

Article

# Living longer: is age 70 the new age 65?

Measuring ageing in terms of remaining life expectancy, instead of years lived, may provide a better indicator of the health of our ageing population.

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Release date:  
19 November 2019

Next release:  
To be announced

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# 1 . When does older age begin?

In the UK, 65 years of age has traditionally been taken as the marker for the start of older age, most likely because it was the official retirement age for men and the age at which they could draw their State Pension.

In terms of working patterns, age 65 years as the start of older age is out of date. There is no longer an official retirement age, State Pension age is rising, and [increasing numbers of people work past the age of 65 years](#).

People are also living longer, healthier lives. [In 2018, a man aged 65 could expect to live for another 18.6 years, while a woman could expect to live for 21 more years](#). So, on average, at age 65 years, women still have a quarter of their lives left to live and men just over one fifth.

An important further consideration is that age 65 years is not directly comparable over time; someone aged 65 years today has different characteristics, particularly in terms of their health and life expectancy, than someone the same age a century ago.

In a number of respects, it could be argued that the start of older age has shifted, but how might this be determined? Should we just move the threshold on a few years – is age 70 really the new age 65? Or, might there be a better way of determining the start of older age?

# 2 . What is population ageing?

At a population level, ageing is measured by an increase in the number and proportion of those aged 65 years and over, and an increase in median age (the age at which half the population is younger and half older).

On both of these measures, the population has aged and is projected to continue to age (Figure 1). In 2018, there were 11.9 million residents in Great Britain aged 65 years and over, representing 18% of the total population. This compares with the middle of the 20th century (1950) when there were 5.3 million people of this age, accounting for 10.8% of the population.

Looking ahead to the middle of this century, there are projected to be 17.7 million people aged 65 years and over (24.8% of the population). The oldest old are the fastest-growing age group, with the numbers of those aged 85 years and over projected to double from 1.6 million in 2018 to 3.6 million by 2050 (5% of the population).

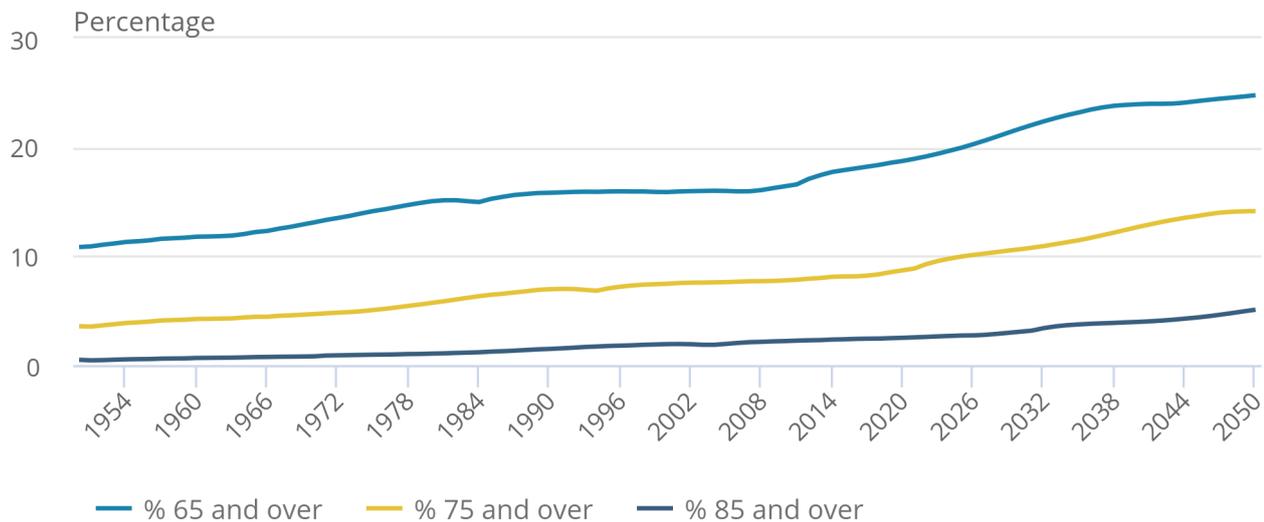
The balance of older and younger people in the population has also tipped more towards older people, reflected in a rising median age up from 34 years in 1950 to 40 years in 2018. By the middle of this century it is projected that median age will reach 43 years.

