# **NISRA STATISTICAL BULLETIN**





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Theme: Population

# Estimates of the population aged 85 and over, Northern Ireland, 2014 (and revised 2001-2013)

#### **Key Points:**

- In mid-2014, 1.9 per cent of the population were aged 85 and over. The number of people in this age group increased by 3.5 per cent between mid-2013 (33,300) and mid-2014 (34,400).
- While women accounted for 67.9 per cent of the population aged 85 and over in mid-2014, the population increase between mid-2004 and mid-2014 was noticeably higher among males aged 85 and over than among females (60.9 per cent and 33.6 per cent respectively).
- Over the decade mid-2004 to mid-2014, the growth of the population aged 85 and over (41.3 per cent) has been six times faster than that of the population aged under 85 (6.9 per cent).
- The percentage growth in the population aged 85 and over was noticeably higher in Northern Ireland (41.3 per cent) over the decade mid-2004 to mid-2014 than in the other countries of the UK (Scotland: 38.1 per cent; England: 36.1 per cent; Wales: 33.2 per cent).
- It is estimated that there were 249 centenarians (those aged 100 and over) in Northern Ireland on 30 June 2014, the vast majority of whom (85.5 per cent) were female.

More detailed figures and analysis are included in the bulletin.

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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-2014, as published on 30 September 2015. These figures follow on from the 2014 mid-year population estimates, published on 4 June 2015, 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 for those aged 105 and over. It presents information on how the overall number and gender composition of those aged 85 and over has changed during the decade mid-2004 to mid-2014, and presents analyses and commentary for those aged 90 to 99, and centenarians (those aged 100 and over).

Similar information relating to England & Wales, and Scotland was also released alongside on 30 September 2015 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 lines 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 <a href="Estimates of the Very Old for the United Kingdom">Estimates of the Very Old for the United Kingdom</a>, produced by the Demographic Analysis Unit within the Office for National Statistics.

#### 2. Background to publication

NISRA produces mid-year population estimates on an annual basis 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. 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 by producing 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 <u>Section 8</u>). 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 is then used to distribute the population estimates for the highest age group 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. The issue of whether or not to keep this title will be discussed at the next population statistics user engagement event, planned for early 2016<sup>1</sup>.

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-2013. More information on these revisions and their impact on the estimates are provided in the Data Quality section on page 16.

# 3. Population in Northern Ireland<sup>2</sup>

The size of the resident population in Northern Ireland at 30 June 2014 is estimated to be 1.840 million people. Slightly more than half (51.0 per cent) of the population were female, with 937,800 females compared to 902,700 males.

Over the period 2013-14 the number of people living in Northern Ireland is estimated to have increased by 10,800 people (0.6 per cent). This population increase was a result of the following estimated factors:

<sup>&</sup>lt;sup>1</sup> The date of the population statistics user engagement event has not yet been confirmed. However, the NISRA website will be updated when the date is agreed. Known users will also be informed by email.

<sup>&</sup>lt;sup>2</sup> Mid-2014 Population Estimates were published on 4 June 2014.

- a. natural growth of 9,800 people (24,200 births minus 14,300 deaths);
- b. an estimated net growth of 1,600 people due to migration. In total 24,400 people came to live in Northern Ireland and 22,800 people left; and
- c. a net loss of 600 due to other changes (i.e. a reduction in Her Majesty's Forces stationed in Northern Ireland<sup>3</sup>).

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-2004 to mid-2014. Figure 1 shows that while the population aged 40-64 has increased by 14.9 per cent over the decade mid-2004 to mid-2014, the population increase of those aged 65 and over has been noticeably higher (23.1 per cent).

