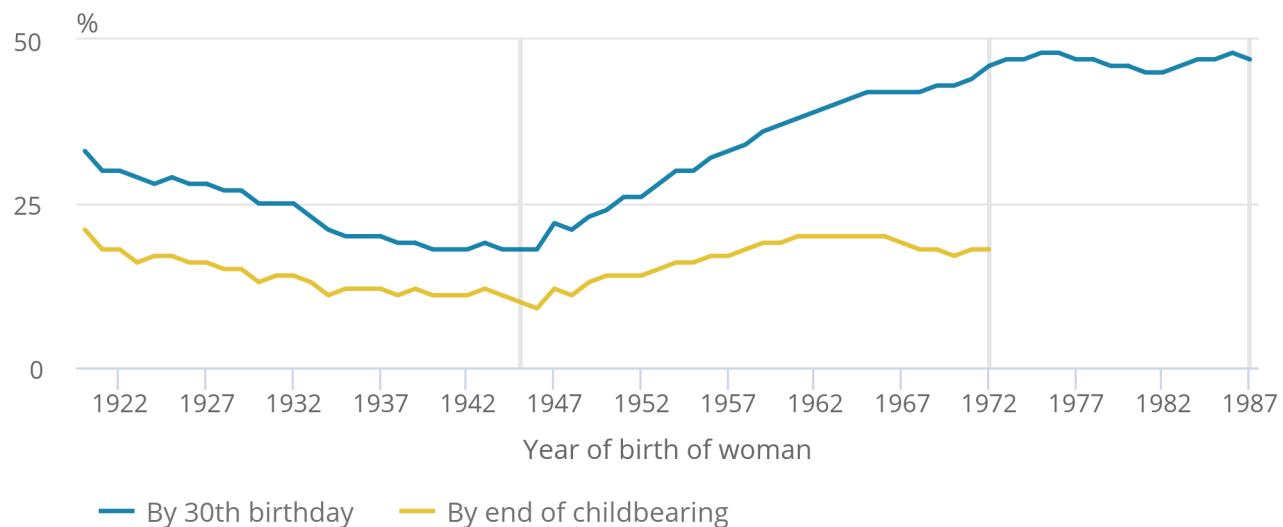
Figure 2: Percentage of women remaining childless at age 45 years and at age 30 years, 1920 to 1987

England and Wales

Figure 2: Percentage of women remaining childless at age 45 years and at age 30 years, 1920 to 1987

19

England and Wales



Source: Birth registrations, Office for National Statistics

Notes:

1. The 1945 cohort is assumed to be their mothers' generation because the average age of mothers giving birth in 1972 was 27 years, and so women of that age were assumed to be born in 1945.

Figure 2 demonstrates that recent cohorts of women are delaying childbearing until a later age. For women born in 1945, 18% were childless at exact age 30 years. For women born in the 1970s onwards, this figure was just under 50%. It is not yet known what proportion of women in these cohorts will remain childless by the end of their childbearing years.

Increasing childlessness in recent cohorts may be due to a decline in the proportion of women married, changes in the perceived costs and benefits of child-rearing versus work and leisure activities, greater social acceptability of a childfree lifestyle, and the postponement of decisions about whether to have children until it may be biologically too late¹.

Compared to some other countries, England and Wales has seen comparatively high levels of childlessness over the past 20 to 30 years. For cohorts born between 1960 and 1970, on average over this decade, England and Wales had one of the highest percentages of childlessness following completion of childbearing².

Notes for: Nearly one in five women from the 1972 cohort were childless at the end of their childbearing years

1. For reasons for increasing childlessness, see a number of articles: [Fertility and partnership status in the last two decades](#); [Postponement and childlessness: Evidence from two British cohorts](#) (PDF 279.15KB); [Voluntary childlessness and being Childfree: The Future of Human Reproduction: Working Paper #5](#) (PDF 853.55KB); and [Perpetual postponers? Women's, men's and couple's fertility intentions and subsequent fertility behaviour](#) (PDF 174.65KB).
2. Source: Human Fertility Project - <https://www.humanfertility.org/cgi-bin/main.php> and births registrations, Office for National Statistics.

6 . Women are becoming less likely to have children before their 25th birthday

By their 25th birthday, 60% of women born in 1945 had had at least one child. Breaking this down further, 27% of women had one child, 23% had two children, 7% had three children and 3% had four or more.

For women born in 1972, the picture had changed by age 25 years – only 33% had had at least one child, just over half the proportion for women born in 1945.

The 1992 birth cohort are the latest to reach exact age 25 years in 2017, and they have continued this decline – only 25% had one or more children by age 25 years. This is the lowest recorded percentage to date.

