

# NISRA STATISTICAL BULLETIN

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Statistics and Research Agency

Gníomhaireacht Thuaisceart Éireann  
um Staitisticí agus Taighde

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**Geographical Area:** Northern Ireland

**Theme:** Population

**Time period:** mid-2017

## Estimates of the population aged 85 and over Northern Ireland, 2017 (and revised 2001 to 2016)

### Key Points:

- The number of people aged 85 and over was estimated to be 37,200 in mid-2017, representing 2.0 per cent of the population and an increase of 700 people from mid-2016.
- Since 2007 the estimated number of people aged 85 and over in Northern Ireland has increased by 9,200, representing an average growth of 900 people per annum over the decade.
- The rate of growth among those aged 85 and over was significantly greater than of those under 85 years of age (32.9 per cent and 5.8 per cent from mid-2007 respectively). While women accounted for two thirds (66.2 per cent) of those aged 85 and over in mid-2017, the population increase among males over the decade from mid-2007 has been noticeably higher than that among females (52.6 per cent and 24.8 per cent respectively).
- The estimates also suggest that there were 274 centenarians (i.e. those aged 100 and over) in mid-2017, the vast majority of whom (87.6 per cent) were female.
- At a UK level Northern Ireland continues to have the lowest proportion of people aged 85 and over (2.0 per cent). However, over the decade ending mid-2017 the percentage growth here among this age group (32.9 per cent) was noticeably higher than in each of England (24.9 per cent), Scotland (26.0 per cent) and Wales (18.5 per cent).
- Growth in the population aged 85 and over is the result of more people 'ageing into' the 85 and over age group than are leaving it each year as a result of dying. At these ages, the impact of migration is negligible.

More detailed figures and analysis are included in the bulletin.

## Contents

1. Introduction .....	3
2. Background to publication.....	3
3. Population in Northern Ireland .....	4
4. Population aged 85 and over .....	6
5. Population aged 90-99.....	9
6. Number of centenarians (aged 100 and over) .....	13
7. Comparison of Population aged 85 and over across the UK and Ireland.....	15
8. Methodology .....	17
9. Quality Assurance.....	18
10. Data Quality .....	24
11. Limitations .....	26
Background Notes .....	27
Annex A: Estimates of those aged 85 years and over by sex and 5 year age bands (mid-2007 to mid-2017).....	28

**Note:** To ease readability throughout the bulletin, population figures have been presented to the nearest 100, with the exception of the population aged 100 and over as these are relatively smaller numbers where rounding would cause a loss of accuracy and knowledge for the reader. All figures in Annex A have been provided unrounded in order to provide consistency within the table, as it contains population age bands, including those aged 100 and over. In all cases, percentage changes have been presented to one decimal place. However, all calculations have been undertaken on the basis of unrounded numbers which will, in some instances, give rise to apparent discrepancies.

## 1. Introduction

This bulletin details the mid-year population estimates for those aged 85 and over in Northern Ireland for mid-2017, as published on 25 September 2018. These figures follow on from the [2017 mid-year population estimates](#) published on 28 June 2018, where population estimates at single years of age were provided up to 89 years, and for the age-group of those aged 90 and over.

The estimates of the population aged 85 and over provide a further age breakdown of those aged 90 and over, by single year of age up to 104 years, and collectively for those aged 105 and over. This bulletin presents information on how the overall number and gender composition of those aged 85 and over has changed during the decade mid-2007 to mid-2017, and presents analyses and commentary for those aged 90 to 99, and centenarians (i.e. those aged 100 and over).

Similar information relating to England & Wales and Scotland was also released on 25 September 2018 by the Office for National Statistics (ONS) and National Records of Scotland (NRS) respectively. While the titles for the releases for the separate UK countries differ slightly, the methodology used by all three statistical organisations to create these statistics are very similar, producing comparable results.

The information in this bulletin contributes to the production of population projections and life expectancy statistics for Northern Ireland, all of which are of policy interest because of the implications for pensions and the delivery of front line services for the older population such as housing, transport and health care. The single year estimates for those aged 90 and over for Northern Ireland also feed into the [Estimates of the Very Old for the United Kingdom](#), produced by the Demographic Analysis Unit within the ONS.

## 2. Background to publication

NISRA produces mid-year population estimates on an annual basis using the components of change method. Using the most recent census as the baseline, each year the population is aged on by one year, births are added, deaths subtracted and estimates of migration are used for those moving in or out of Northern Ireland. Historically, these included estimates on a single year of age basis up to and including age 84. For those aged 85 and over aggregate statistics were produced, as single year of age estimates were considered to be less reliable for this age group due to the small number of people involved.

NISRA then responded positively to an increased demand for more detailed population estimates for those aged 85 and over and in 2010 produced single year of age mid-2009 estimates for those aged 85-104 using an internationally recognised methodology called the Kannisto-Thatcher

Survivor Ratio Method (see [Section 8](#)). Similar arrangements were introduced by the other statistical offices across the UK.

Following the release of 2011 Census figures, mid-year population estimates for the years 2001 to 2011 were revised. One outcome of this revision was to extend the age range of population estimates to provide single year of age estimates up to age 89 with aggregate statistics for ages 90 and over. The Kannisto-Thatcher Survivor Ratio Method was then subsequently used to distribute the population estimates for the highest age group (90 and over) into single year of age up to and including 104, and a group aged 105 and over.

After the revision of the mid-year estimates and the increase of single year of ages from 0-84 to 0-89 within this publication, a decision was made to keep the title of “Estimates of the population aged **85 and over**”, rather than changing it to the “...population aged **90 and over**”. As the bulletin still contains information on the age group 85 to 89, and 85 and over, this decision was taken so that it would be clear to users that the publication being released continues to provide the same information as in previous years, and that both the methodology and figures within it are consistent and comparable with previous publications.

It should be noted that the Kannisto-Thatcher Survivor Ratio Method gives rise to minor revisions to the age distribution within the aged 90 and over category as new information on actual deaths becomes available. Accordingly, slightly revised estimates for the 90 and over category are provided for the period mid-2001 to mid-2016. More information on these revisions and their impact on the estimates are provided in the [Quality Assurance section](#) of this bulletin.

### **3. Population in Northern Ireland<sup>1</sup>**

The size of the resident population in Northern Ireland at 30 June 2017 is estimated to be 1.871 million people. Slightly more than half (50.8 per cent) of the population were female, with 950,600 females compared to 920,200 males.

Over the period mid-2016 to mid-2017 the number of people living in Northern Ireland is estimated to have increased by 8,700 people (0.5 per cent). This population increase was primarily a result of the following estimated factors:

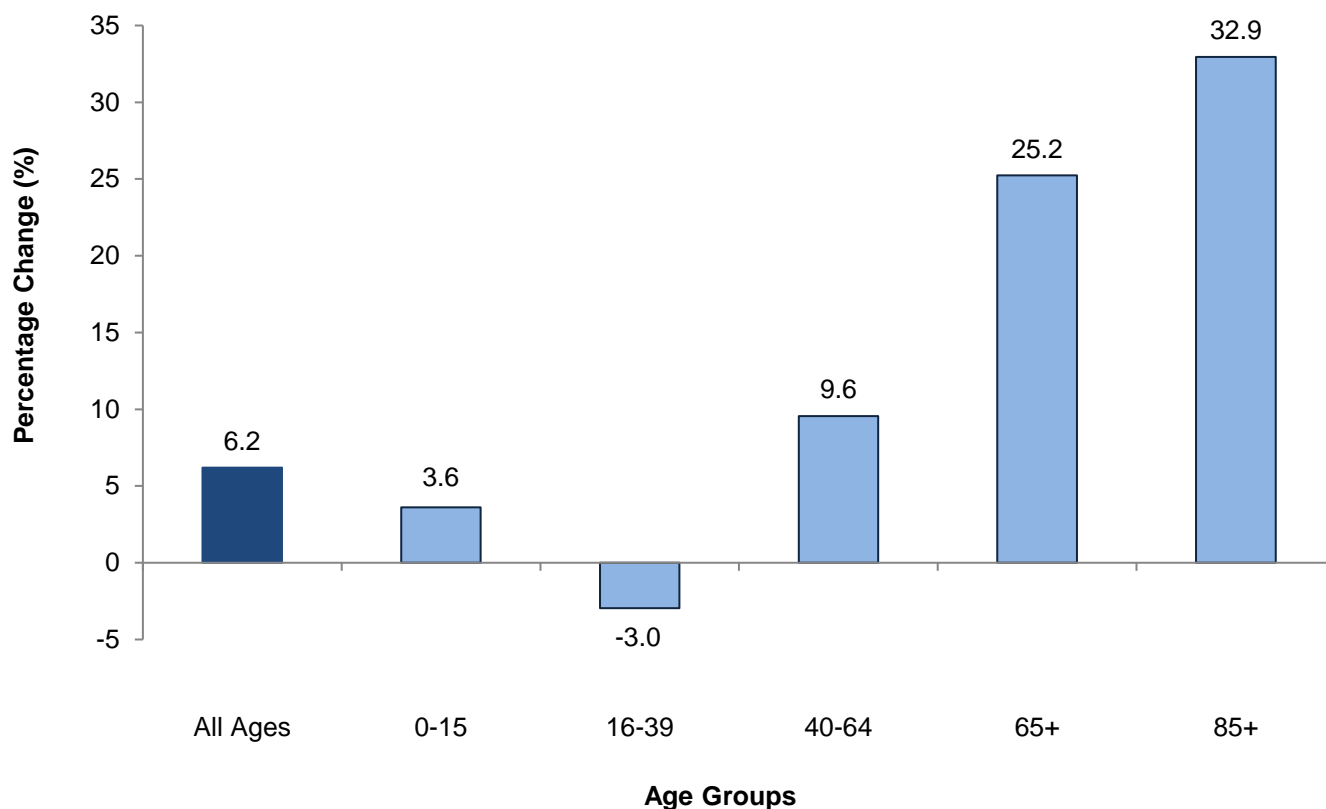
- a. natural growth of 7,700 people (23,600 births minus 15,900 deaths); and
- b. an estimated net growth of 1,200 people due to migration, with 22,100 people coming to live in Northern Ireland and 20,900 people leaving; and
- c. a slight reduction of 200 people due to changes in armed forces stationed here.

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<sup>1</sup> [Mid-2017 Population Estimates](#) were published on 28 June 2018.

The population of Northern Ireland is becoming increasingly older. Improving survival, coupled with a general downward trend in the number of births, has resulted in an ageing population. This progressive ageing is evident in the relative percentage changes among those in different broad age groups over the decade mid-2007 to mid-2017. Figure 1 shows that the population increase of those aged 65 and over (25.2 per cent) and 85 and over (32.9 per cent) is higher than any other age group between mid-2007 and mid-2017. Interestingly, the population aged 16 to 39 (i.e. the younger working age population) has decreased by 3.0 per cent during this period.