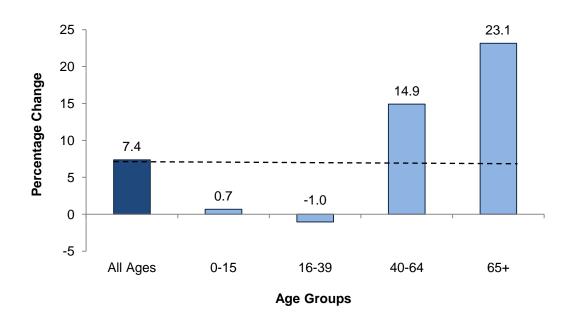


Figure 1: Population change by age group, mid-2004 to mid-2014

#### <u>Download Chart</u> (XLS Format – 1,503KB)

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Between mid-2013 and mid-2014, the population aged under 65 increased at a moderate rate (0.3 per cent) reaching 1,554,600. In contrast, the population aged 65 and over increased by 2.4 per cent over the same period, and has been growing by 2.4 per cent per annum for the last seven years, increasing from 241,900 in mid-2007 to reach 285,900 in mid-2014. In mid-2014, 1.9 per cent of the population were aged 85 and over, an increase of 3.5 per cent between mid-2013 and mid-2014 (from 33,300 to 34,400 respectively).

<sup>&</sup>lt;sup>3</sup> For estimates at the Northern Ireland level, "Other Changes" refers to changes in Her Majesty's Forces only (see <u>Methodology Report</u>).

#### 4. Population aged 85 and over

It is estimated that there were 34,400 people aged 85 and over living in Northern Ireland at 30 June 2014, 41.3 per cent more than was the case ten years previously in mid-2004. The growth of the population aged 85 and over is six times faster than that of the population aged under 85 (6.9 per cent).

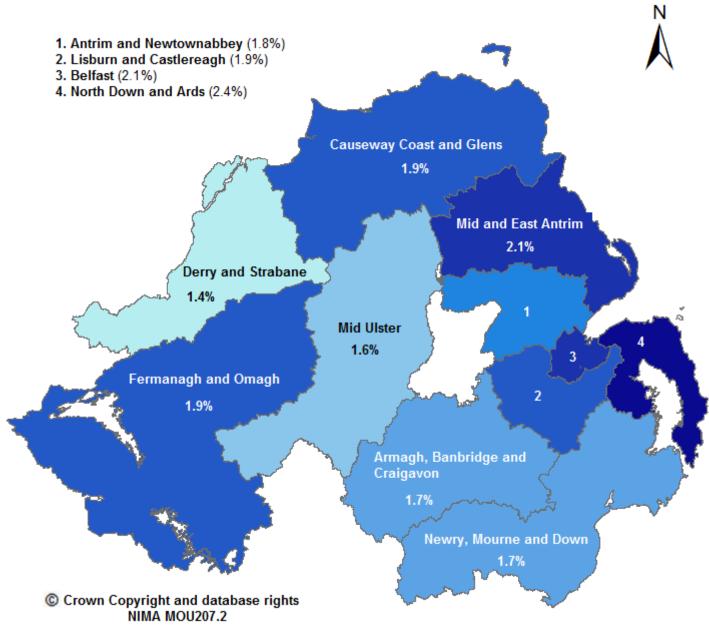
In mid-2014, the proportion of people aged 85 and over ranged from 1.4 per cent (2,000 people) in Derry & Strabane to 2.4 per cent (3,800 people) in North Down & Ards Local Government District. As the Local Government District with the largest population in Northern Ireland, Belfast also had the largest number of people aged 85 and over (7,000 people). However, as shown in Map 1, it is notable that Belfast Local Government District only had the third highest proportion of people aged 85 and over (2.1 per cent), after North Down & Ards (2.4 per cent), and Mid & East Antrim (2.1 per cent).

The overall increase of 41.3 per cent (10,100 people) in the population aged 85 and over during the 10-year period mid-2004 to mid-2014 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, as at this age, the impact of migration is negligible.

