

Article

Life expectancy in care homes, England and Wales: 2011 to 2012

The average number of years people aged 65 years and over who are living in care homes are expected to live beyond their current age in England and Wales. Classified as Experimental Statistics.

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1 . Main points

- Life expectancy for female care home residents aged 65 years and over in 2011 to 2012 was higher than for male care home residents of the same age in all age groups.
- Life expectancy for male care home residents was 3.9 years compared with 5.3 years for female care home residents in the age group 75 to 79 years, with a difference of 1.4 years, the largest difference among all age groups.
- Care home residents of both sexes had a lower life expectancy across all age groups compared with non-care home residents in the same age groups.
- The largest difference in life expectancy was in those aged 65 to 69 years, with a difference of 13.2 years between male care home residents (life expectancy of 6.5 years) and non-care home residents (19.7 years), and a difference of 15.3 between female care home residents (7.5 years) and non-care home residents (22.8 years).
- The gap in life expectancy between females and males was smaller in care home residents than in non-care home residents across all age groups.

2 . Overview of life expectancy in care homes

This is the first publication the Office for National Statistics (ONS) has released on the life expectancy of care home residents. We publish an annual [health state life expectancy](#) bulletin and will be releasing an upcoming life expectancy by ethnic group publication, which is also a new release for the ONS.

The study population is “care home residents”, which refers to people who were enumerated as living in a care home (which includes care homes with and without nursing), as defined by the [2011 Census questionnaire](#), who could be linked to our mortality data. The definition used in this release differs from the definition used in the [deaths in the care sector, 2019](#) article and therefore figures should not be compared across the two publications.

The care home resident life expectancy data in this release cover the period 27 March 2011 to 26 March 2012 (inclusive). The data year 2011 to 2012 included in the analysis was chosen because it immediately follows the 2011 Census, so that information on residence collected in the census was likely to remain relevant.

Care home occupancy is subject to fluctuation, therefore, we are unable to accurately capture care home residents and link this to our mortality data after March 2012 (see [Data sources and quality](#)).

According to the 2011 Census, individuals aged 65 years and over formed the majority of the care home population (82.6%) (see Table 3 in [Data sources and quality](#)). This age group is the focus of our analysis and life expectancy reported in this article is the average remaining period of life conditional on surviving to 65 years of age (that is, “life expectancy at age 65 years”, which is different from “life expectancy at birth”).

Any differences mentioned in this article are statistically significant unless stated otherwise (refer to [Glossary](#) for definition).

3 . Care home resident life expectancy

Female care home residents had a higher life expectancy than male care home residents across all age groups (Figure 1).

The largest difference in life expectancy between female and male care home residents was in the age group 75 to 79 years, with a difference of 1.4 years (female care home residents are expected to live a further 5.3 years compared with 3.9 years for male care home residents in this age group). This is compared with those aged 95 years and over who saw the smallest difference in life expectancy between female and male care home residents, with a difference of 0.6 years (female care home residents are expected to live a further 2.7 years compared with 2.1 years for male care home residents in this age group).