**Figure 1: Population change by age group (mid-2007 to mid-2017)**



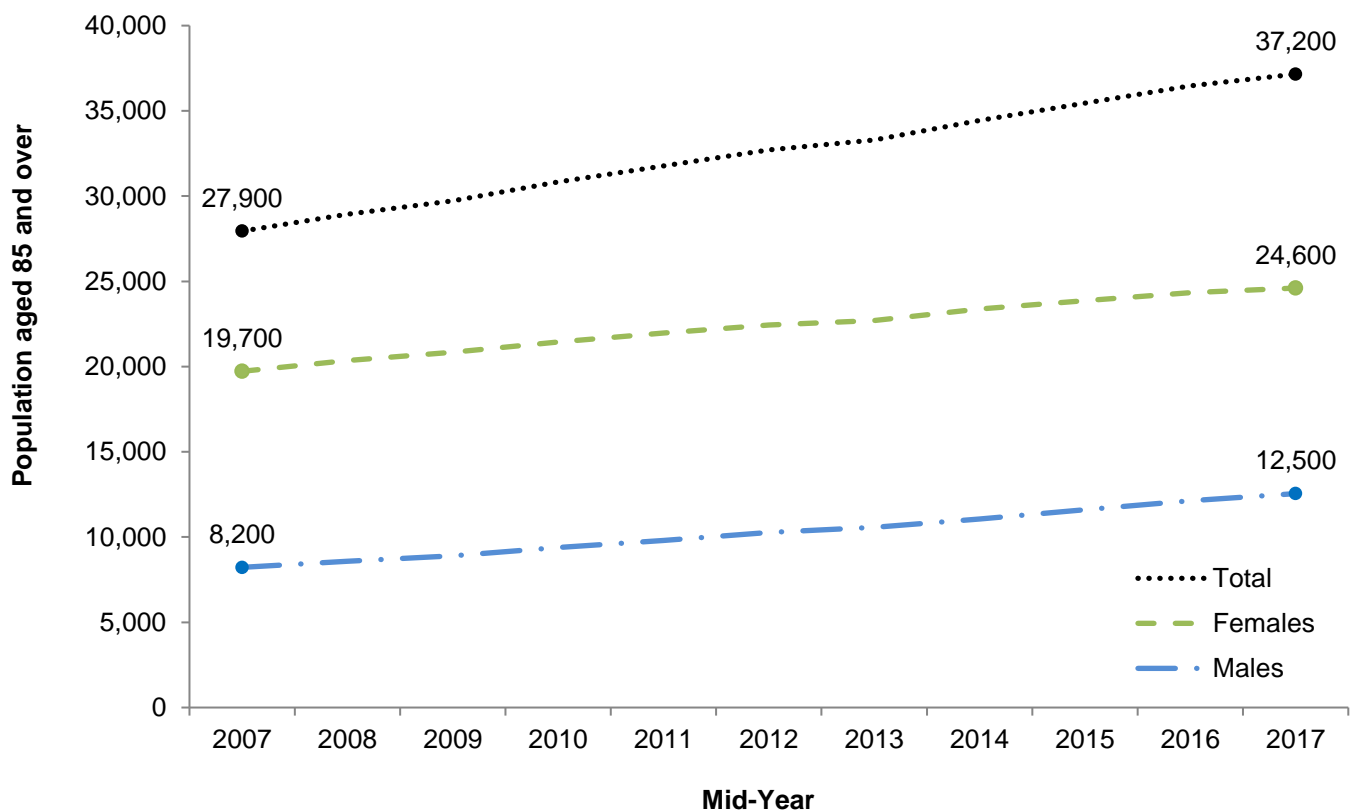
[Download Chart](#) (XLSX Format – 87 KB)

Between mid-2016 and mid-2017, the population aged under 65 increased at a moderate rate (0.2 per cent) reaching 1,567,900. In contrast, the population aged 65 and over increased by 1.8 per cent over the same period, and has been growing by an average of 2.3 per cent per annum for the last ten years, increasing from 241,900 in mid-2007 to reach 303,000 in mid-2017.

## 4. Population aged 85 and over

It is estimated that there were 37,200 people aged 85 and over living in Northern Ireland at 30 June 2017, an increase of 700 people (1.9 per cent) since mid-2016. In the decade since mid-2007, the number of people aged 85 and over has increased by 32.9 per cent, significantly greater than the population aged under 85 (5.8 per cent).

Figure 2: Population aged 85 and over by sex (mid-2007 to mid-2017)



[Download Chart](#) (XLSX Format – 88 KB)

The overall increase of 32.9 per cent (9,200 people) in the population aged 85 and over during the 10 year period mid-2007 to mid-2017 is the result of more people ‘ageing into’ the age group of 85 and over than are leaving it each year as a result of dying. At these ages, the impact of migration is negligible.

For example, between mid-2016 and mid-2017, net migration of people aged 85 and over to and from Northern Ireland was roughly in balance, with only 11 more people leaving to live elsewhere than coming to live here. In the same period 6,700 people aged into this age group and 6,000 people left as a result of dying. This resulted in an overall increase of 700 people aged 85 and over from mid-2016 to mid-2017. This pattern of marginal migration effects is consistent with estimated population changes in previous years.

Between mid-2007 and mid-2017, an average of 5,200 people aged 85 and over died each year, whereas an average of 6,100 people ‘aged into’ the 85 and over category each year. This has resulted in the number of people aged 85 and over growing by approximately 900 people per annum.

Table 1, which presents the changing size and sex composition of the population aged 85 and over from mid-2007 to mid-2017, shows that the proportion of males in this age group has been gradually increasing.

For example, between mid-2007 and mid-2017, the percentage increase in the number of males aged 85 and over (52.6 per cent) has been noticeably higher than that among females (24.8 per cent). Over the past decade, the number of males aged 85 and over has increased on average by 4.3 per cent each year, while the numbers of females aged 85 and over has increased by an average of 2.2 per cent each year.

**Table 1: Estimates of the population aged 85 and over by sex (mid-2007 to mid-2017)<sup>2</sup>**

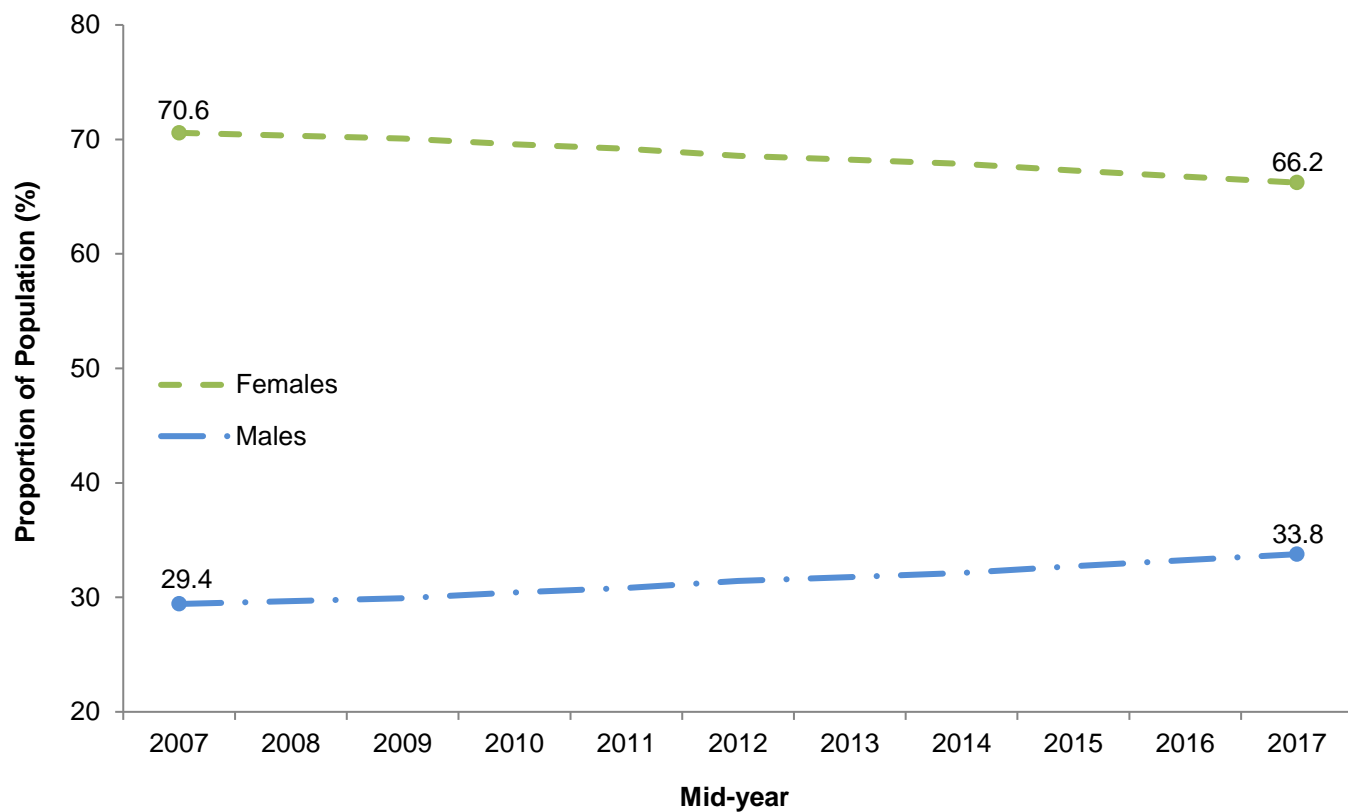
Mid-Year	All Persons			Males			Females		
	Number	Proportion of NI population	% Change since 2007	Number	Proportion of All persons	% Change since 2007	Number	Proportion of All persons	% Change since 2007
2007	27,900	1.6	-	8,200	29.4	-	19,700	70.6	-
2008	28,900	1.6	3.5	8,600	29.7	4.4	20,300	70.3	3.2
2009	29,700	1.7	6.4	8,900	29.9	8.2	20,800	70.1	5.7
2010	30,800	1.7	10.3	9,400	30.4	14.1	21,400	69.6	8.7
2011	31,800	1.8	13.7	9,800	30.8	19.1	22,000	69.2	11.4
2012	32,700	1.8	17.1	10,300	31.4	25.0	22,400	68.6	13.7
2013	33,300	1.8	19.1	10,600	31.8	28.6	22,700	68.2	15.1
2014	34,400	1.9	23.3	11,100	32.1	34.6	23,400	67.9	18.5
2015	35,500	1.9	26.9	11,600	32.7	41.1	23,900	67.3	21.0
2016	36,500	2.0	30.5	12,100	33.2	47.4	24,300	66.8	23.4
2017	37,200	2.0	32.9	12,500	33.8	52.6	24,600	66.2	24.8

[Download Table](#) (XLSX Format – 439 KB)

In mid-2017 males accounted for 33.8 per cent of those aged 85 and over and females for 66.2 per cent, whereas 10 years previously in mid-2007 the figures were 29.4 per cent and 70.6 per cent respectively. This compositional change, which is illustrated in Figure 3, is indicative of higher improvement in survival rates among males than females at older ages in recent years.

<sup>2</sup> A more detailed breakdown of the population aged 85 and over, by mid-year and sex, is presented in Annex A.