**Figure 1: The percentage of older people in Great Britain has been increasing since the middle of the 20th century**

Percentage of people aged 65 years and over, 75 years and over, and 85 years and over, 1950 to 2050, Great Britain

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Percentage of people aged 65 years and over, 75 years and over, and 85 years and over, 1950 to 2050, Great Britain



Source: Office for National Statistics

### 3 . Why does population ageing matter?

Measuring population ageing is important because it has multiple economic, public service and societal impacts. It brings challenges but also opportunities.

From an economic and societal point of view, longer lives mean people can continue to contribute for longer – through longer working lives, volunteering, and possibly providing care for family members, for example, grandchildren. For individuals it might mean the opportunity to spend more time with family and friends and to pursue personal interests with more time for leisure activities.

When considering the challenges, more older people means increased demand for health and adult social services, and increased public spending on State Pensions. The key to shifting the balance from challenge towards opportunity, both at a societal level and at an individual level, is for older people to be able to live healthy lives for as long as possible. The importance of health at older ages has been prioritised by the government in their [Grand Challenge on Ageing](#).

## 4 . Is there a better measure of population ageing?

[Sergei Scherbov and Warren Sanderson](#) have suggested that instead of taking a fixed chronological age as the start of older age, a better alternative would be to set the threshold at a fixed remaining life expectancy (RLE) of 15 years.

The age at which a person has an RLE of 15 years changes over time in line with changes in life expectancy and will also be different for men and women because of differences in their life expectancies.

Table 1: Age at which there is 15 years of remaining life expectancy

	1911	2017	2066
Men	57	70	75
Women	60	72	77

Source: Office for National Statistics

In 2017, in Great Britain a man with RLE of 15 years was aged 70 and a woman was aged 72. In terms of RLE this is equivalent to a man aged 57 and a woman aged 60 in 1911. It is projected that by 2066, the equivalent ages will be 75 years for a man and 77 years for a woman (Table 1).

Unlike chronological age, age at RLE15 is a measure that changes over time in line with improvements in life expectancies. Instead of looking back over years lived (chronological age), this measure looks forward and marks the start of older age in terms of an average number of years left to live, that is, a prospective measure of ageing.

## 5 . Traditional versus prospective population ageing

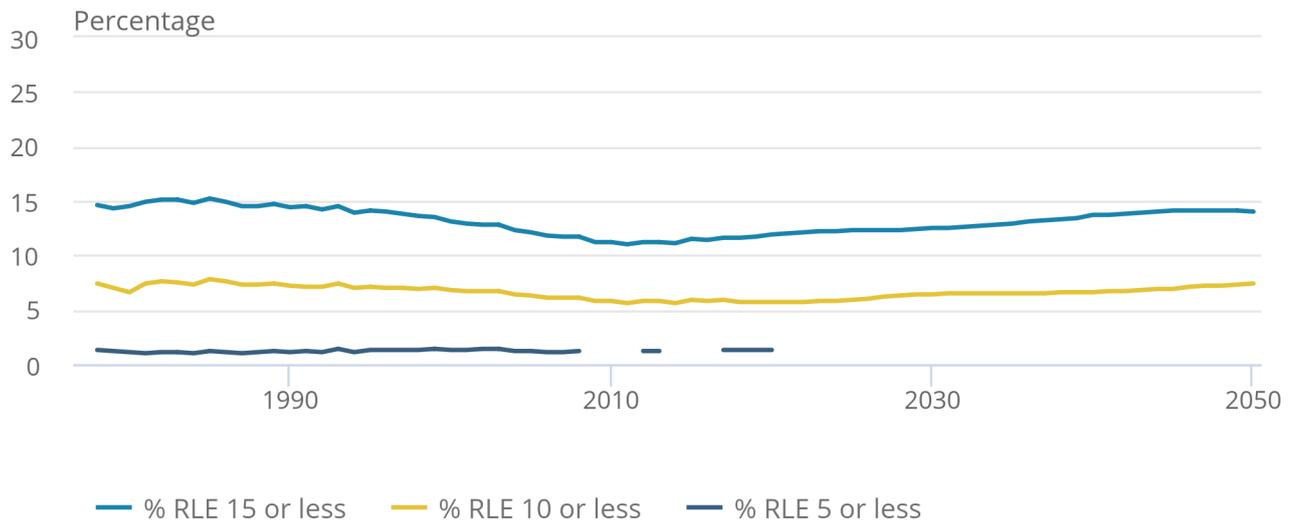
Percentages of those aged 65 years and over, and 85 years and over have increased since the mid 20th century. In comparison, percentages of those with a remaining life expectancy (RLE) of 15 years or less remained relatively constant until the mid 1990s, then decreased until around 2011, after which they started to rise in line with the slowdown in improvements in life expectancies in recent years. They are projected to continue to rise back to the levels seen in the 1950s by the mid 2040s. Percentages of those with RLE5 years or less have remained relatively constant since the 1950s. The population is therefore ageing more slowly when prospective rather than traditional measures of ageing are used (Figure 2).