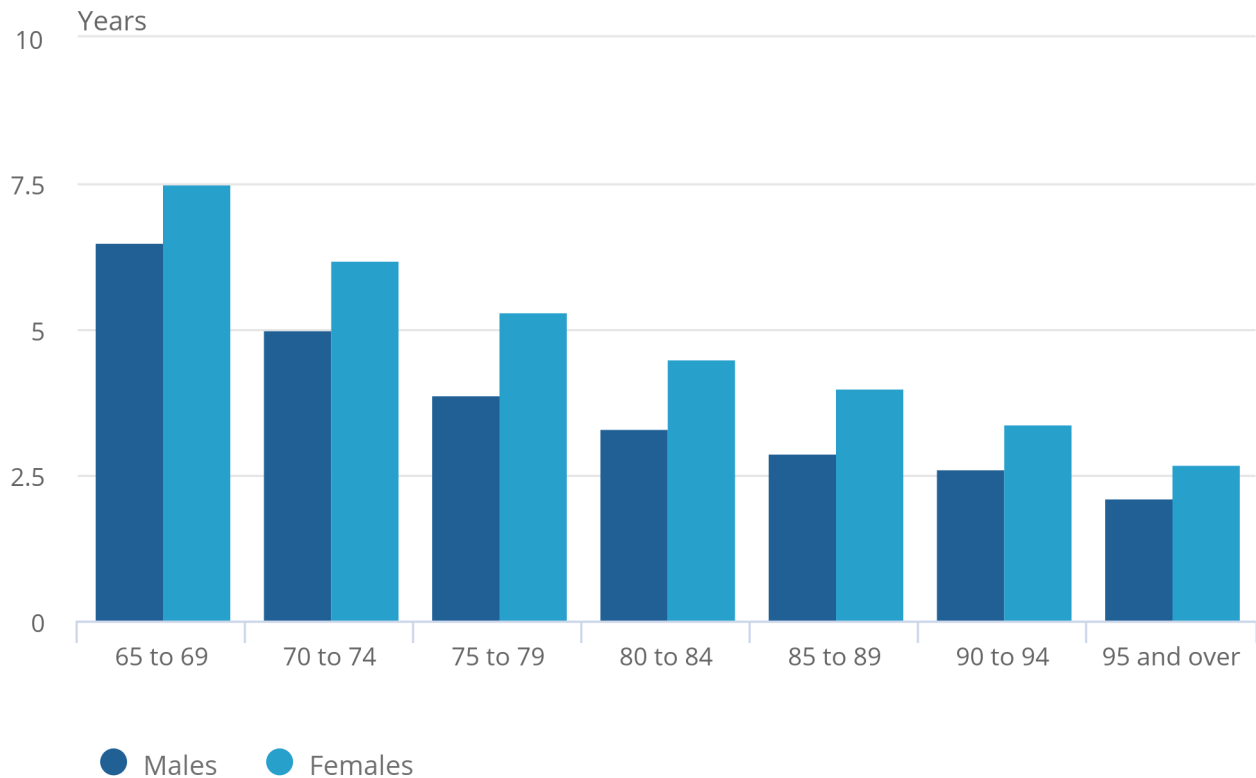
These findings confirm that the [higher life expectancy found nationally among women](#) also applies to the care home population.

Figure 1: Female life expectancy was higher than male life expectancy in care home residents

Life expectancy by age group in care home residents, England and Wales, 2011 to 2012

Figure 1: Female life expectancy was higher than male life expectancy in care home residents

Life expectancy by age group in care home residents, England and Wales, 2011 to 2012



Source: Office for National Statistics - Life expectancy in care homes, England and Wales

Notes:

1. Figures are conditional on surviving to the stated age group and are reported from the start of the age group.
2. The term "care home residents" in this release refers to those who were recorded as living in a care home during the 2011 Census.
3. Calculations are based on unrounded estimates, therefore data presented in this article may differ from data presented in this figure because of rounding.
4. Confidence intervals are available in the [accompanying dataset](#).

The largest fall in life expectancy between age groups was between those aged 65 to 69 years (male and female care home residents are expected to live a further 6.5 and 7.5 years respectively) and 70 to 74 years (male and female care home residents are expected to live a further 5.0 years and 6.2 years respectively), with life expectancy decreasing by 1.6 years for males and 1.3 years for females (Figure 1).

While life expectancy naturally decreases as age increases, the extent of the decrease per age group mostly narrows with increasing age. The smallest difference in life expectancy between age groups for male care home residents was between those aged 85 to 89 years and 90 to 94 years, with life expectancy falling by only 0.3 years (life expectancy of 2.9 years compared with 2.6 years respectively). This is compared with female care home residents where the smallest difference between age groups was between each age group above the age of 80 to 84 years, with life expectancy falling by 0.6 years (80 to 84 years, life expectancy of 4.5 years; 85 to 89 years, 4.0 years; 90 to 94 years, 3.4 years; and 95 years and over, 2.7 years).

4 . Comparison of life expectancy between care home residents and non-care home residents

According to the 2011 Census the age group 65 years and over forms the majority of the care home resident population (82.6%). This is compared with the non-care home resident population where only 16.8% of the population are above 65 years of age (see Table 3 in [Data sources and quality](#)).

Our definition of “non-care home residents” is the rest of the population recorded as living in England and Wales during the 2011 Census excluding our definition of care home residents over the age of 65 years.

