Office for National Statistics

Article

Life expectancy in care homes, England and Wales: 2021 to 2022

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

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Release date:
16 March 2023

Next release:
To be announced

Notice

9 January 2025

Following the Health and Social Care Statistical Outputs consultation commissioned by the Health and Social Care Statistics Leadership Forum, we are improving some of our statistical products, so they are more coherent and efficient. Additionally, we are ensuring that our resources are deployed in producing statistics for maximum possible benefit.

Full details of changes to this product, and our other health and social care products, are available in the Health and Social Care Statistical Outputs Consultation Response. We welcome user feedback on our releases. Please use the contact details on individual publication web pages to share feedback.

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1 . Main points

- Life expectancy for care home residents between 2021 and 2022 ranged from 7.0 years at age group 65 to 69 years, to 2.9 years at age 90 years and over for females, and from 6.3 years at age group 65 to 69 years, to 2.2 years at age 90 years and over for males.

- Life expectancy for female care home residents aged 65 years and over between 2021 and 2022 was statistically significantly higher than for male care home residents of the same age in all age groups.

- The largest difference in life expectancy between female and male care home residents was in the age groups 75 to 79 years and 80 to 84 years, with a statistically significant difference of 1.1 years in each age group.

- Both male and female care home residents had a statistically significantly lower life expectancy across all age groups compared with non-care home residents in the same age groups; a result of statistically significantly higher age-specific mortality among the former.

- Life expectancy for non-care home residents between 2021 and 2022 ranged from 23.3 years at age group 65 to 69 years, to 6.9 years at age 90 years and over for females, and 20.2 years at age group 65 to 69 years, to 5.5 years at age 90 years and over for males.

- The largest difference in life expectancy between care home residents and non-care home residents was in those aged 65 to 69 years, with a difference of 16.3 years between the female populations, and a difference of 13.9 years between the male populations.

2 . Overview of life expectancy in care homes

This is an update to our Life expectancy in care homes, England and Wales: 2011 to 2012 article. The term “care home residents” refers to people who were identified as living in a care home (which includes care homes with and without nursing) as defined by the 2021 Census questionnaire, and who linked to patient records. Our definition excludes staff or owners, and family members and partners of staff or owners.

Life expectancy for care home residents is compared with age- and sex-matched non-care home residents in this release. Our definition of "non-care home residents" is the rest of the population recorded as living in England and Wales during the 2021 Census who linked to patient records, excluding our definition of care home residents (see Section 7: Glossary).

The life expectancy data in this release cover the period 21 March 2021 to 20 March 2022 (inclusive). We chose this timeframe because it cover the year immediately following Census Day 2021 (21 March 2021), so information on residence collected in the census was likely to have remained relevant.

Care home occupancy is subject to fluctuation throughout the year because of deaths to care home residents, new residents and short-term or temporary stays. Therefore, we are unable to accurately capture care home residents and link this to our mortality data after March 2022 (see Section 8: Data sources and quality).

To align with other life expectancy releases published by the ONS, mortality data in this release are based on the date a death was registered, rather than the date a death occurred (see Section 8: Data sources and quality). Mortality data in the previous release were based on death occurrences data. Therefore, any comparison between this release and the previous release must be made with caution. Deaths from 21 March 2021 to 31 December 2021 are based on final data, deaths from 1 January 2022 to 20 March 2022 are based on provisional data.

According to the 2021 Census, individuals aged 65 years and over formed most of the care home population (82.1%); therefore, our analyses focus on this age range. Life expectancy, as reported in this article, is the average remaining period of life conditional on surviving to a given age from 65 years (that is, "life expectancy at age 65 years") and is different from "life expectancy at birth", which takes account of mortality risk across all ages.

Where this article references a significant difference, this refers to statistical significance (see Section 7: Glossary for a definition). The accompanying dataset includes life expectancy and age-specific mortality rates separately for England and Wales. Overall, the pattern of findings remains the same when looking at England or Wales separately, with the exception that not all statistically significant findings were significant for Wales; the accompanying dataset includes confidence levels as an indication of significance. However, life expectancy estimates for male care home residents in Wales should be interpreted with caution because of a small overall sample size (less than 5,000).