Figure 3: Proportion of population aged 85 and over by sex (mid-2007 to mid-2017) (non-zero axis)



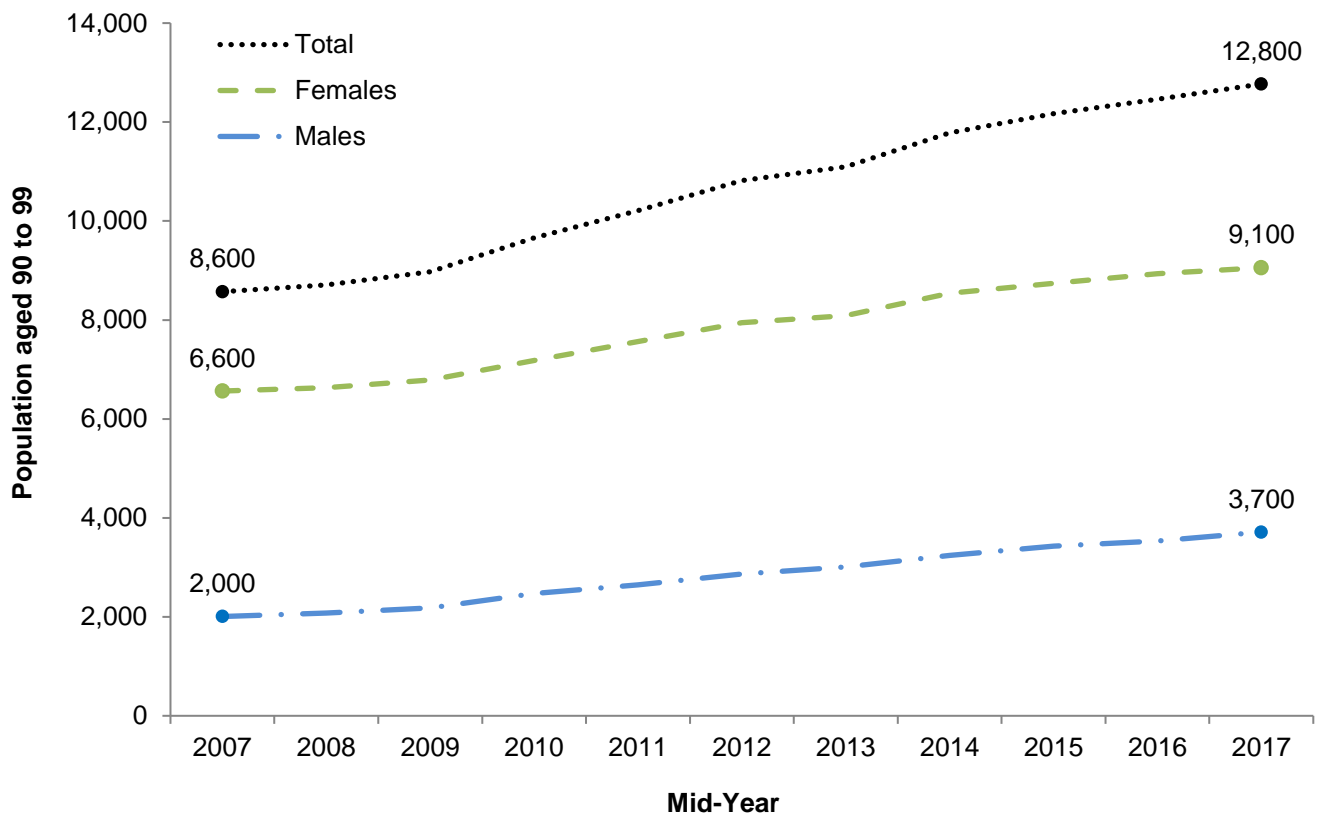
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## 5. Population aged 90-99

It is estimated that there were 12,800 people aged between 90 and 99 in Northern Ireland at 30 June 2017, this represents an increase of 300 people (2.4 per cent) since mid-2016. In the period mid-2007 to mid-2017, the population aged 90 to 99 increased by 49.0 per cent from 8,600 to 12,800 (see Figure 4).

Figure 4: Population aged 90 to 99 by sex (mid-2007 to mid-2017)



[Download Chart](#) (XLSX Format – 88 KB)

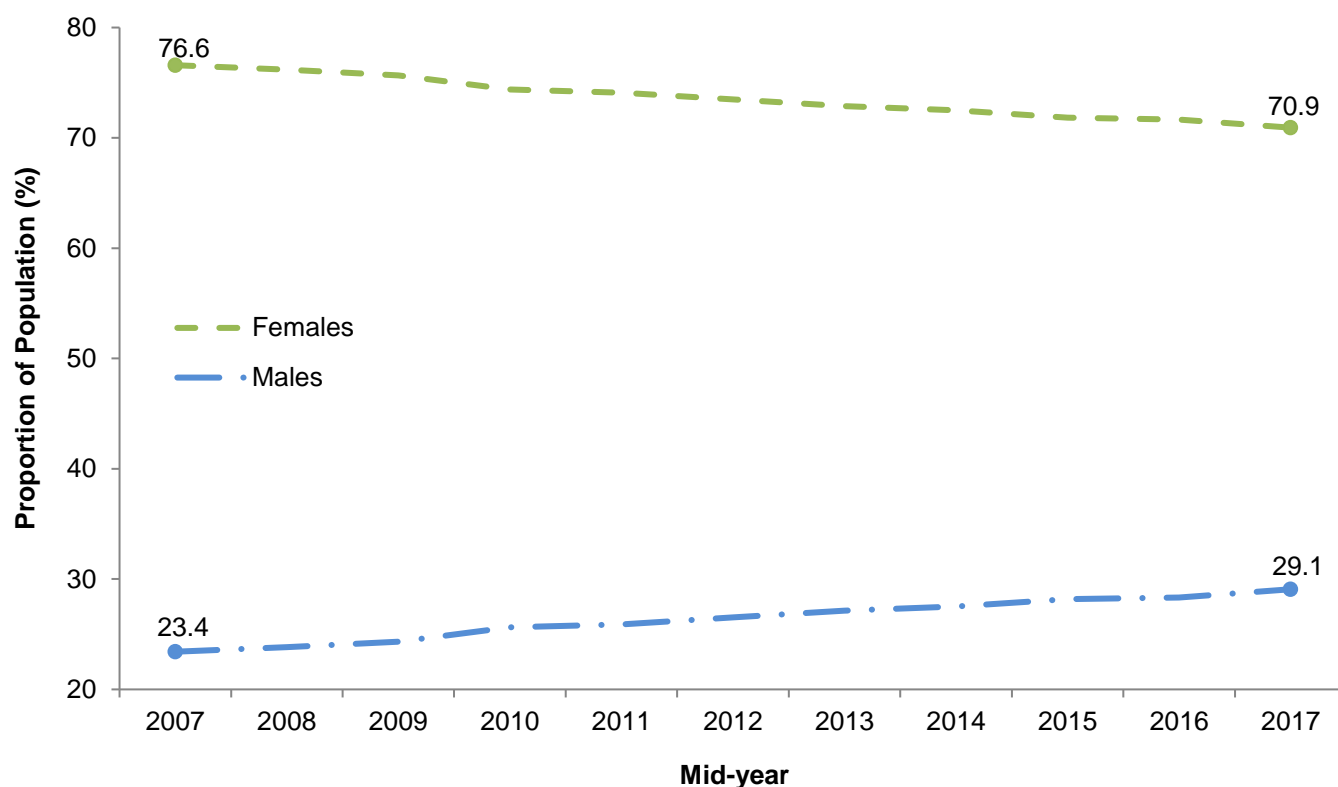
There has consistently been more females aged 90 to 99 than males since mid-2007. In mid-2017, 70.9 per cent of those aged 90 to 99 were females (9,100) and 29.1 per cent were males (3,700). Ten years previously in mid-2007, females accounted for 76.6 per cent of those aged 90 to 99 and males accounted for 23.4 per cent. However, looking at percentage growth, the increase in the number of males aged 90 to 99 (85.0 per cent) was noticeably higher than that of females (38.0 per cent) over the decade in question (see Table 2 and Figure 5).

**Table 2: Estimates of the population aged 90-99 by sex (mid-2007 to mid-2017)**

Mid-Year	All Persons			Males			Females		
	Number	Proportion of NI population	% Change since 2007	Number	Proportion of All persons	% Change since 2007	Number	Proportion of All persons	% Change since 2007
2007	8,600	0.5	-	2,000	23.4	-	6,600	76.6	-
2008	8,700	0.5	1.6	2,100	23.8	3.4	6,600	76.2	1.1
2009	9,000	0.5	4.7	2,200	24.3	8.8	6,800	75.7	3.4
2010	9,700	0.5	12.7	2,500	25.6	23.3	7,200	74.4	9.4
2011	10,200	0.6	19.1	2,600	25.9	31.7	7,600	74.1	15.2
2012	10,800	0.6	26.2	2,900	26.5	42.9	7,900	73.5	21.1
2013	11,100	0.6	29.4	3,000	27.1	50.0	8,100	72.9	23.2
2014	11,800	0.6	37.4	3,200	27.5	61.5	8,500	72.5	30.1
2015	12,200	0.7	42.0	3,400	28.2	70.9	8,700	71.8	33.2
2016	12,500	0.7	45.4	3,500	28.3	76.0	8,900	71.7	36.1
2017	12,800	0.7	49.0	3,700	29.1	85.0	9,100	70.9	38.0

[Download Table](#) (XLSX Format – 434 KB)

**Figure 5: Proportion of population aged 90-99 by sex (mid-2007 to mid-2017) (non-zero axis)**



[Download Chart](#) (XLSX Format - 87 KB)