Care home residents had a lower life expectancy than non-care home residents across all age groups in both males and females (Figure 2), with the largest difference in the age group 65 to 69 years, with male and female care home residents expected to live a further 6.5 and 7.5 years compared with 19.7 and 22.8 years for male and female non-care home residents.

The difference in life expectancy between care home residents and non-care home residents was greater between the female populations than the male populations in all age groups (Figure 2). Life expectancy differences between care home and non-care home residents decreased with increasing age for both males and females (differences of 13.2 years and 15.3 years respectively in the age group 65 to 69 years, compared with differences of 2.0 and 2.3 years respectively in the age group 95 years and over).

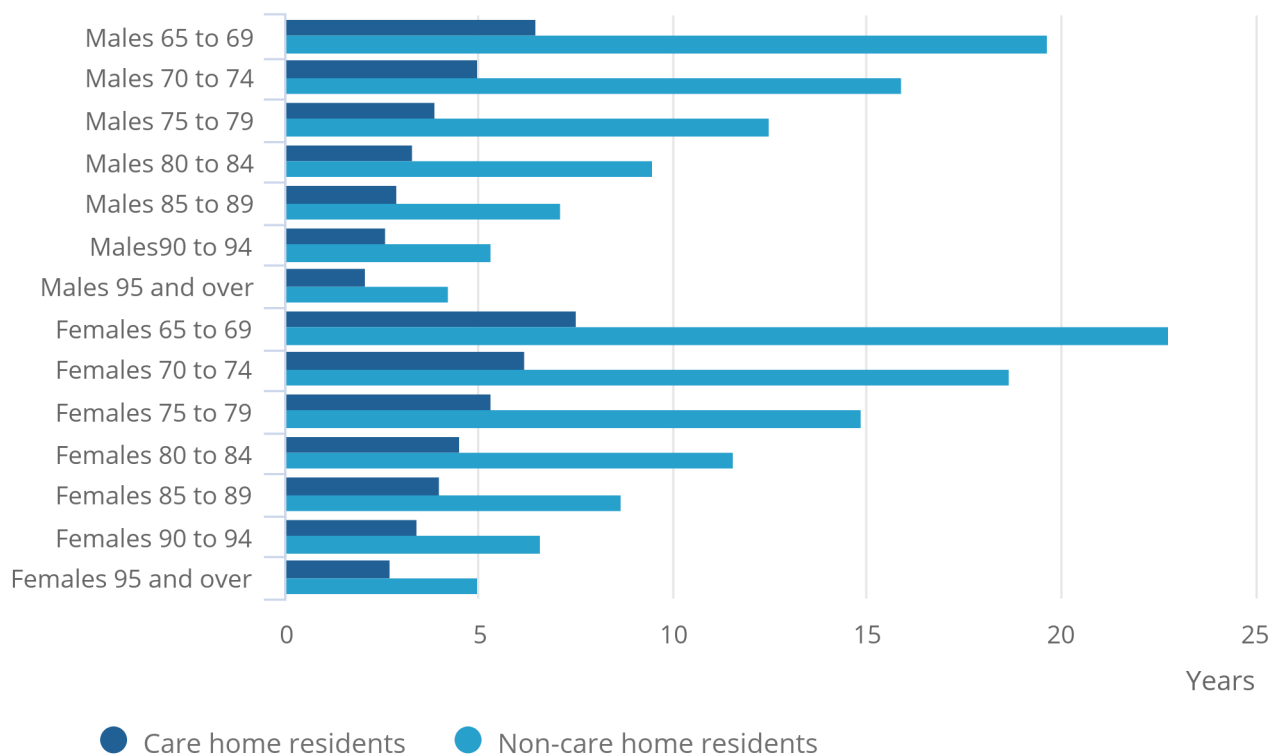
Using the 2011 Census, we can look at self-reported health of both care home residents and non-care home residents by age group. In the younger age groups (65 to 74 years) a higher proportion of male and female care home residents self-reported their health as Very bad, Bad or Fair (79.0% and 80.4% respectively) compared with non-care home residents (40.3% and 40.1% respectively). This gap narrows in the older age groups and could therefore account for the larger differences in life expectancy among younger than older age groups. This could therefore account for the disparity in life expectancy between the two groups since [poor health, or requiring physical support is a common reason for needing residential care](#).