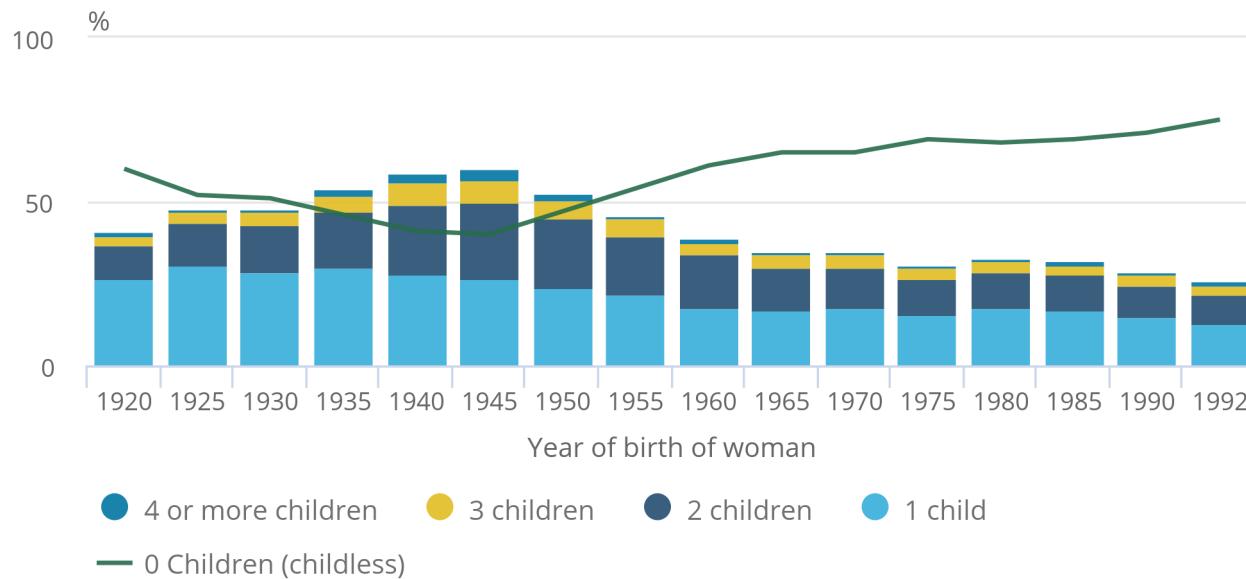
Figure 3 shows the changing picture of the number of live born children by women aged 25 years by year of birth of woman since 1920. Data shows that family sizes of one to four children at exact age 25 years to women born since 1950 have decreased reflecting the increase in the proportion of childlessness at this age.

Figure 3: Distribution of live-born children to women of exact age 25 years, selected cohorts

England and Wales

Figure 3: Distribution of live-born children to women of exact age 25 years, selected cohorts

England and Wales



Source: Birth registrations, Office for National Statistics

7 . Most common age at childbirth continues to increase

Fertility rates (live births per thousand women of childbearing age) continue to rise mainly for women over 30 years but are declining for those younger than 30 years. Childbearing in teenage years remains low, as just 6% of 20-year-old women from the 1997 cohort had given birth by age 20 years. There has been a gradual decline since the 1991 cohort in which 10% of women had given birth by age 20 years. In the 1945 cohort, 17% had had at least one child by age 20 years, almost treble the percentage of the 1997 cohort.

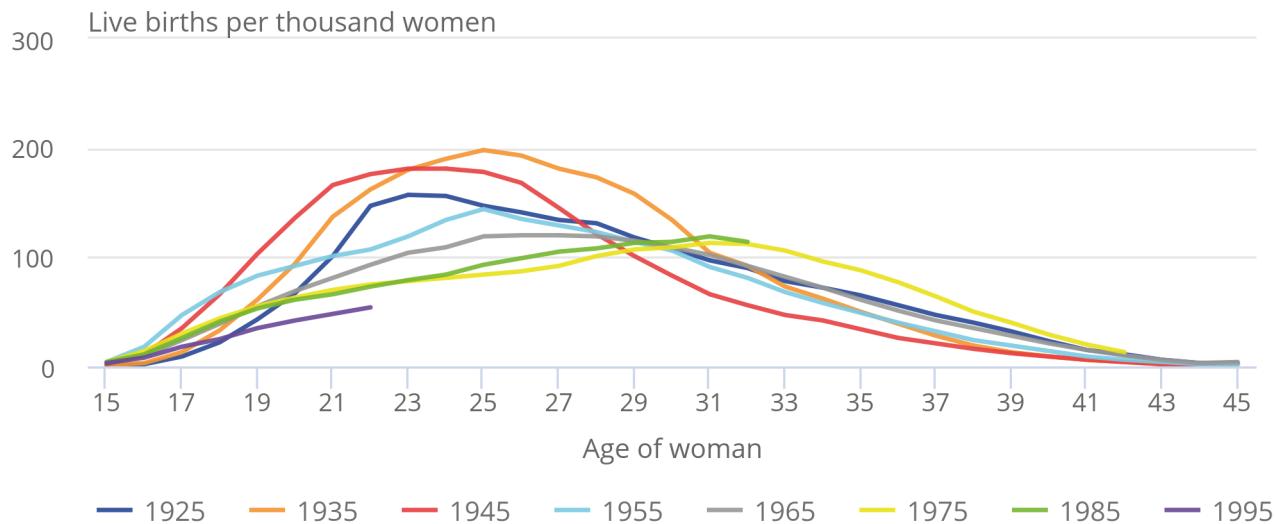
Figure 4 shows the changing pattern of fertility that we have seen in England and Wales over the last 70 years, from selected cohorts born between 1925 and 1995.