## Figure 2: According to prospective measures of ageing, the population is ageing far more slowly

Percentage of population by selected prospective age groups, Great Britain, 1951 to 2050

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Percentage of population by selected prospective age groups, Great Britain, 1951 to 2050



Source: Office for National Statistics

#### Notes:

1. RLE stands for remaining life expectancy (in years).
2. Data for years prior to 1981 are every 10 years (excluding 1941) and for England and Wales only.
3. RLE can only be calculated for ages up to 89 years given data limitations at older ages.
4. Age at RLE5 exceeds age 89 years in later years.

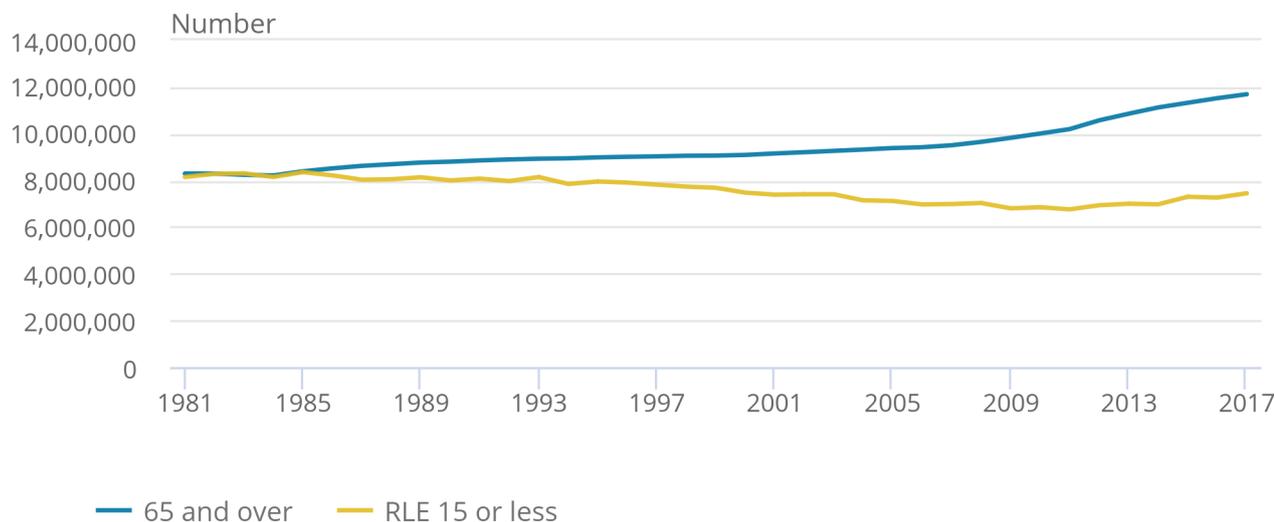
In 1981, the number and proportion of people aged 65 years and over in the Great Britain population exactly matched those with RLE15 years or less. While the numbers of those aged 65 years and over has increased from around 8.3 million in 1981 to 11.7 million in 2017, the numbers with RLE 15 decreased to 7.4 million (Figure 3).

### Figure 3: Numbers of those aged 65 years and over have increased but numbers with RLE15 have declined

Number of people aged 65 years and over, and with RLE15, 1981 to 2017, Great Britain

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Number of people aged 65 years and over, and with RLE15, 1981 to 2017, Great Britain



Source: Office for National Statistics

Notes:

1. RLE stands for remaining life expectancy (in years).

Why do we see these different patterns between population ageing measured by traditional measure and prospective measures? This is because the age at which RLE is 15 has increased over time in line with improvements in life expectancy. By 2050, those with RLE 15 will be in their mid 70s, and there are projected to be fewer 75 year olds in the population in 2050 than there are 65 year olds.