Figure 2: Life expectancy of care home residents was lower than in non-care home residents

Life expectancy by age group, England and Wales, 2011 to 2012

Figure 2: Life expectancy of care home residents was lower than in non-care home residents

Life expectancy by age group, England and Wales, 2011 to 2012



Source: Office for National Statistics - Life expectancy in care homes, England and Wales

Notes:

1. Figures are conditional on surviving to the stated age group and are reported from the start of the age group.
2. The term "care home residents" in this release refers to those who were recorded as living in a care home during the 2011 Census.
3. The term 'non-care home residents' refers to the rest of the population recorded as living in England and Wales during the 2011 Census excluding our definition of care home residents.
4. Calculations are based on unrounded estimates, therefore data presented in this article may differ from data presented in this figure because of rounding.
5. Confidence intervals are available in the [accompanying dataset](#).

The difference in life expectancy between females and males was smaller in care home residents compared with non-care home residents across all age groups.

In line with the pattern in care home residents, females in the non-care home resident population had a higher life expectancy than male non-care home residents in all age groups. For non-care home residents the largest difference in life expectancy between females and males occurred in the 65 to 69 years age group (3.1 years), compared with care home residents, where the largest difference occurred in the age group 75 to 79 years (1.4 years) (Figure 2).

Table 1: Differences in length of life by age group are smaller in care home residents in both males and females than non-care home residents

The range in life expectancy between age groups 65 to 69 years and 95 years and over for care home residents and non-care home residents, England and Wales, 2011 to 2012

Age group	Care home resident	Non-care home resident
	Males	Males
65 to 69 years	6.5	19.7
95 years and over	2.1	4.2
Range	4.4	15.6
	Females	Females
65 to 69 years	7.5	22.8
95 years and over	2.7	5.0
Range	4.8	17.7

Source: Office for National Statistics - Life expectancy in care homes, England and Wales

Notes

1. The term 'care home residents' in this bulletin refers to those who were recorded as living in a care home during the 2011 Census.
2. The term 'non-care home residents' refers to the rest of the population recorded as living in England and Wales during the 2011 Census excluding our definition of care home residents.
3. Figures are conditional on surviving to the stated age group and are reported from the start of the age group.
4. Calculations, including the range in this table, are based on unrounded estimates therefore differences may occur within the data.

The range in life expectancy for care home residents between the ages 65 to 69 years and 95 years and over is 4.4 and 4.8 years for males and females respectively. In contrast, there is a larger range in life expectancy between these age groups in non-care home residents (15.6 and 17.7 years for males and females respectively) (Table 1). This is to be expected as life expectancy is lower in the youngest age group (65 to 69 years) for care home residents compared with non-care home residents (Figure 2).

5 . Age-specific mortality rates

When investigating the disparity in life expectancy between care home residents and non-care home residents it is useful to look at the difference in mortality in these populations. Age-specific mortality rates account for differences in population size. We have calculated age-specific mortality rates for care home residents and non-care home residents for 2011 to 2012, which are presented in the accompanying [dataset](#).

Care home resident age-specific mortality rates were higher than non-care home residents for both males and females across all age groups.

Age-specific mortality rates for male and female care home residents in the age group 65 to 69 years were 9.0 and 11.9 times greater than non-care home residents (11,994.6 and 10,759.1 deaths per 100,000 for male and female care home residents compared with 1,340.0 and 903.1 deaths per 100,000 for male and female non-care home residents). This difference reduces to 1.9 and 1.8 times greater for the age group 95 years and over (46,530.6 and 36,621.5 deaths per 100,000 for male and female care home residents compared with 24,031.8 and 19,842.0 deaths per 100,000 for male and female non-care home residents) (Table 2).