Figure 4: Live births per thousand women for ages 15 to 45 years, selected cohorts born between 1925 and 1995

England and Wales

Figure 4: Live births per thousand women for ages 15 to 45 years, selected cohorts born between 1925 and 1995

England and Wales



Source: Birth registrations, Office for National Statistics

Notes:

1. These data are presented by age in completed years.

This chart shows the age at which births were most prevalent for each of the selected cohorts. Data for the 1925, 1935 and 1945 cohorts show the highest number of births per thousand women were occurring when women were in their early to mid-twenties. By the 1955 and 1965 cohorts, the peak age at which women were having children was in their mid-to-late 20s and by the 1975 and 1985 cohort, who have yet to complete their childbearing years, the highest number of live births per thousand women occurred when women were in their early 30s. This is evidence that women are tending to delay their childbearing.

The fertility of the latest cohort likely to have completed their childbearing, born in 1972, peaked at the age of 31 years.

It is clear also, that for the later cohorts, the data points have "flattened" out, suggesting that women are tending to spread births more over their childbearing lifetime than previous cohorts. There is evidence (as depicted in Figure 4) that women are generally having fewer children at a given age; for instance, at its highest point, the 1935 cohort had close to 200 births per thousand women in a single year but by the 1985 cohort, the highest number was just under 120 births per thousand.

The 1975 cohort shows a clearly higher fertility rate for women in their mid- to late-30s than for previous cohorts. The most recent cohort visible on the chart (born in 1995) is so far displaying a “flatter” trend, showing the recent decrease in births to teenage mothers. It is probable that the 1995 cohort will continue in the same way as the 1975 and 1985 cohorts, in that there will be a lower fertility rate in their 20s compared to previous cohorts, but higher fertility rates at older ages.

Changes in the fertility rate (number of births per thousand women) for women aged between 20 and 45 years are shown in Figure 5.

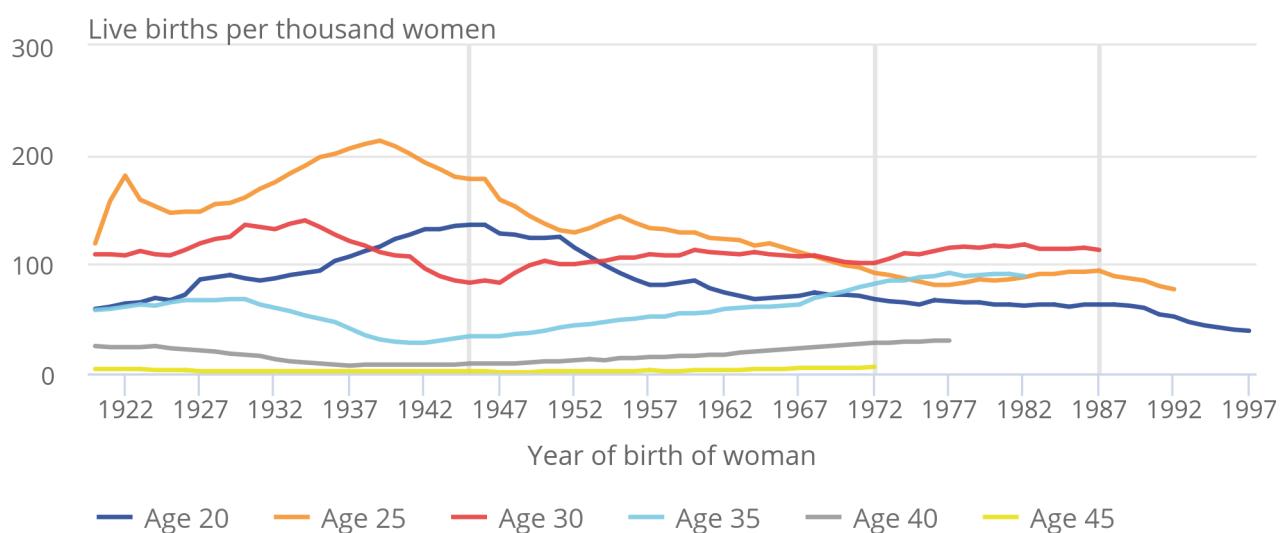
Figure 5: Age-specific fertility rates at selected ages, by year of birth of woman, 1920 to 1997