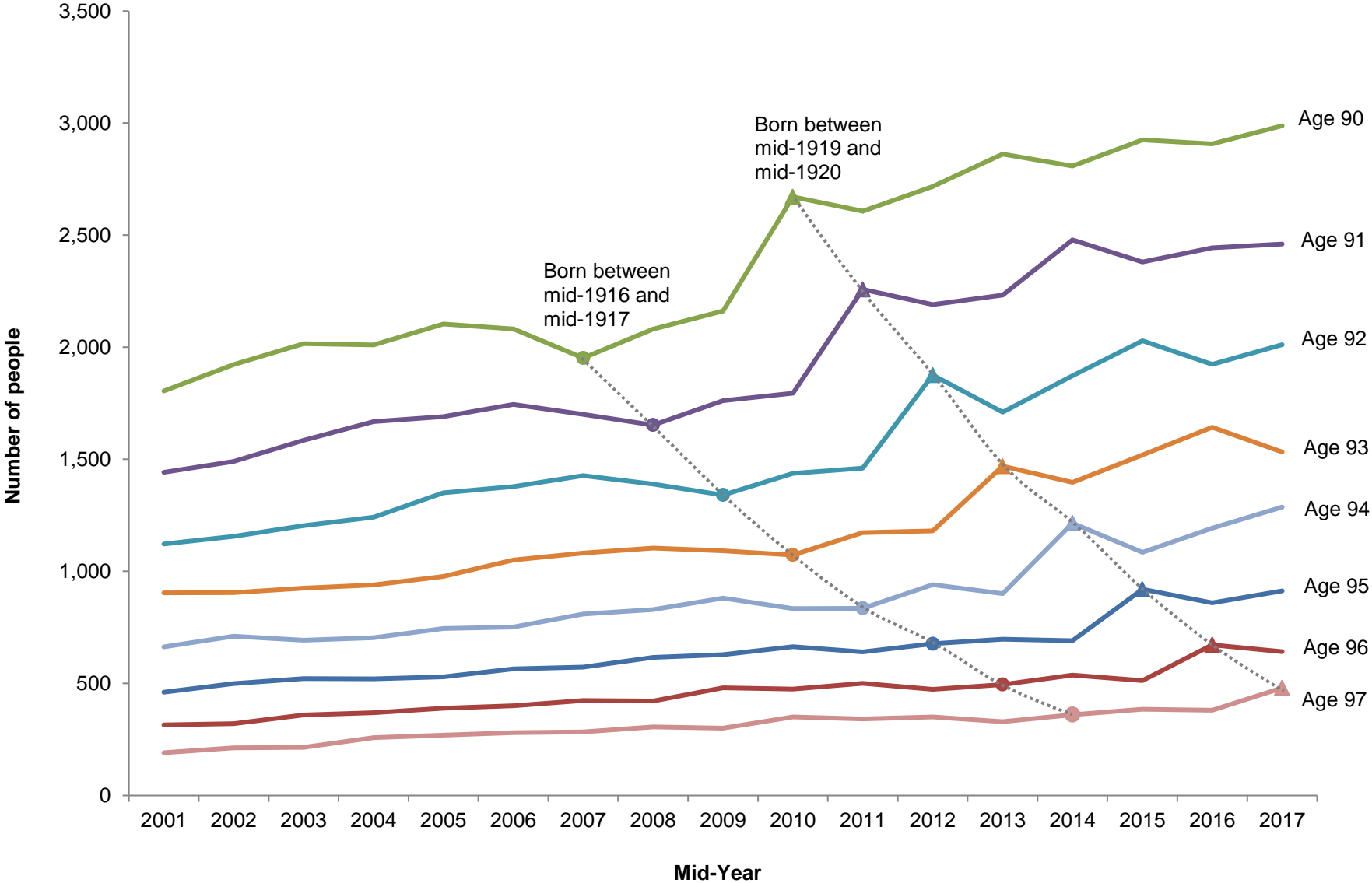
Previous reports demonstrated the impact which the First World War had on births occurring at that time, and how that has had knock-on effects on the number of persons aged 90 and over in recent years<sup>3</sup>. Figure 6 shows the population aged 90 to 97 from mid-2001 to mid-2017, and highlights those born in the years ending mid-1917 and mid-1920.

The peak in the number of births in 1920 is still visible in the population estimates for those aged 90 in mid-2010, those aged 91 in mid-2011, and so on right through to those aged 97 in mid-2017. The low number of births in 1917 can still be observed in the dips in population estimates for those aged 90 in mid-2007 through to those aged 92 in mid-2009, albeit to a lesser extent. Beyond this the impact of low births in 1917 on the population estimates becomes less evident.

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<sup>3</sup> Historical births data are available from the [Vital Statistics](#) section of the NISRA website.

Figure 6: Population aged 90-97, Northern Ireland (mid-2001 to mid-2017)



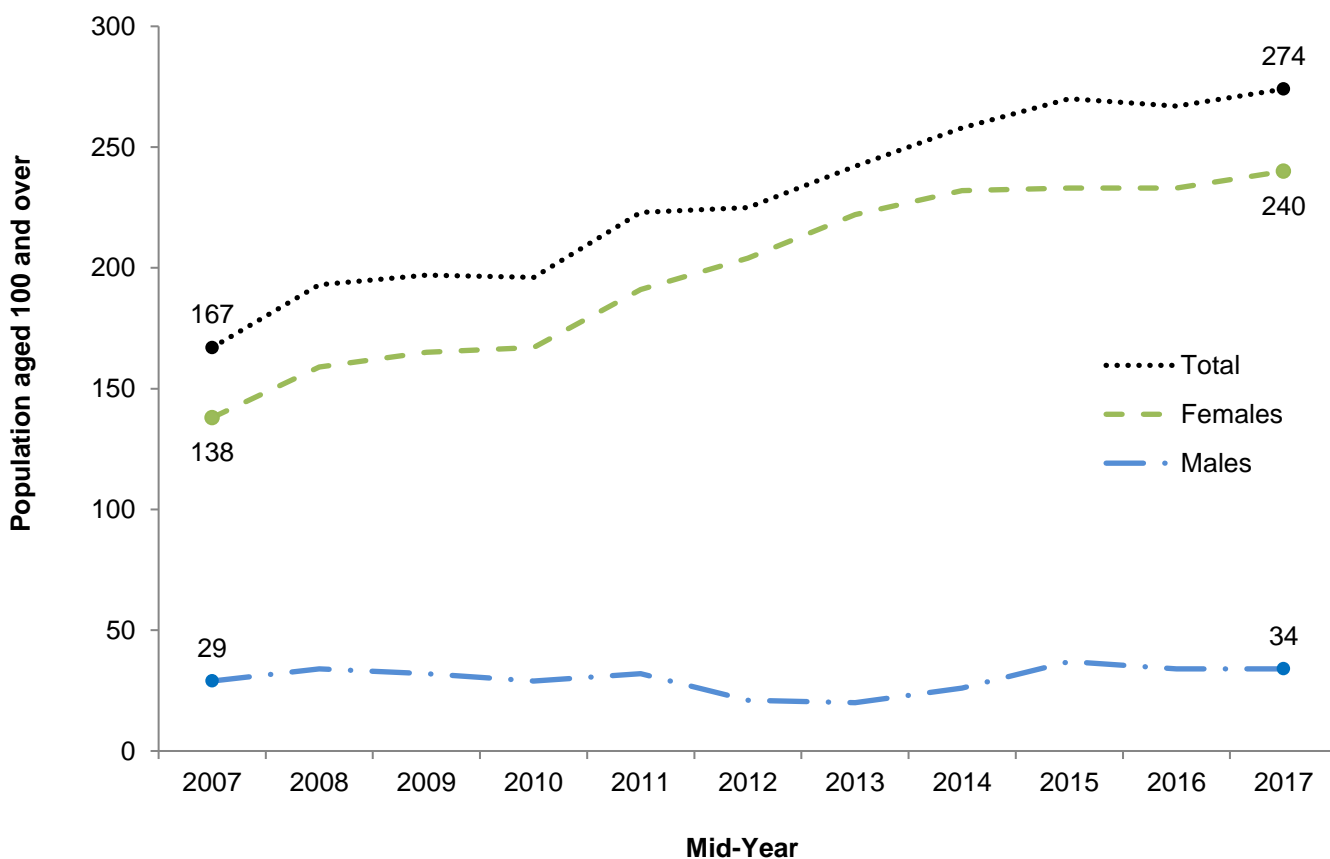
[Download Chart](#) (XLSX Format – 91 KB)

## 6. Number of centenarians (aged 100 and over)

It is estimated that there were 274 centenarians living in Northern Ireland on 30 June 2017, the vast majority of whom (87.6 per cent) were female.

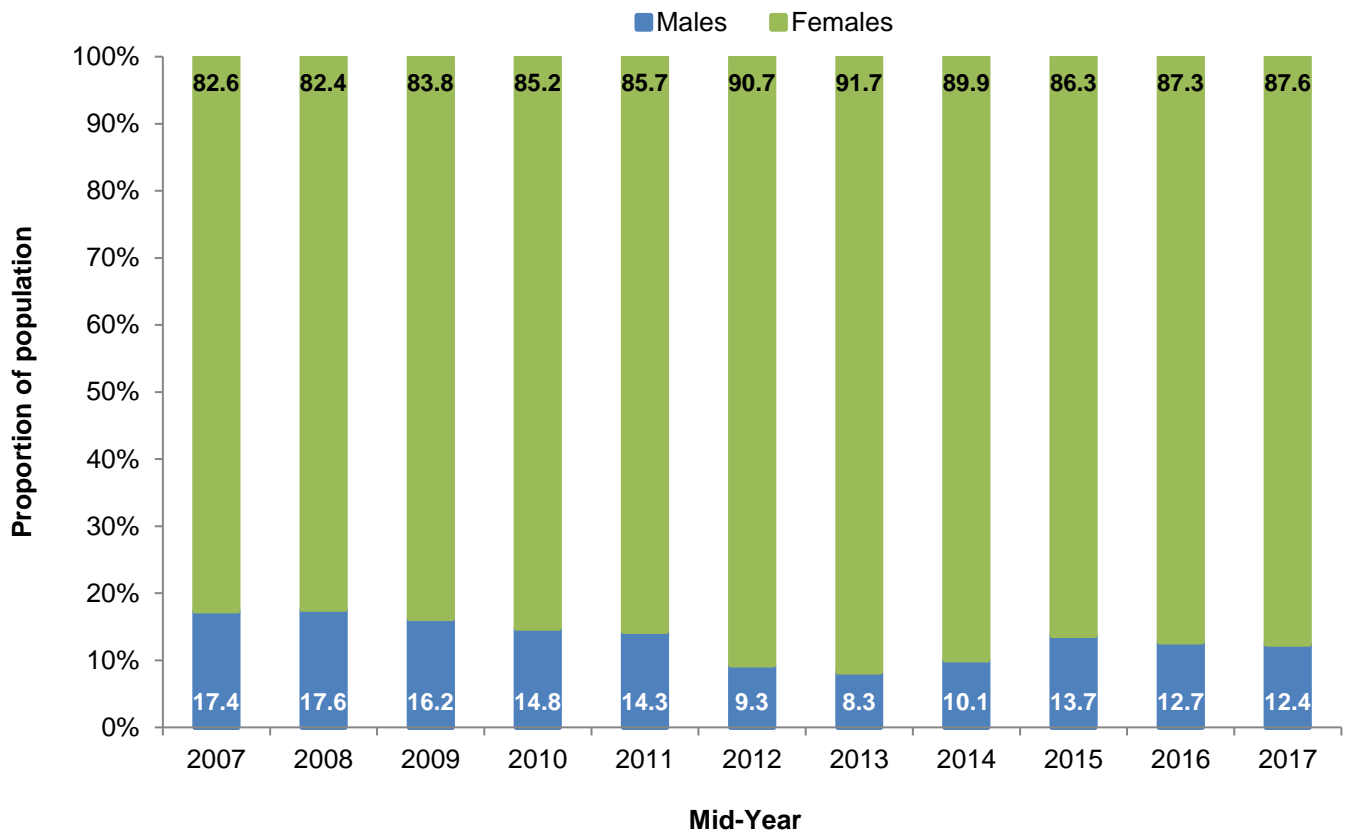
Figure 7 shows how the size and gender composition of the relatively small centenarian group has changed over the ten year period mid-2007 to mid-2017. Throughout the period in question, the centenarian group has increased in size from 167 centenarians in mid-2007 to 274 centenarians in mid-2017, with the number of females consistently and notably exceeding the number of males (see Figure 7). Because of the relatively small number of people in the centenarian age group, small changes in the number of males and females can result in larger changes in the proportional representation of males and females (see Figure 8).