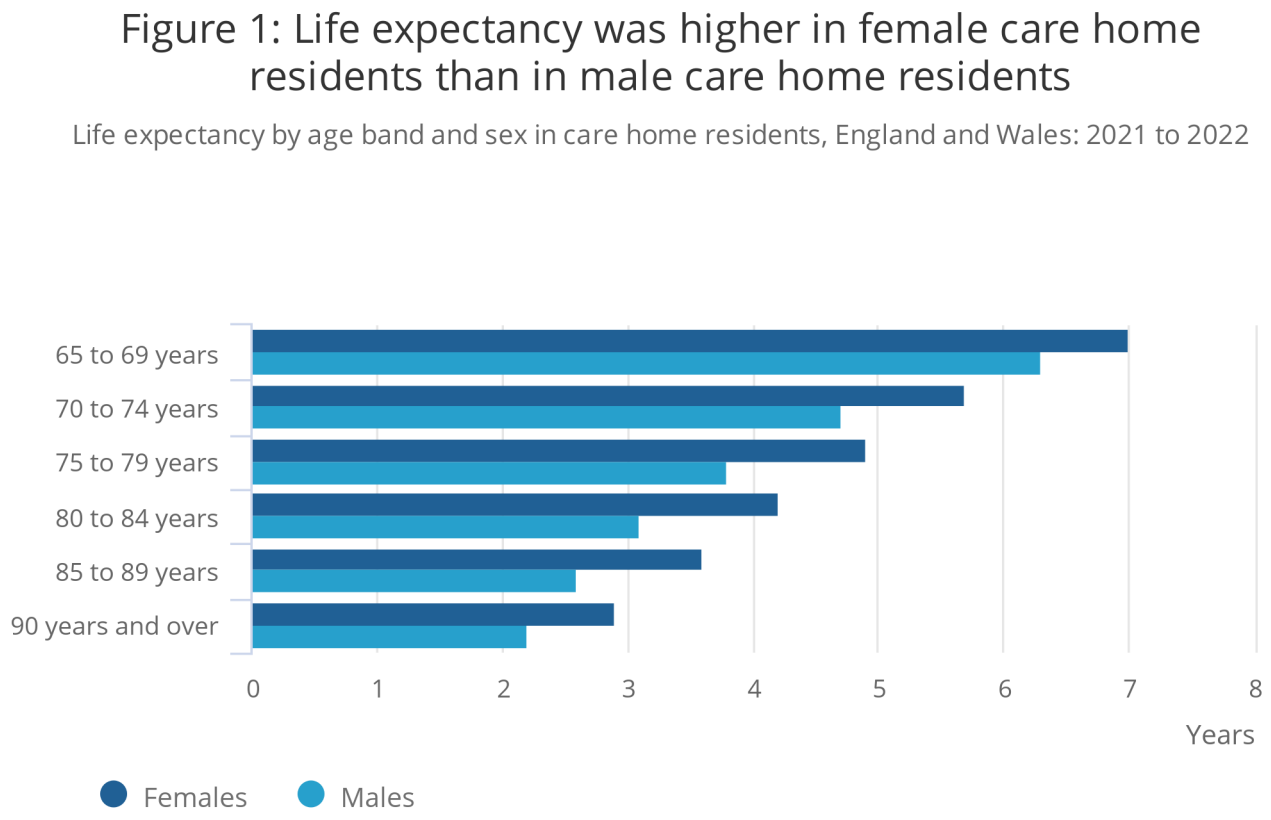
3 . Care home resident life expectancy

Female care home residents had a significantly 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 groups 75 to 79, and 80 to 84 years, with a difference of 1.1 years in both age groups. This is compared with a difference of only 0.7 years among female and male care home residents aged 65 to 69 years, and 90 years and over.

Figure 1: Life expectancy was higher in female care home residents than in male care home residents

Life expectancy by age band and sex in care home residents, England and Wales: 2021 to 2022



Source: Office for National Statistics

Notes:

1. Life expectancy estimates have been calculated using counts rounded to the nearest 5.
2. Figures are conditional on surviving to the stated age group and are reported from the start of the age group.
3. The term "care home residents" in this release refers to those who were recorded as living and receiving care in a care home on Census Day (21 March 2021).
4. Confidence intervals are available in the accompanying dataset.