Table 2: Age-specific mortality rates were higher in care home residents compared with non-care home residents for both males and females across all age groups

Age-specific mortality rates per 100,000 for care home residents and non-care home residents by age group, England and Wales, 2011 to 2012

Age group	Care home resident	Non-care home resident	Mortality rate ratio
	Males	Males	Males
65 to 69 years	11,994.6	1,340.0	9.0
70 to 74 years	17,807.7	2,245.4	7.9
75 to 79 years	24,248.2	3,644.6	6.7
80 to 84 years	29,212.7	6,247.0	4.7
85 to 89 years	34,219.0	10,385.3	3.3
90 to 94 years	39,096.8	16,173.5	2.4
95 years and over	46,530.6	24,031.8	1.9
	Females	Females	Females
65 to 69 years	10,759.1	903.1	11.9
70 to 74 years	14,249.6	1,451.1	9.8
75 to 79 years	17,128.2	2,420.1	7.1
80 to 84 years	20,765.8	4,271.4	4.9
85 to 89 years	23,979.5	7,487.0	3.2
90 to 94 years	28,688.0	11,918.9	2.4
95 years and over	36,621.5	19,842.0	1.8

Source: Office for National Statistics - Life expectancy in care homes, England and Wales

Notes

1. The term 'care home residents' in this release refers to those who were recorded as living in a care home during the 2011 Census.
2. The term 'non-care home residents' refers to the rest of the population recorded as living in England and Wales during the 2011 Census excluding our definition of care home residents.
3. Calculations are based on unrounded estimates, therefore figures may not multiply because of rounding.
4. Confidence intervals are available in the accompanying dataset.

Based on the differences in age-specific mortality rates between the care home residents and non-care home residents we would expect to see the lower life expectancy estimates in care home residents compared with non-care home residents reported within this release, and the gap narrowing between these two groups in the older age groups (Table 2).

More research is needed to investigate the reasons for disparity in life expectancy across the two groups including the impact of leading cause of death. This is an area we are hoping to investigate further as more data become available.

6 . Life expectancy in care homes data

[Life expectancy in care homes, England and Wales](#)

Dataset | Released on 2 June 2021

Life expectancy of care home residents and non-care home residents of the same age groupings.

7 . Glossary

Life expectancy

Life expectancy is a population-based statistical measure of the average number of years a person has before death. Life expectancies can be calculated for any age and give the further number of years a person can, on average, expect to live given the age they have attained.

Life table

A life table is a demographic tool used to analyse death rates and calculate life expectancies at various ages. We calculate life tables separately for males and females because of their different mortality patterns. The life table for care home residents starts at age 65 years, whereas in the general population life tables tend to start at age under 1 year. So, figures in this article are conditional on survival to age 65 years (that is, “life expectancy at age 65”, which is different from “life expectancy at birth”).

Period life expectancy

The life expectancy estimates reported in this article are period-based. Period life expectancy at a given age for an area is the average number of years a person would live, if he or she experienced the particular area’s age-specific mortality rates for that time period throughout his or her life. Further details about the differences between period and cohort life expectancies can be found in the article [Period and cohort life expectancy explained](#).

Confidence intervals

A measure of the uncertainty around a specific estimate. It is expected that the interval will contain the true value on 95 occasions if repeated 100 times. As intervals around estimates widen, the level of uncertainty about where the true value lies increases. See our [statistical uncertainty](#) page.

Statistical significance

The term “significant” refers to statistically significant changes or differences. Significance has been determined using the 95% confidence intervals, where instances of non-overlapping confidence intervals between estimates indicate the difference is unlikely to have arisen from random fluctuation. See our [statistical uncertainty](#) page.

Age-specific mortality rates

Age-specific mortality rates (ASMRs) are used to allow comparisons between populations that may contain different proportions of people of different ages. Information on how age-specific mortality rates are calculated can be found in the [User guide to mortality statistics](#).

8 . Data sources and quality

Life expectancy estimates within this publication are calculated using all causes of death using death occurrences data (that is, the date a death occurred, not when it was registered) held by the Office for National Statistics (ONS), which are compiled when deaths are certified and registered as part of civil registration.

More quality and methodology information on strengths, limitations, appropriate uses, and data is available in the [Health state life expectancies, UK QMI](#).

Method for estimating life expectancy

Estimates reported in this article use an abridged life table method. Abridged life tables are based on deaths and population data by age groups (usually five-year age groups, with an open-ended final age interval). Abridged life tables use age-specific mortality rates to estimate the probability of surviving a given age interval. For age groups other than the first year of life, it is assumed deaths are evenly distributed within age groups, so that the probability of dying applies to individuals within an age group regardless of their age.