Figure 7: Population aged 100 and over by sex (mid-2007 to mid-2017)



[Download Chart](#) (XLSX Format – 86 KB)

**Figure 8: Proportion of population aged 100 and over by sex (mid-2007 to mid-2017)**



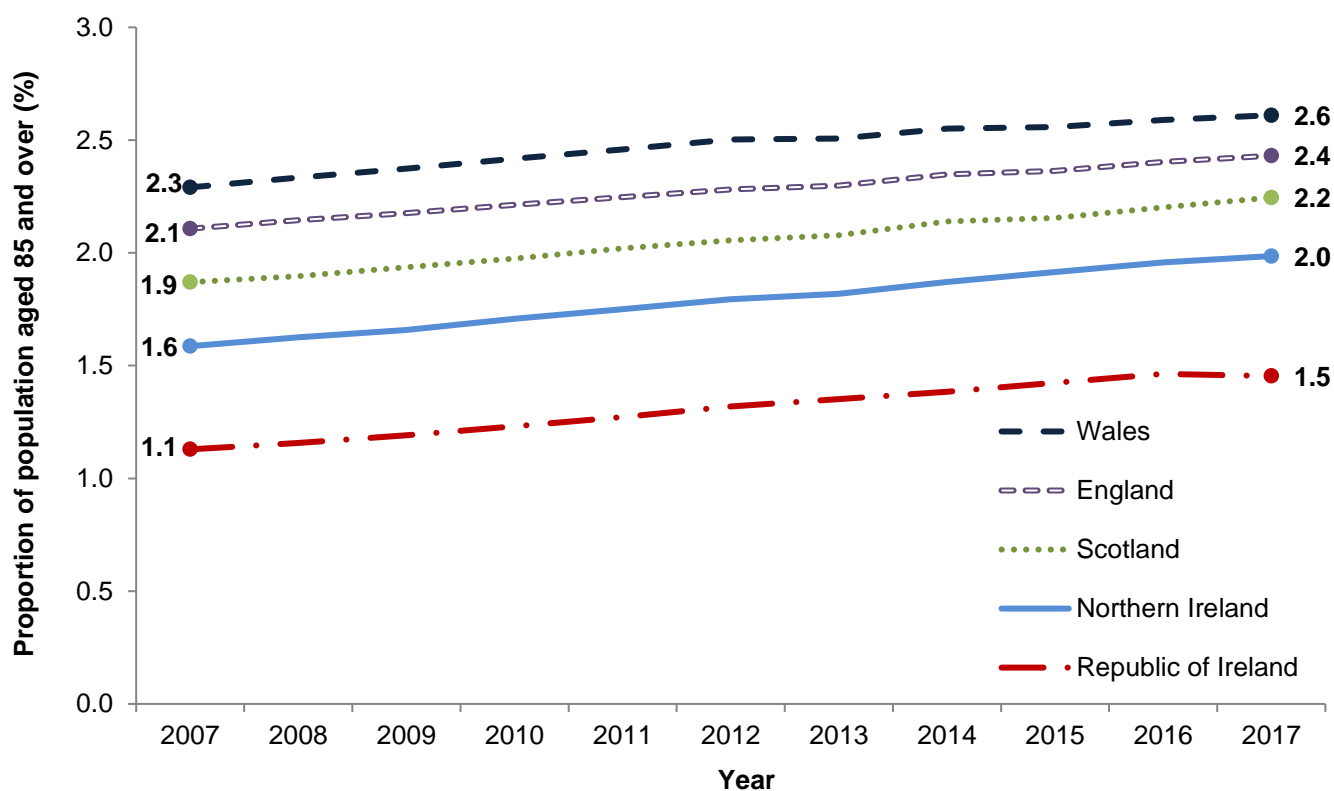
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## 7. Comparison of Population aged 85 and over across the UK and Ireland

Population estimates by age are available for each UK country and the Republic of Ireland. Figure 9 shows that of the UK countries, Northern Ireland had the lowest proportion of its population aged 85 and over (2.0 per cent) in mid-2017, whereas Wales had the highest (2.6 per cent). This was also the case 10 years previously in mid-2007 (1.6 per cent in Northern Ireland, and 2.3 per cent in Wales). However, the Republic of Ireland had even lower rates: its proportion of the population aged 85 and over in 2017 (1.5 per cent) was similar to that for Northern Ireland a decade ago (1.6 per cent).

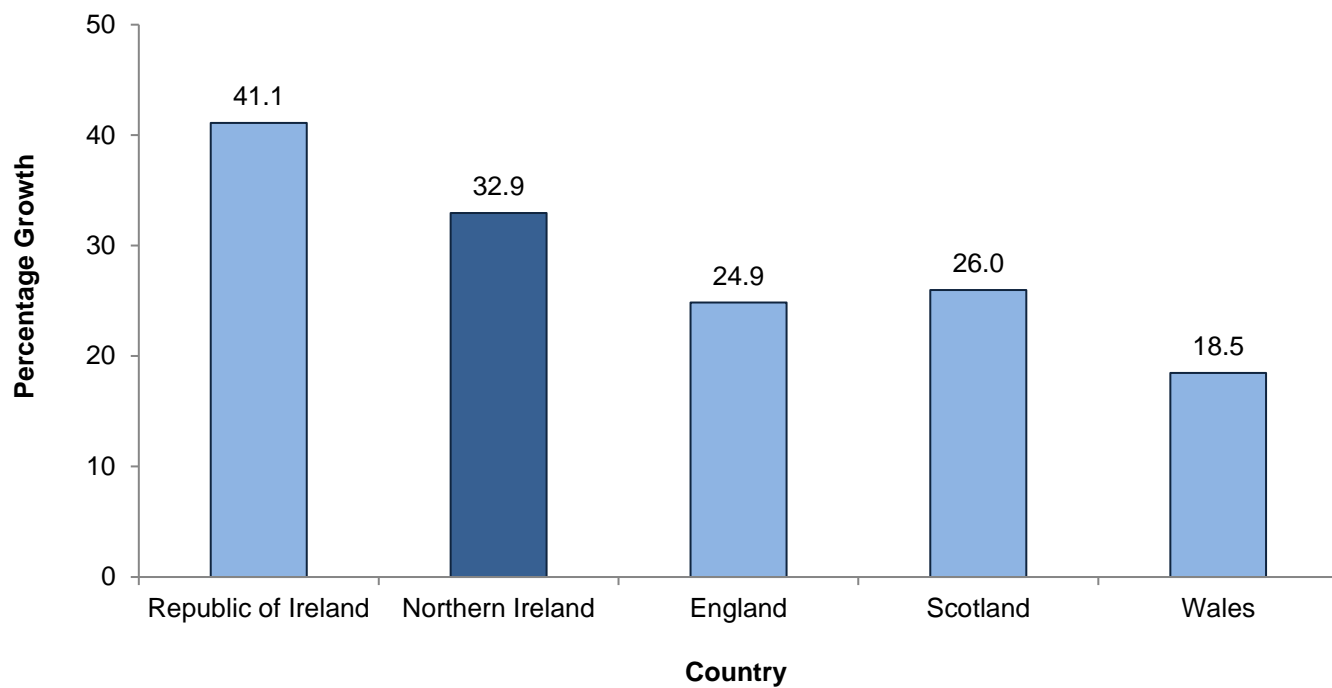
In contrast, Figure 10 shows that the percentage growth of this age group over the decade mid-2007 to mid-2017 has been noticeably higher in Northern Ireland (32.9 per cent) than in the other countries of the UK, but still lower than in the Republic of Ireland (4 per cent). This is the result of a combination of (i) differences in age distribution within this age group, (ii) age specific mortality rates, and (iii) cohort effects of those aging into this age group.

Figure 9: Proportion of population aged 85 and over by country (2007 to 2017)



[Download Chart](#) (XLSX Format – 91 KB)

**Figure 10: Growth of population aged 85 and over by country (2007 to 2017)**



[Download Chart](#) (XLSX Format – 88 KB)



## **8. Methodology**

### **8.1. Mid-Year Population Estimates**

The Northern Ireland Statistics and Research Agency produces annual [mid-year population estimates](#) at Northern Ireland level by single year of age from 0 to 89 using the 'cohort component' method. Using the most recent census as the baseline, each year the population is aged on by one year, births are added, deaths subtracted and estimates of migration are used for those moving in or out of Northern Ireland. For the official 30 June population estimates, ages 90 and over are aggregated into one age-group.

### **8.2. Estimates of the population aged 90 and over**

To produce single year of age estimates of the population aged 90 and over, NISRA has adopted the Kannisto-Thatcher Survivor Ratio Method<sup>4</sup>, an internationally recognised method used to provide a more detailed breakdown of the older population by age.

Using death registration data, an estimate is produced of the number of people at a given age alive in a particular year. For the most recent year, the Kannisto-Thatcher Survivor Ratio Method uses an average of the last five years death data to produce an estimate of the number of survivors.

For earlier years, if someone died aged 100 in 2017, this means that they were alive in 2016 aged 99, and aged 98 in 2015 and so on. This is used to produce age distribution profiles. The number of people aged 99 alive in 2016 is recalibrated from the estimated number of people alive aged 100 in 2017, plus the number of registered deaths of people aged 100 in 2017. One outcome of this method is that each year the estimates for earlier years become more accurate as more death data become available to inform age profiles. It also assumes that migration for those aged 85 and over is negligible. Estimates are then controlled to agree with the NISRA mid-year population estimates for those aged 90 and over.

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<sup>4</sup> The Survivor Ratio Method for Estimating Numbers at High Ages, Thatcher R, Kannisto V, Andreev K, 2002. <http://www.demographic-research.org/Volumes/Vol6/1/>. The Demography of Centenarians in England and Wales, *Population Trends* 96 pp5-12, Thatcher R, 1999.