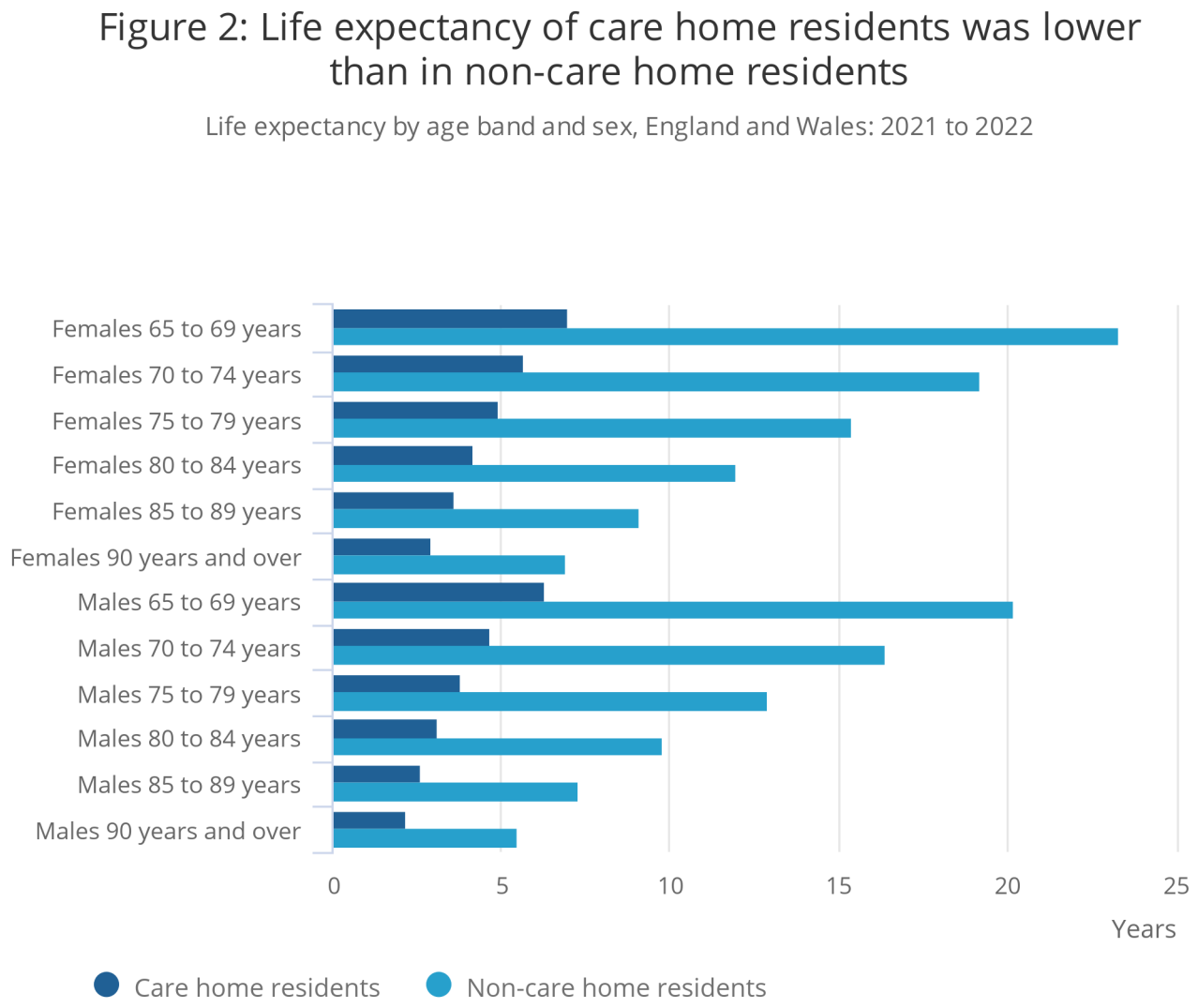
Life expectancy statistically significantly decreased with age in both male and female care home residents. For example, at age 65 to 69 years, female care home residents had a life expectancy of 7.0 years. However, for female care home residents aged 90 years and over, life expectancy was 2.9 years. For male care home residents, life expectancy was 6.3 years at age 65 to 69 years. However, for male care home residents aged 90 years and over, this life expectancy was 2.2 years.

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

Male and female care home residents had a significantly lower life expectancy than non-care home residents across all age groups (Figure 2). The largest difference was seen in the age group 65 to 69 years, amounting to 16.3 years in females and 13.9 years in males. The smallest difference was in the age group 90 years and over, amounting to 4.0 years among females and 3.2 years among males. This difference may be because those entering care homes at younger ages are more likely to have conditions or diseases which limit their lives.