For example, between mid-2013 and mid-2014, there were fewer than 100 people aged 85 who came to Northern Ireland to live or who left Northern Ireland to live elsewhere. This compares to 6,300 people aging into this age group, and 5,100 people leaving as a result of dying. This resulted in an overall increase of 1,200 people aged 85 and over from mid-2013 to mid-2014. This pattern of minor migration effects is consistent in previous years' population changes.

Between mid-2004 and mid-2014, an average of 4,800 people aged 85 and over died each year, whereas 5,900 people 'aged into' the 85 and over category. This has resulted in the number of people aged 85 and over growing by approximately 1,000 people per annum.

Map1: Proportion of Population aged 85 and over by the 11 new Local Government Districts, mid-2014



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Table 1, which presents the changing size and sex composition of the population aged 85 and over from mid-2004 to mid-2014, shows that the proportion of males in this age group has been gradually increasing.

Table 1: Estimates of the population aged 85 and over by sex, mid-2004 to mid-2014<sup>4</sup>

		M	lales	Females		
Mid-Year	Persons	Number	Proportion	Number	Proportion	
2004	24,400	6,900	28.2	17,500	71.8	
2005	25,900	7,500	29.0	18,400	71.0	
2006	27,000	8,000	29.5	19,100	70.5	
2007	27,900	8,200	29.4	19,700	70.6	
2008	28,900	8,600	29.7	20,300	70.3	
2009	29,700	8,900	29.9	20,800	70.1	
2010	30,800	9,400	30.4	21,400	69.6	
2011	31,800	9,800	30.8	22,000	69.2	
2012	32,700	10,300	31.4	22,400	68.6	
2013	33,300	10,600	31.8	22,700	68.2	
2014	34,400	11,100	32.1	23,400	67.9	

<u>Download Table</u> (XLS Format – 3,583KB)

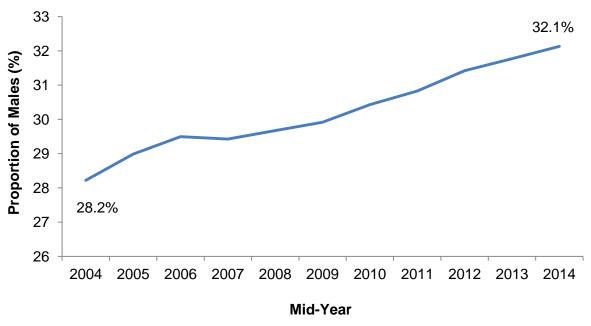
Between mid-2004 and mid-2014, the percentage increase in the number of males aged 85 and over (60.9 per cent – from 6,900 to 11,100) has been noticeably higher than that among females (33.6 per cent – from 17,500 to 23,400). Over the past decade, the number of males aged 85 and over has increased on average by 4.9 per cent each year, while the numbers of females aged 85 and over has increased by an average of 2.9 per cent each year.

In mid-2014 males accounted for 32.1 per cent of those aged 85 and over, whereas 10 years previously in mid-2004 they accounted for 28.2 per cent (see Figure 2). This compositional change is indicative of higher improvement in survival rates among males than females at older ages in recent years<sup>5</sup>.

<sup>4</sup> A more detailed breakdown of the population aged 85 and over, by mid-year and sex, is presented in Annex A.

<sup>&</sup>lt;sup>5</sup> See page 3 of http://www.ons.gov.uk/ons/dcp171778\_416983.pdf

Figure 2: Proportion of males aged 85 and over, mid-2004 to mid-2014 (non-zero axis)



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### 5. Population aged 90-99

It is estimated that there were 11,800 people aged between 90 and 99 in Northern Ireland at 30 June 2014, 72.6 per cent of whom were females (8,600) and 27.4 per cent of whom were males (3,200). Ten years previously in mid-2004, females accounted for 76.6 per cent of those aged 90 to 99 and males accounted for 23.4 per cent.