## 6 . Is age 70 the new age 65?

Men aged 70 years in 2017 had a remaining life expectancy (RLE) of 15 years and women aged 70 years an RLE of 17 years. In terms of prospective ages (RLE) a man aged 70 years today is equivalent to a man aged 65 years in 1997 and a woman aged 70 years is equivalent to a woman aged 65 years in 1981 (Table 2). But is 70 really the new 65? Did a man aged 65 years in 1997 have the same characteristics as a man aged 70 years today? And does a woman aged 70 years today have the same characteristics as a woman aged 65 years in 1981?

Table 2: Age at which remaining life expectancy is 15 for men, and 17 for women, selected years, Great Britain

	<b>Men (age at RLE 15)</b>	<b>Women (age at RLE 17)</b>
1911	57.8	57.4
1951	59.0	60.6
1981	62.0	65.0
1997	65.0	66.8
2017	70.0	70.0
2037	72.9	72.3
2057	75.0	74.1

Source: Office for National Statistics

#### Notes

1. Data for years prior to 1981 are for England and Wales only. [Back to table](#)

Arguably, the most important characteristics to consider, both from an individual and a population perspective, is level of health. This is because health has such a great impact on the choices an individual can make (for example, to work longer and participate in the activities they enjoy) and at a societal level, it drives the demand for health and social care services and the potential for people to have longer working lives.

[Previous research has suggested that some aspects of health are more closely related to years of life remaining than years lived \(chronological age\)](#). Does this mean that measures based on prospective age are a fairer measure of population ageing, in terms of health, than those based on chronological age? If this is the case, we would expect to see health by chronological age improving over time with health by prospective ages (RLEs) showing less change.

Likewise, we would expect 70-year-old men today to have around the same level of health as 65-year-old men in 1997 and women aged 70 years today to have similar health to 65-year-old women in 1981.

#### **Note for: Is age 70 the new age 65?**

[Scherbov and Sanderson](#) have extended their previous work on prospective measures to take a characteristics approach to population ageing.

## **7 . How did we measure health?**

Health is a complex concept and there are limitations to data that are available to measure this at single older ages over time. We have looked at two measures, self-reported general health and limiting longstanding illness. An accompanying [Methodology guide](#) details limitations of this data and methods applied to address these in our analyses.

## 8 . Changes in health – Chronological age versus prospective age

We compared levels of health in 1981 with 2017 for all ages between 65 and 85 years. On average, 45% of people at these ages reported poor general health in 1981, compared with 39% in 2017. There were similar levels of people reporting limiting longstanding illness at the two time points.

For every single age the levels of poor general health and limiting longstanding illness declined between the two time points (Figure 4), reflecting improvements in health.

### Figure 4: Health improves over time at every chronological age

Percentage change in percentage reporting poor general health and limiting longstanding illness between 1981 and 2017, selected chronological ages, Great Britain.

[Data download](#)

We then compared levels of health at the same two time points for people with remaining life expectancies (RLEs) from 5 to 25 years. For these prospective ages the pattern differed, with only a small change between the two time points. On average, 38% of people at these ages reported poor general health in 1981 compared with 36% in 2017, with slightly lower levels for limiting longstanding illness. For individual ages, on both health measures the proportions increased for some prospective ages and declined at others (Figure 5).

### Figure 5: Health improves over time at some prospective ages, and worsens at others

Percentage change in percentage reporting poor general health and limiting longstanding illness between 1981 and 2017, selected prospective ages, Great Britain.

#### Notes:

1. RLE stands for remaining life expectancy (years).

[Data download](#)

It is notable that the both the average changes between the two time points for both health measures, and the changes at individual ages, whether increases or declines, are usually smaller (closer to zero) for prospective ages than for chronological ages. That is, there have been improvements in health at each chronological age between 65 and 85 years, while there was greater stability in health measures for different prospective ages.

These findings go some way towards supporting the case that prospective measures of ageing (based on remaining life expectancies) are a more realistic measure of population ageing in terms of health than those based on chronological age.