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

Life expectancy by age band and sex, England and Wales: 2021 to 2022



Source: Office for National Statistics

Notes:

1. Life expectancy estimates have been calculated using counts rounded to the nearest 5.

2. Figures are conditional on surviving to the stated age group and are reported from the start of the age group.

3. The term "care home residents" in this release refers to those who were recorded as living and receiving care in a care home on Census Day (21 March 2021).

4. The term "non-care home residents" refers to the rest of the population recorded as living in England and Wales on Census Day (21 March 2021) excluding our definition of care home residents.

5. Confidence intervals are available in the[accompanying dataset.]

The difference in life expectancy between care home residents and non-care home residents was greater among females than males in all age groups (Figure 2). Life expectancy differences between care home and non-care home residents decreased with increasing age for both female and male populations.

5 . Age-specific mortality rates

Age-specific mortality rates (ASRs) account for differences in population size. Care home resident ASRs were significantly higher than for non-care home residents for both male and female populations across all age groups (Table 1). The ASR ratio of female care home residents to female non-care home residents was highest at age 65 to 69 years (13.3 times higher), and lowest at age 90 years and over (2.4 times higher). Similarly, the ASR ratio for male care home residents to male non-care home residents was highest at age 65 to 74 years (9.4 times higher), and lowest at age 90 years and over (2.4 times higher).

Table 1: Age-specific mortality rates (ASRs) 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 (ASRs) per 100,000 persons for care home residents and non-care home residents by age band, England and Wales, 2021 to 2022

Sex and age band (years)	Care home residents	Non-care home residents	Mortality rate ratio
Females, 65 to 69 years	11,569	869	13.3
Females, 70 to 74 years	15,703	1,375	11.4
Females, 75 to 79 years	19,034	2,290	8.3
Females, 80 to 84 years	22,663	4,047	5.6
Females, 85 to 89 years	26,382	7,055	3.7
Females, 90 years and over	34,058	14,445	2.4
Males, 65 to 69 years	12,210	1,295	9.4
Males, 70 to 74 years	19,050	2,020	9.4
Males, 75 to 79 years	25,321	3,344	7.6
Males, 80 to 84 years	31,643	5,817	5.4
Males, 85 to 89 years	37,567	9,936	3.8
Males, 90 years and over	44,815	18,317	2.4

Source: Office for National Statistics

Notes

1. Age-specific mortality rates (ASRs) have been calculated using counts rounded to the nearest 5.
2. The term "care home residents" in this release refers to those who were recorded as living and receiving care in a care home on Census Day (21 March 2021).
3. The term "non-care home residents" refers to the rest of the population recorded as living in England and Wales on Census Day (21 March 2021) excluding our definition of care home residents.
4. Confidence intervals are available in the accompanying dataset.
5. Mortality rate ratio is calculated by dividing the first ASR by the second ASR.

6 . Life expectancy in care homes data

Life expectancy in care homes, England and Wales
Dataset | Released on 16 March 2023
Life expectancy of care home residents and non-care home residents of the same age and sex grouping, based on Census 2021 and death registrations data.

7 . Glossary

Care home resident

A care home resident is defined here as someone who has been identified in the census as living in one of the following categories of establishment:

- Local authority care home with nursing
- Local authority care home without nursing
- Other care home with nursing
- Other care home without nursing

While not belonging to any of the following categories:

- Staff or owner
- Family member
- Staying temporarily (no fixed UK address)
- Failed multi-tick or missing

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 male and female populations 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 area's age-specific mortality rates for that time period throughout his or her life. Further details can be found in our Period and cohort life expectancy explained methodology.

Confidence intervals

Confidence intervals are a measure of the uncertainty around a specific estimate. We expect the interval to 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 Uncertainty and how we measure it for our surveys methodology.

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 Uncertainty and how we measure it for our surveys methodology.

Age-specific mortality rates

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

8 . Data sources and quality

For full information regarding methods, please see the Data sources and quality section of our previous Life expectancy in care homes, England and Wales: 2011 to 2012 article. Please also refer to our Health state life expectancies, UK Quality and Methodology Information for methods for estimating life expectancy, and our Deaths of care home residents, England and Wales Quality and Methodology Information for mortality methodology. For further information on this topic, please see our Life expectancy releases and their different uses article.