Abridged life tables are used in preference to complete life tables for smaller populations, such as local authorities, because death counts can be too sparse for examining mortality for single years of age, and mid-year population estimates are not available or sufficiently reliable to produce these by single year of age.

For more information on the various ONS life expectancy releases and their uses please see [Life expectancy releases and their different uses](#).

To calculate life expectancy estimates for care home residents, and non-care home residents, the [2011 Census](#) is used. This data source allows us to identify care home residents as recorded in the 2011 Census and link these individuals to our mortality data to ascertain the proportion of those who had died, or survived, between 27 March 2011 and 26 March 2012 (inclusive). We were able to link 84.4% of deaths within this period to the 2011 Census. This is currently the only data source we have that allows us to track individuals to see how long they survived after a certain timepoint.

Table 3: Care home resident and non-care home resident population by age group and sex, England and Wales, 2011

	Care home resident			
	Males		Females	
	Counts	%	Counts	%
0 to 64 years	31,696	32.1	22,496	10.6
65 to 69 years	5,886	6.0	5,335	2.5
70 to 74 years	7,289	7.4	8,709	4.1
75 to 79 years	10,442	10.6	17,515	8.2
80 to 84 years	14,480	14.6	35,520	16.7
85 to 89 years	15,845	16.0	54,534	25.6
90 to 94 years	9,566	9.7	44,855	21.1
95 years and over	3,675	3.7	23,934	11.2
Total	98,879	100.1	212,898	100.0
	Non-care home resident			
	Males		Females	
	Counts	%	Counts	%
0 to 64 years	20,347,841	84.4	21,167,806	82.2
65 to 69 years	1,220,450	5.1	1,300,662	5.0
70 to 74 years	965,431	4.0	1,071,973	4.2
75 to 79 years	743,781	3.1	891,197	3.5
80 to 84 years	497,742	2.1	689,208	2.7
85 to 89 years	250,990	1.0	429,801	1.7
90 to 94 years	74,783	0.3	169,680	0.7
95 years and over	13,324	0.1	43,030	0.2
Total	24,114,342	100.1	25,763,357	100.2

Source: Office for National Statistics – Life expectancy in care homes, England and Wales

Notes

1. Data differ to populations reported in explorable datasets because of data linkage.
2. Percentage totals do not add up to 100 because of rounding.

To define self-reported health, we refer to the [2011 Census](#) question, “How is your health in general?”. Answer options included: Very good, Good, Fair, Bad and Very bad.

Life expectancy estimates provides a dimension to length of life, which is useful for assessing health and social care needs. The mortality data used provide complete population coverage and ensure the estimates are of high precision, and representative of the underlying population at risk.

Care home occupancy is subject to fluctuation, consequently we are unable to accurately capture care home residents and link individuals to our mortality data after 2012, which restricts provision of a longer time series.

Figures are based on the date a death occurred for the period 27 March 2011 to 26 March 2012 (inclusive), not when it was registered. There is usually a delay of at least five days between occurrence and registration. More information on this issue can be found in our [Impact of registration delays release](#).

9 . Future developments

Experimental Statistics

These statistics are designated as [Experimental Statistics](#). Experimental Statistics are those that are in the testing phase, are not yet fully developed, and have not been submitted for assessment to the UK Statistics Authority. Experimental Statistics are published to involve customers and stakeholders in their development and as a means of building in quality at an early stage.

Feedback – next steps

Comments on this release are welcomed. Feedback can be emailed to social.care@ons.gov.uk.

We will be providing updates to these estimates once we have 2021 Census data available.

10 . Related links

[Health state life expectancies by national deprivation deciles, England: 2017 to 2019](#)

Bulletin | Released 22 March 2021

Life expectancy and years expected to live in “Good” health using national indices of deprivation to measure socioeconomic inequalities in England.

[Health state life expectancies, UK: 2017 to 2019](#)

Bulletin | Released 25 January 2021

The number of years people are expected to spend in different health states among local authority areas in the UK.

[Method changes to life and health state expectancies](#)

Methodology | Released 26 November 2016

Report outlining the changes to life expectancy, healthy life expectancy and disability-free life expectancy.

[National life tables, UK: 2017 to 2019](#)

Bulletin | Released 24 September 2020

Trends in the average number of years people will live beyond their current age measured by period life expectancy, analysed by age and sex for the UK and its constituent countries.