To test whether the pattern of health changes seen for chronological and prospective ages applied only to the particular time points we selected to compare (1981 to 2017), or applied more generally, we compared other pairs of time points available in our dataset. In total, health status for 21 chronological ages (65 to 85 years) and 21 prospective ages (RLE 25 to RLE 5) were compared, for seven pairs of time points 30 years apart (from 1981 to 2011 and 1987 and 2017) making a maximum of 147 comparisons.

Table 3: Direction of change for multiple comparisons of health between two time points for prospective and chronological ages

		<b>Total comparisons</b>	<b>Health improved</b>	<b>Health worsened</b>	<b>% improved</b>	<b>Mean absolute % difference</b>
General health	Chronological	147	141	6	95.9	12.9
General health	Prospective	144	81	63	56.3	7.3
Limiting longstanding illness	Chronological	147	147	0	100.0	16.8
Limiting longstanding illness	Prospective	142	107	35	75.4	7.9

Source: General Household Survey, Opinions and Lifestyle Survey, Office for National Statistics

For chronological ages, limiting longstanding illness improved between every pair of time points and general health improved in almost all cases. For prospective ages, general health improved in just over half of cases and worsened in just under half, while limiting longstanding illness improved in just under three-quarters of cases. The average changes in both health measures were smaller for prospective ages than for chronological ages (Table 3).

This strengthens the earlier finding that health by chronological age has improved over time while changes in health by prospective age decline in some cases and improve in others, but overall there is less change and greater stability.

## 9 . Is age 70 the new age 65 in terms of health?

Returning to the question we posed earlier, is 70 the new 65? In terms of remaining life expectancies, a man aged 70 years in 2017 has the same prospective age as a man aged 65 years in 1997 and a woman aged 70 years in 2017 has the same prospective age as a woman aged 65 years in 1981. But how does their health status compare?

Levels of poor general health for women aged 70 years in 2017 were around the same as for those aged 60 years in 1981, while levels of limiting longstanding illness were similar for women aged around 64 years (Figure 6).

### Figure 6: Women aged 70 years in 2017 have similar levels of limiting longstanding illness as women aged 64 years in 1981

#### Notes:

1. Trendlines have been added to assist the identification of patterns over time in the data.

[Data download](#)

For men, levels of poor general health at age 70 years in 2017 were around the same as for those aged 65 years in 1997, while levels of limiting longstanding illness were similar for around age 57 years (Figure 7).

### Figure 7: Men aged 70 years in 2017 have similar levels of limiting longstanding illness as men aged 57 years in 1997

## Notes:

1. Trendlines have been added to assist the identification of patterns over time in the data.

### [Data download](#)

Given changes in remaining life expectancy over time, age 70 can be thought of as the new age 65; initially, age 70 also appears to be the new 65 (or even younger) in terms of health. But it needs to be stressed that these findings are based on overall data trends based on small numbers. It is apparent from the charts that there are large fluctuations in reported health status at different ages.

Additionally, this analysis compared the health status of men and women of just one particular age – 70 years old, with the health status of men and women with equivalent prospective ages in the past. A different pattern of results may have been seen if the same analysis had been done for other ages.

## 10 . Implications and limitations

The health measures we have used are self-reported rather than direct measures and may not have been interpreted the same way by people over time or at different ages. Poor general health and limiting longstanding illness give some indication of potential health and social care needs, but demand is also driven by many other factors including advances in medicine and technology. Likewise, self-reported health levels are likely to be influenced by the provision of health and social care services, which may have impacted on the health improvements observed over time.

Regardless of whether population ageing is measured by chronological age or prospective age, in absolute numbers there will be more older people, who are likely to have health and social care needs, in the future. And although health at any given chronological age seems to have improved over time, we do not know whether this will continue and, if so, at what rate.

Because of data limitations, our findings cannot be said to be conclusive; larger sample sizes and more consistent data over time would be needed to fully assess the questions we have posed. Despite this, our findings indicate that health status by chronological age has improved over time while health status at prospective ages shows more stability.

This means that measuring population ageing in terms of the proportion of people in the population of a set chronological age may not be the most appropriate measure to use when considering the health of our ageing population. Prospective measures, based on years of life remaining, may provide a more consistent indication and as such may be a more appropriate measure to use when planning for current and future health and social care needs and demand.

At the Centre for Ageing and Demography we are committed to both improving measures of ageing and the evidence related to the implications of an ageing population. With this article, we have identified a data need for reliable and disaggregated health data time series and projections.