To calculate life expectancy estimates, the 2021 Census was linked to the Personal Demographics Service (PDS) using personal identifiers (such as name, date of birth and postcode) to create a census to NHS number lookup. This lookup was then used to link census data to mortality data using NHS number. We carried out a clerical review to manually check a sample of records to estimate the false positives (incorrect links) and false negatives (missed links) in the linked census and PDS data. We estimated 0.06% of the linked data were false positives (incorrect links) and 0.01% were false negatives (missed links).

Care home occupancy is subject to fluctuation throughout the year as care home resident status becomes less accurate as time moves further from Census Day. Therefore, we have used one year of mortality data to balance accuracy with sufficient data to calculate life expectancy.

For this release, we identified care home residents and non-care home residents in our linked census and mortality dataset to work out the proportion of those who had died, or survived, between 21 March 2021 and 20 March 2022 (inclusive).

The number of care home residents reported in this article differs to the number of care home residents in 2021 reported elsewhere, because:

- We only analyse those who are aged 65 years and over, as this represents most of the care home resident population (82.1%).

- We only include people who are listed as 'resident' in the care home and exclude individuals such as staff or owners, because our population of interest is people receiving care.

- A proportion of responses to the census are imputed, because of non-response, and therefore cannot be linked to mortality data. Census response rates ranged from 97% to 99% for the general population aged 65 and over (Measures showing the quality of Census 2021 estimates methodology), and 87% for care home residents of all ages (Communal establishment (CE) estimation and adjustment: Census 2021 methodology).

- We have been unable to link a proportion of respondents to a valid NHS number and therefore cannot link those respondents to our mortality data.

- We remove those who have died before Census Day.

Additionally, we apply statistical disclosure control (SDC) to protect the confidentiality of census respondents. Differences in SDC methods may result in minor differences in data totals between census products. As we round all figures individually, table totals may not sum exactly. Life expectancy estimates, age-specific mortality rates, and all percentages were calculated based on numbers rounded to the nearest five.

In the accompanying dataset, Table 10 shows the starting populations of care home residents and non-care home residents aged 65 years and over, and how many were removed because of imputation, failure to link or dying before Census Day. In total, 14.1% of care home residents and 3.9% of non-care home residents are not included in the analysis. Table 11 in the accompanying dataset shows the age and sex distributions of care home residents and non-care home residents for the starting population and final sample. Our life expectancy estimates are always presented broken down by age and sex, which accounts for any bias resulting from losing cases disproportionately across these characteristics.

9 . Future developments

Experimental Statistics

These statistics are designated as Experimental Statistics. Experimental Statistics are official statistics that are in the testing phase, are not yet fully developed, and have not been submitted for assessment to the UK Statistics Authority. We publish Experimental Statistics to involve customers and stakeholders in their development, and as a means of building in quality at an early stage. Future developments could explore the use of alternative data sources to identify the care home resident population so that estimates can be updated between censuses.

Feedback

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

10 . Related links

Deaths of care home residents, England and Wales: 2021
Bulletin | Released 22 November 2022
Registered deaths of care home residents by underlying cause of death and the leading causes of death. Contains death registrations of care home residents by age, sex and area of usual residence. Classified as Experimental Statistics.

Death of care home residents England and Wales QMI
Methodology | Revised 28 October 2022
Quality and methodology information (QMI) for deaths of care home residents registered in England and Wales.

Health state life expectancies, UK QMI
Methodology | Revised 12 December 2018
Quality and Methodology Information for health state life expectancies in the UK, detailing the strengths and limitations of the data, methods used, and data uses and users.

Method changes to life and health state expectancies
Methodology | Released 29 November 2016
Report outlining the changes to life expectancy, healthy life expectancy and disability-free life expectancy.

National life tables-life expectancy in the UK: 2018 to 2020
Bulletin | Released 23 September 2021
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.

UK adult social care statistics
Website | Updated monthly
This tool compiles official statistics relating to adult social care across the four nations (England, Northern Ireland, Scotland and Wales) into one location. The landscape is updated each month with new publications from the previous month.

11 . Cite this article

Office for National Statistics (ONS), released 16 March 2023, ONS website, article, Life expectancy in care homes, England and Wales: 2021 to 2022