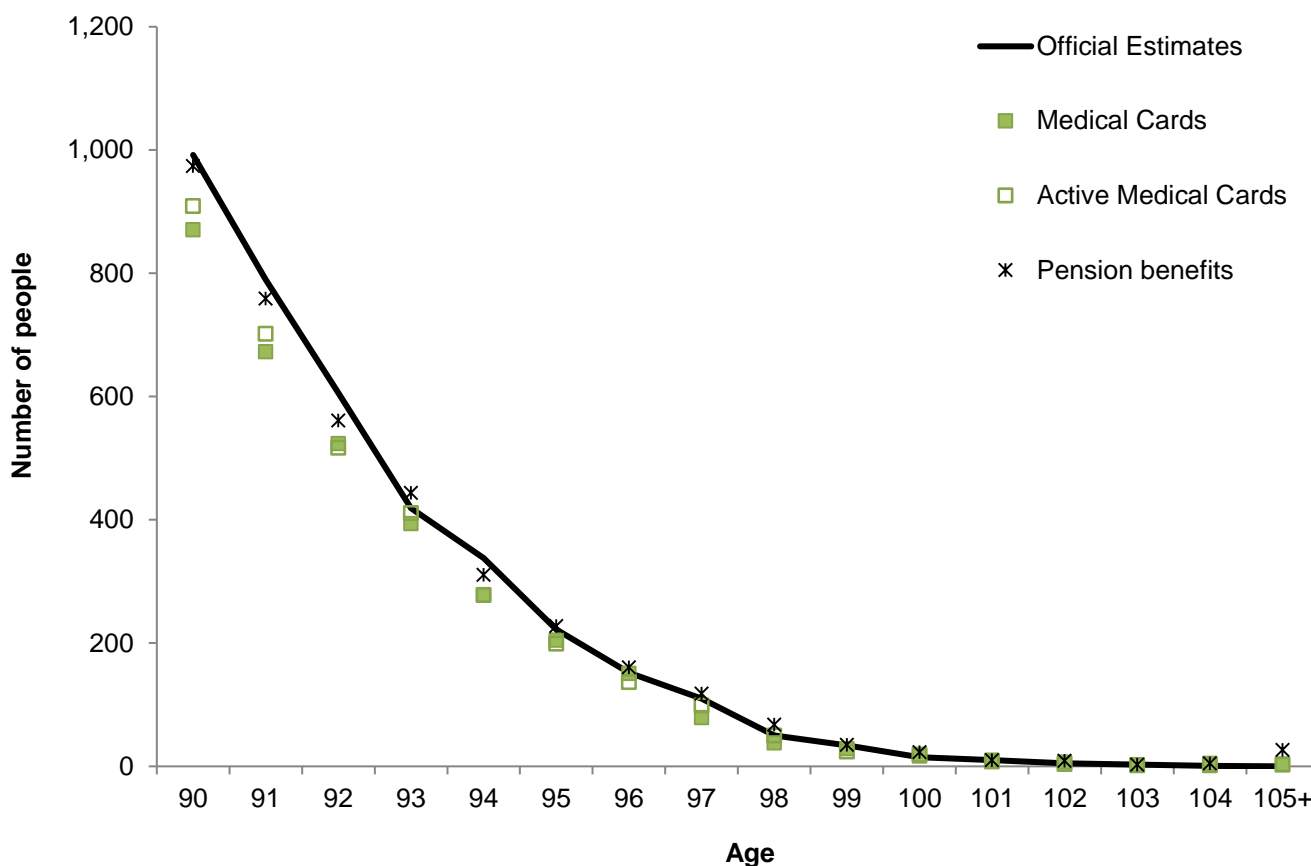
## 9. Quality Assurance

### 9.1. Quality Assurance of the Population aged 90 and over – mid-2017

Estimates of the population aged 90 and over in Northern Ireland are produced by the Northern Ireland Statistics and Research Agency (NISRA) using the Kannisto-Thatcher Survivor Ratio Method, which uses an average of the last five years death data to produce an estimate of the number of survivors and applies this to the mid-year estimates.

Figures 11a and 11b show these estimates compared with other administrative data sources which collect data for males and females aged 90 and over, namely Medical Card Registration Data, Active Medical Card data<sup>5</sup>, and Pensions data. These graphs show a good degree of comparability across the various data sources, but particularly in terms of pension benefits, as might be expected, both in terms of numbers and trends.

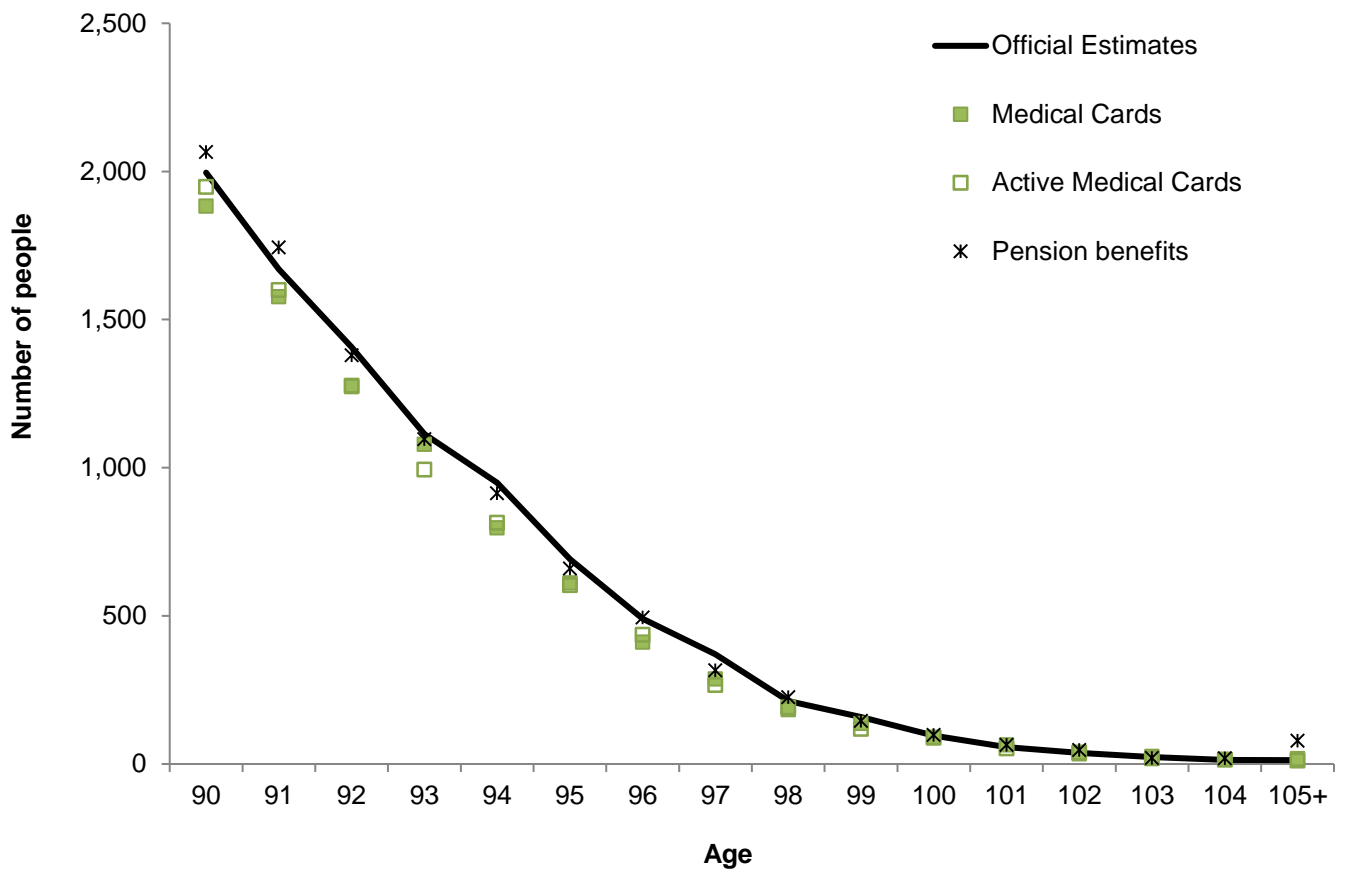
**Figure 11a: Mid-2017 population aged 90 and over in comparison with administrative sources by age (males)**



[Download Chart](#) (XLSX Format - 108 KB)

<sup>5</sup> Active Medical Card data is Medical Card Registration data that has been used in recent years.

Figure 11b: Mid-2017 population aged 90 and over in comparison with administrative sources by age (females)

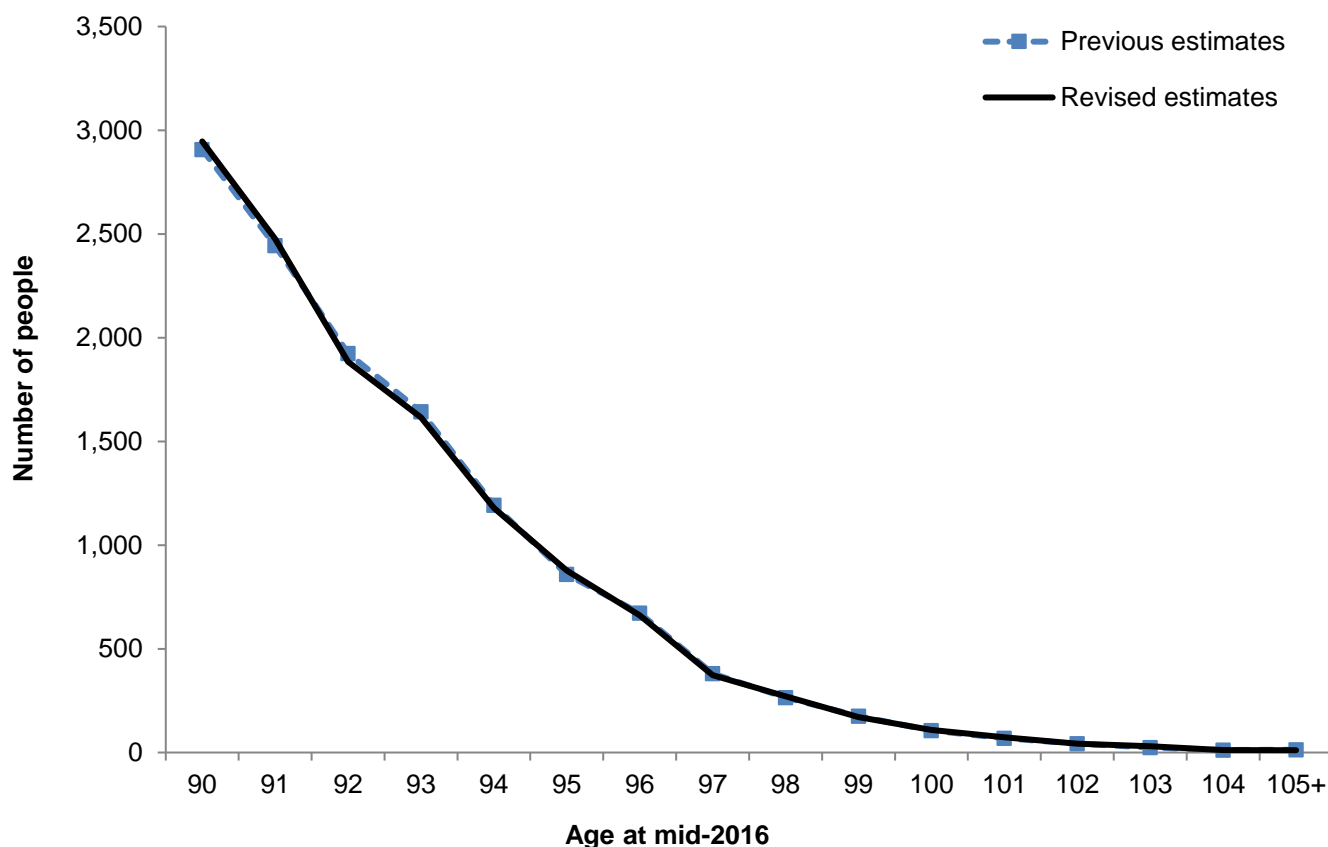


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## 9.2. Quality Assurance of the Population aged 90 and over – revised<sup>6</sup> mid-2001 to mid-2016

The Kannisto-Thatcher Survivor Ratio Method does not revise the total estimates of the age-group 90 and over which are already-published. However, there could be changes in the age distribution within this age group over the years. As such, it is classified as a scheduled revision<sup>7</sup>. Figure 12 plots the previous estimates for mid-2016 alongside the revised mid-2016 estimates.