England and Wales

Figure 5: Age-specific fertility rates at selected ages, by year of birth of woman, 1920 to 1997

1945 cohort
1972 cohort
1995 cohort

England and Wales



Source: Birth registrations, Office for National Statistics

Notes:

1. These data are presented by age in completed years.
2. The 1945 cohort is assumed to be their mothers' generation because the average age of mothers giving birth in 1972 was 27 years, and so women of that age were assumed to be born in 1945.

In general, fertility rates for women aged 20 and 25 years have fallen but rates for over-30s have risen; this trend is most evident for the latest cohorts. Proportions for the latest cohorts to reach ages 20 and 25 years are the lowest rates recorded to date. Women aged 25 in 2017 had a rate of just 77 births per thousand, while for women born in 1997, who turned 20 in 2017, the rate at age 20 years had fallen below 40 births per thousand.

At age 30 years, considered to be the mid-point of the childbearing years, births per thousand women have steadied at around 115 births per thousand women. Fertility rates at age 40 and 45 years are at the highest levels recorded to date for the latest cohorts to reach those ages. Women aged 40 years in 2016 and 2017 had a rate of 30 births per thousand women, while women aged 45 years in 2017 had a rate of six births per thousand.

The latest data reflects a tendency for women to postpone childbearing. Some of the reasons may include:

- participating in [higher education](#)
- [Delaying marriage and/or partnership formation](#)
- wanting to start a career, get on the housing ladder and ensure financial stability before starting a family¹

Notes for: Most common age at childbirth continues to increase

1. For more information on fertility assumptions, please see [Fertility assumptions for the 2016-based national population projections](#).

8 . Links to related statistics

More details on teenage conceptions can be found in the annual [ONS conceptions release](#).

International comparisons of live birth rates are available in the [Vital statistics: population and health reference tables](#).

Annual summary birth statistics for the UK and its constituent countries can also be found in the [Vital statistics: population and health reference tables](#).

For information on data quality, legislation and procedures relating to birth statistics, please see the [User guide for birth statistics](#).

9 . Quality and methodology

This release was previously called "Cohort Fertility" and was renamed as "Childbearing for women born in different years" in 2013.

The Births [Quality and Methodology Information](#) report contains important information on:

- strengths and limitations of the data and how it compares with related data
- uses and users of the data
- how the output was created
- the quality of the output: including the accuracy of the data

During May 2012, changes were made to the Population Statistics Act 1938, which means that information on the number of previous children and whether previously married is now collected from all mothers at birth registration and not just from married women. This change highlighted an issue with the number of previous children being reported at birth registration, which Office for National Statistics [noted at the time](#).

In January 2016, an improvement was made to the registration system to rectify this issue. We are currently monitoring the effect that the further improvement to the question has had on the number of previous children being reported. Accompanying this bulletin for 2017 is [a paper on previous children](#) that assesses the impact of the improvement made in 2016.

The methods used to create cohort fertility require use of data collected at birth registration from women on the number of previous children they have had. At present, the birth registration system does not collect information on the number of previous children a man has had. Without this information it is not possible to produce estimates of the proportion of men who have not fathered a child.

It is also important to note that a man's reproductive span is not as well defined as a woman's, in terms of the upper age at which a man can father a child, and so this means we would need a longer time series to calculate cohort measures. Male period fertility rates can be found in [Births by parent's characteristics](#).

The [revisions policy](#) for population statistics is available.

Further information on the data sources and methods for producing this output can be found in the metadata tab of the data tables.

[National Records of Scotland](#) provides more detailed birth statistics for Scotland, including [cumulative fertility by cohort](#).

The Northern Ireland Statistics and Research Agency provides more detailed [birth statistics](#) for Northern Ireland, including cumulative fertility by cohort.

Special extracts and tabulations of births data for England and Wales are available to order for a charge (subject to legal frameworks, disclosure control, resources and agreements of costs, where appropriate). Such enquiries should be made to Vital Statistics Outputs Branch via email at vsob@ons.gov.uk or telephone on +44 (0)1329 444 110.

Enquiries on Childbearing for women born in different years, England and Wales, should be made to the Demographic Analysis Unit via email at pop.info@ons.gov.uk or telephone on +44 (0)1329 444 661.