Figure 12: Previous and revised estimates of the population aged 90 and over by age (mid- 2016)



[Download Chart](#) (XLSX Format – 90 KB)

Most differences are relatively small: the revised population estimate for those aged 90 to 94 in mid-2016 was 0.1 per cent higher than the previously published estimate (i.e. the estimated number of people aged 90 to 94 in mid-2016 increased by 11 people in the revised estimate). The revised population estimate for those aged 95 to 99 in mid-2016 was exactly the same as the previously published estimate (2,400 people).

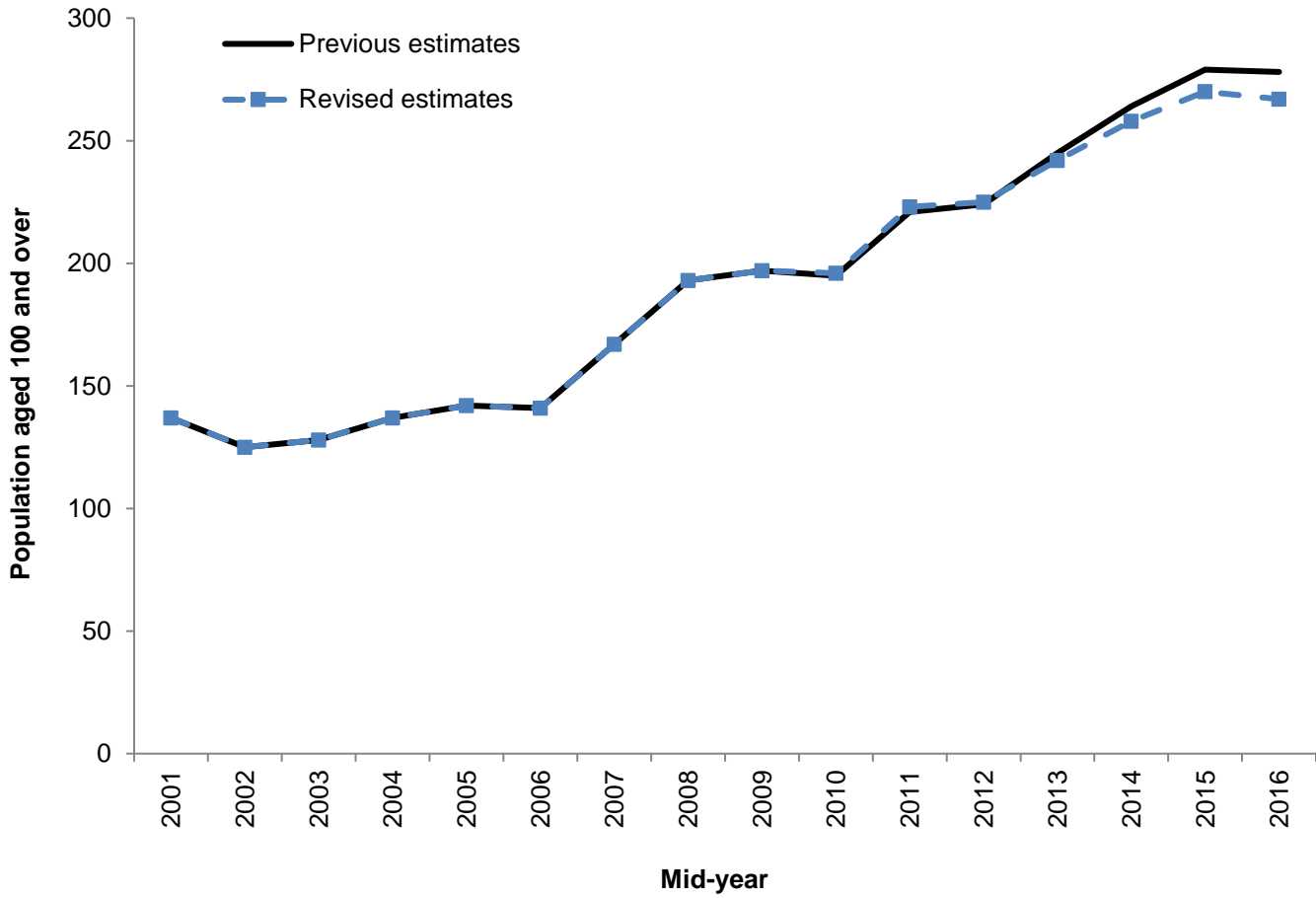
<sup>6</sup> “Revised” estimates refer to the estimates of those aged 90 and over at single year of age from mid-2001 to mid-2016 that have been updated with the release of the mid-2017 population estimates at the same ages.

<sup>7</sup> <http://www.ons.gov.uk/ons/guide-method/revisions/revisions-policies-by-theme/population/population-statistics-revision-policy.pdf>

The estimated number of centenarians in mid-2016 has been revised downwards by 4.0 per cent. This revision in the estimated number of centenarians for mid-2016 relates to a decrease of 11 people aged 100 and over, from 278 in the previous estimates to 267 in the revised estimates.

Figure 13 shows the previous and current estimates of the number of centenarians over the period mid-2001 to mid-2016. It is evident that the difference between the two series becomes smaller when going further back in time, with negligible differences or identical figures prior to 2012.

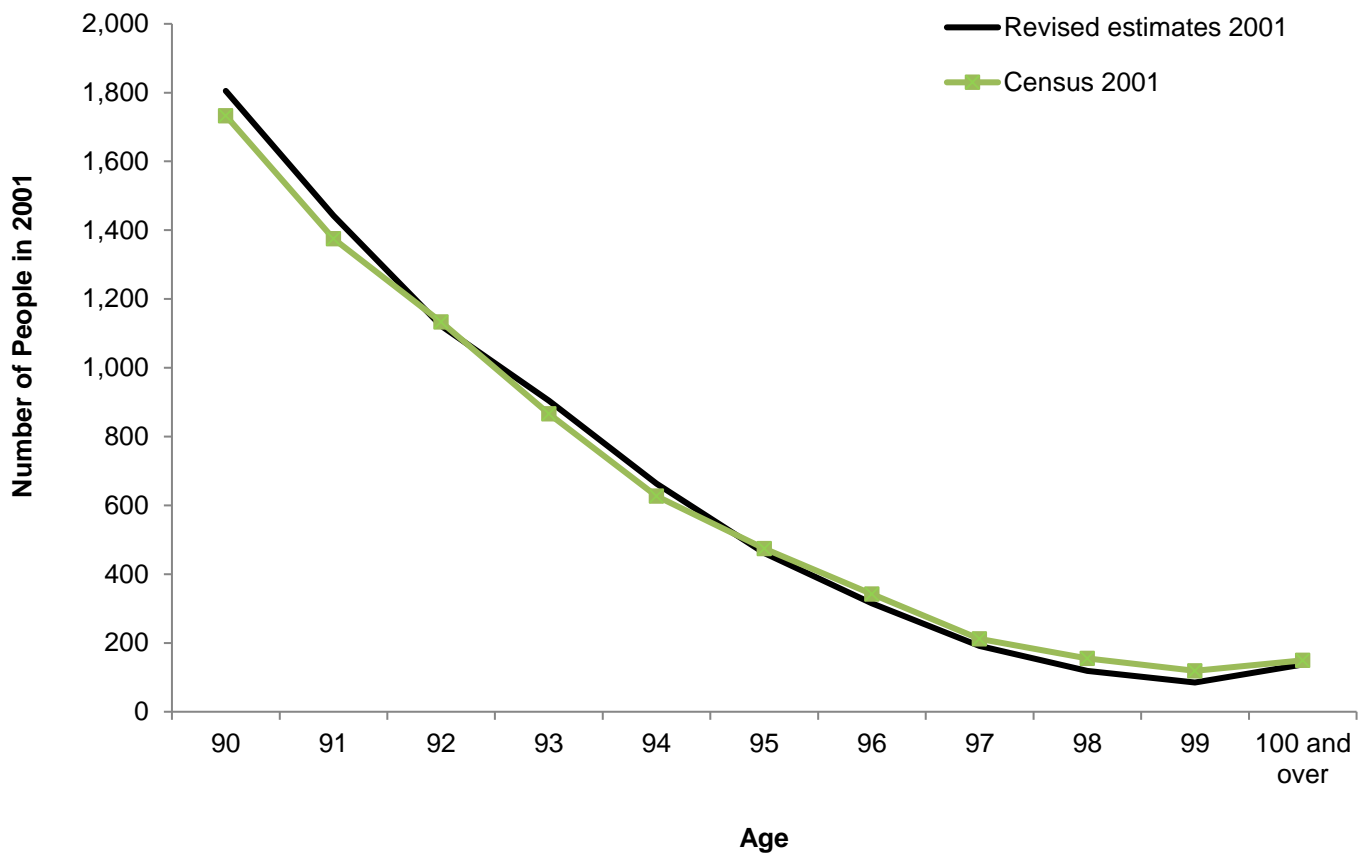
**Figure 13: Previous and revised estimates of centenarians (mid-2001 to mid-2016)**



[Download Chart](#) (XLSX Format – 90 KB)

The revised estimates are also quality assured against 2001 and 2011 Census data, and as can be seen in Figures 14a and 14b, the estimates are again broadly in line with both the 2001 and 2011 Census figures.

**Figure 14a: Revised estimates of the population aged 90 and over by age (mid-2001 compared to the 2001 Census)**

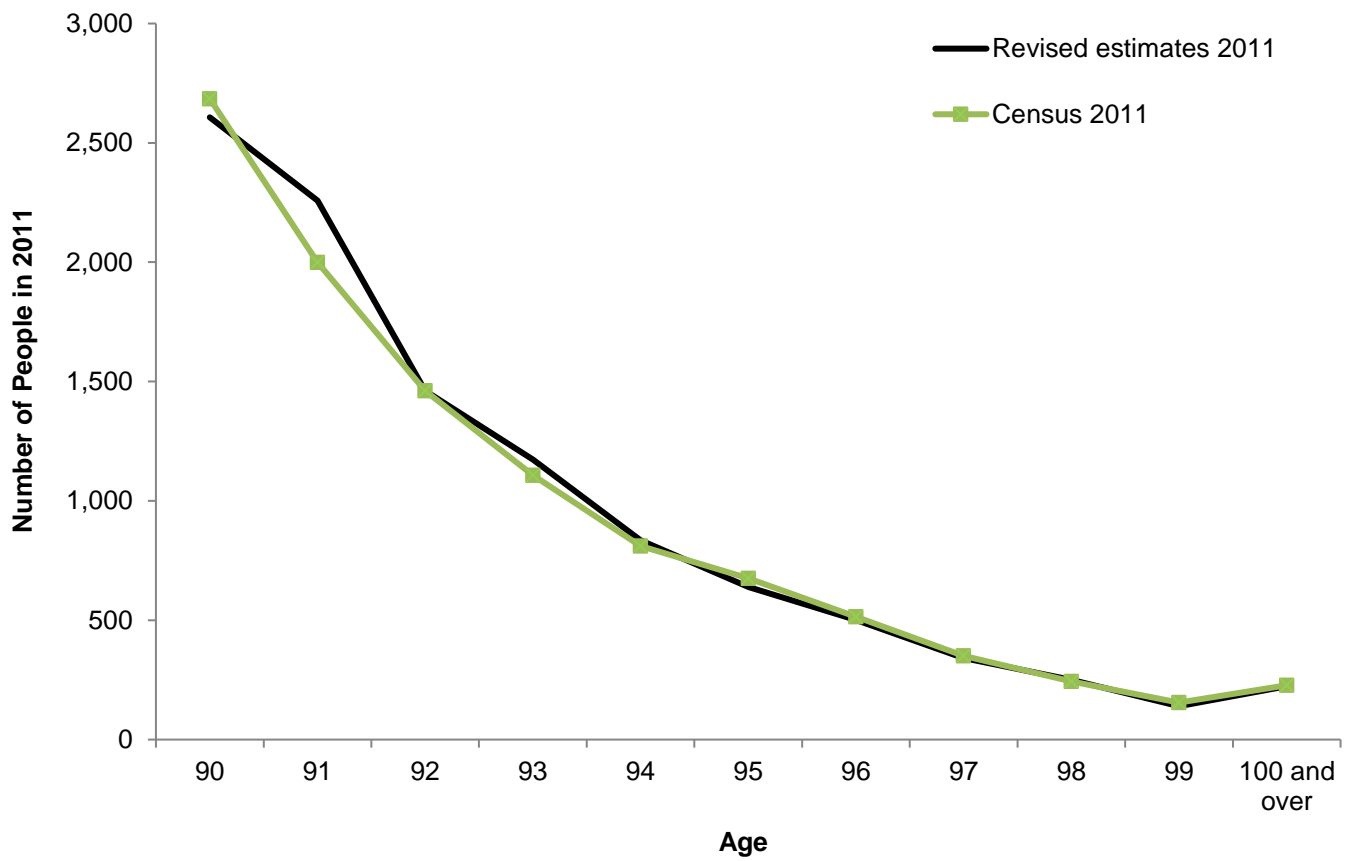


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In 2001, the greatest percentage difference by five year age-bands is for male centenarians, where the revised estimates for males aged 100 and over in mid-2001 are 38.9 per cent smaller than the 2001 Census figures for the same age-sex band. This is understandable as the number of males aged 100 and over is very small (females make up the majority of people aged 100 and over). This means that small changes in the numbers can equate to sizeable changes in percentage terms. In this instance the 38.9 per cent change relates to a difference of seven males aged 100 and over between the 2001 Census (18 males) and the revised estimates (11 males). Furthermore, as the 2001 Census refers to the population at 29 April 2001 and the mid-year estimates refer to the population at 30 June 2001, this may account for some of the difference in the number of people.

Males aged 100 and over again had the greatest percentage change in 2011, with the revised estimates of male centenarians in mid-2011 being 20.0 per cent smaller than the 2011 census figure of the same age-sex group (32 males and 40 males respectively). As with the 2001 Census figures, the 2011 figures do not refer to the population at mid-year, but instead to the population at 27 March 2011. This may account for some of the difference between the revised estimates for mid-2011 and the 2011 census figures.

Figure 14b: Revised estimates of the population aged 90 and over by age (mid-2011 compared to the 2011 Census)



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## **10. Data Quality**

### **10.1. Mid-Year Population Estimates**

Mid-year population estimates are created using a variety of administrative data sources. A brief outline of these sources, and how quality is assured for each one, is detailed in the latest [mid-year population estimates](#) statistical bulletin. A more comprehensive outline of these sources, including details of the quality management actions undertaken to ensure that the data is suitable for population estimates, is detailed within the [Administrative Data Quality Document](#).

### **10.2. Death Data Used in Kannisto-Thatcher Survivor Ratio Method**

Information supplied at death registration is generally believed to be correct since wilfully supplying false information may render the informant liable to prosecution for perjury. Death figures by sex and single year of age are obtained from registrations with the General Register Office (GRO) and all that occurred over the 12 month period from 1 July to 30 June are included.

During registrations, information provided is first checked by the informant before being finalised on the GRO's electronic Northern Ireland Registration Office System (NIROS). Appropriate validation checks are embedded within the NIROS to help the Registrar with this process. Statistics are extracted directly from NIROS and are subjected to further checks by the Vital Statistics team in NISRA's Demography & Methodology Branch, and again by the Population and Migration team when the relevant data are supplied to them.

Quality Assessment Reports are available online and contain further details on the quality of [death](#) statistics.

Further checks are made on deaths registrations of people aged 100 and over. Such registrations are flagged by the Vital Statistics and sent back to the GRO in order to manually check their validity.

### **10.3. Quality Analysis by the Office for National Statistics**

Northern Ireland estimates are sent to the Office for National Statistics (ONS) for further checks on the calculations and formula used at all stages of the process, in order to ensure the quality is of compatible standards with their own data (see the [ONS Quality and Methodology Information Paper](#) for more information). When these are completed, the population aged 90 to 104 at single year of age and 105 and over aggregated are fed into the UK Estimates of the Very Old, produced by ONS.



## 10.4. National Statistics Designation

National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They undergo regular quality assurance review to ensure they meet customer needs. They are produced free from any political interference. The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods; and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

In line with the Statistics and Registration Service Act 2007, and signifying compliance with the Code of Practice for Official Statistics in 2011, the United Kingdom Statistics Authority (UKSA) appointed this publication as a National Statistics publication. Population estimates and projections for Northern Ireland statistics were re-assessed by the Statistics Authority in July 2015 ([UK Statistics Authority Assessment Report](#)). Following work to address recommendations that emerged from the assessment ([Assessment Action Plan](#)), UKSA confirmed the re-designation of these statistics as National Statistics in August 2016 (see [letter of designation](#)).

## **11. Limitations**

When considering change over time, it is important to note that the number of centenarians is relatively small when compared with other population age groups and, as such, small changes in the numbers can equate to sizeable changes in percentage terms.

Estimates of the Population Aged 85 and Over are not produced for areas within Northern Ireland due to the fact that:

- the Kannisto-Thatcher Survivor Ratio Method does not take into account migration;
- the small numbers of people aged 85 and over would be unreliable if split into geographies lower than Northern Ireland as a whole.

Estimates of the population aged 90 and over at single year of age are constrained to the aggregated number of males and females aged 90 and over produced in the mid-year population estimates, thus making them consistent. However, due to the different approaches used (i.e. cohort component method for mid-year estimates and Kannisto-Thatcher Survival Ratio method for estimates of the population aged 85 and over), the transition between the number of people aged 89 to 90 may not be as smooth as at other ages.

As the Kannisto-Thatcher Survival Ratio Method uses the most recent deaths data, this can include some late registrations of deaths occurring in previous years (for example, deaths referred to a coroner can mean the date of occurrence of a death is not available until several months after the registration of that death). This means that, in order to allow these statistics to be available on an annual basis, previous years' estimates are revised with each publication. While these means there may be minor changes in previous years' figures, it also means the numbers are continuously improving and becoming more accurate.

## Background Notes

- Mid-year population estimates are produced by the Northern Ireland Statistics and Research Agency (NISRA). The estimates refer to the size of the usually resident population at 30 June and are therefore often referred to as the mid-year estimates. The [most recent estimates](#), published in June 2018, relate to the population at mid-2017.
- The method used to estimate the age distribution of the population aged 90 and over is an internationally recognised standard approach known as the Kannisto-Thatcher Survivor Ratio Method. This method requires previous years' estimates to be revised when new death registration data becomes available. Estimates of the population aged 90 and over, by single year of age and sex, are constrained to mid-year population estimates for the entire 90 and over age group.
- Whilst this report concentrates on the significant increase in the population aged 85 and over, it is still important to recognise that the number of people aged 85 and over represents a small proportion of the total population (i.e. 2.0 per cent in mid-2017).
- Statistics for the population aged 85 and over are available on the [NISRA Website](#). An [infographic](#) highlighting the important figures and trends in the data has also been released.
- Equivalent and comparable estimates of the population aged 90 and over for [England and Wales](#) by the Office for National Statistics (ONS), and for [Scotland](#) by National Records Scotland (NRS) have also been released on 25 September 2018. A [UK comparison paper](#) analysing the comparability between the four UK countries is also available.
- Estimates of the population aged 85 and over for mid-2018, as well as a revised series for mid-2001 to mid-2017, are expected to be published in September 2019.
- The revisions policy for population statistics is available [here](#).
- We welcome feedback from users on the content, format and relevance of this release. Users can send feedback directly to [census@nisra.gov.uk](mailto:census@nisra.gov.uk).
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Responsible Statistician: Richard Elliott

## Annex A: Estimates of those aged 85 years and over by sex and 5 year age bands (mid-2007 to mid-2017)

Mid-Year	Persons 85-89	Persons 90-94	Persons 95-99	Persons 100-104	Persons 105+	Persons 85+	Persons All Ages
2007	19,208	6,971	1,600	156	11	27,946	1,761,683
2008	20,028	7,056	1,653	188	5	28,930	1,779,152
2009	20,562	7,238	1,735	191	6	29,732	1,793,333
2010	20,977	7,810	1,847	190	6	30,830	1,804,833
2011	21,335	8,334	1,873	218	5	31,765	1,814,318
2012	21,673	8,906	1,909	218	7	32,713	1,823,634
2013	21,947	9,176	1,919	233	9	33,284	1,829,725
2014	22,406	9,772	2,008	245	13	34,444	1,840,498
2015	23,019	9,939	2,232	258	12	35,460	1,851,621
2016	23,730	10,111	2,353	253	14	36,461	1,862,137
2017	24,111	10,280	2,489	261	13	37,154	1,870,834
Mid-Year	Males 85-89	Males 90-94	Males 95-99	Males 100-104	Males 105+	Males 85+	Males All Ages
2007	6,187	1,733	274	29	0	8,223	862,256
2008	6,476	1,785	290	34	0	8,585	870,998
2009	6,679	1,892	291	31	1	8,894	878,562
2010	6,879	2,148	326	28	1	9,382	884,535
2011	7,116	2,274	370	32	0	9,792	889,322
2012	7,389	2,485	384	20	1	10,279	894,548
2013	7,545	2,610	400	20	0	10,575	897,145
2014	7,800	2,826	415	25	1	11,067	902,711
2015	8,134	2,937	492	37	0	11,600	909,129
2016	8,556	3,011	521	34	0	12,122	915,213
2017	8,801	3,145	568	34	0	12,548	920,248
Mid-Year	Females 85-89	Females 90-94	Females 95-99	Females 100-104	Females 105+	Females 85+	Females All Ages
2007	13,021	5,238	1,326	127	11	19,723	899,427
2008	13,552	5,271	1,363	154	5	20,345	908,154
2009	13,883	5,346	1,444	160	5	20,838	914,771
2010	14,098	5,662	1,521	162	5	21,448	920,298
2011	14,219	6,060	1,503	186	5	21,973	924,996
2012	14,284	6,421	1,525	198	6	22,434	929,086
2013	14,402	6,566	1,519	213	9	22,709	932,580
2014	14,606	6,946	1,593	220	12	23,377	937,787
2015	14,885	7,002	1,740	221	12	23,860	942,492
2016	15,174	7,100	1,832	219	14	24,339	946,924
2017	15,310	7,135	1,921	227	13	24,606	950,586

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