In the period mid-2004 to mid-2014, the population aged 90 to 99 increased by 48.5 per cent from 7,900 to 11,800. The number of males aged 90 to 99 increased from 1,900 to 3,200 over the same period while females in the same age group increased from 6,100 to 8,600 (see Figure 3). Accordingly the percentage growth in the number of males aged 90 to 99 (73.9 per cent) was noticeably higher than that of females (40.8 per cent) over the decade in question.

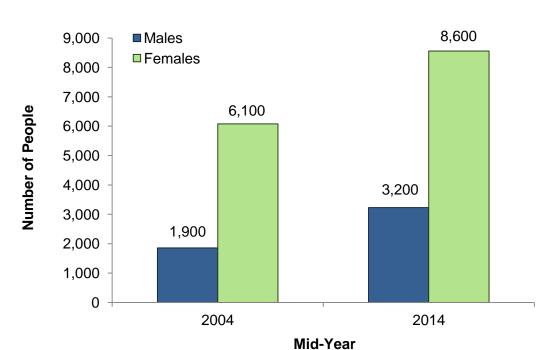


Figure 3: Population aged 90 to 99 by sex, mid-2004 and mid-2014

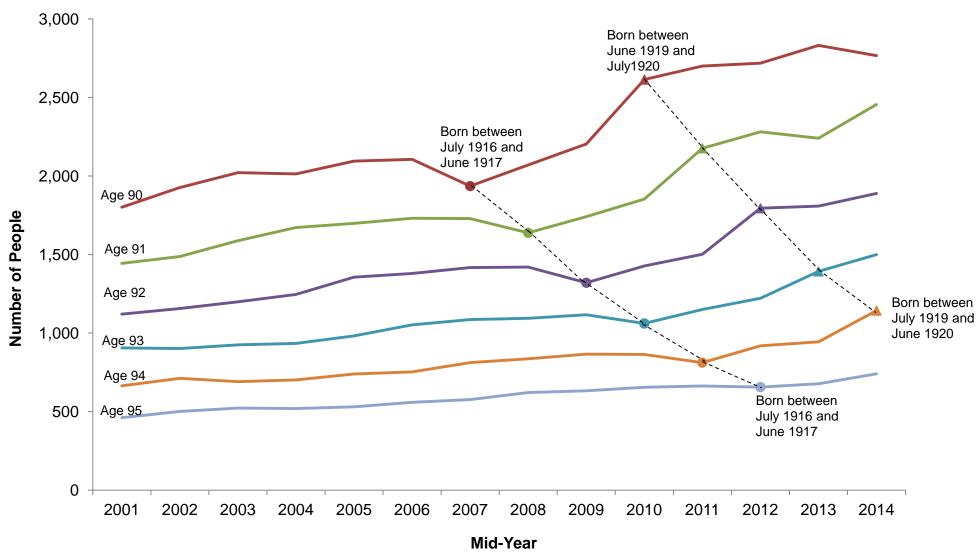
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This age group contains some people who were born during the First World War. For example, someone born in 1915 (after the start of the War) would be aged 99 in mid-2014 whereas someone born in 1918 (the year the War ended) would be aged 96 in mid-2014. Note that the population estimates relate to mid-year (30 June), so that only those born in the first six months of 1918 would reach 96 before the 30th June, and those born in the last six months of 1918 would still be aged 95 at that point.

The war affected the number of births occurring at the time, which had a knock-on effect on the number of people aged 90 and over today<sup>6</sup> (see Figure 4).

<sup>&</sup>lt;sup>6</sup> More detail is available in the births section of the Registrar General Annual Report 2014

Figure 4: Population aged 90-95, Northern Ireland, mid-2001 to mid-2014



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Just prior to the War there were around 30,000 births registered each year. While this number fell to a low of 25,000 in 1917, it then rose year on year until peaking at around 32,500 births in 1920, before stabilising around 30,000 births per annum in the period 1921 to 1923.

As can be seen in Figure 4, the low number of births in 1917 can still be observed in the dips in the population estimates for those aged 90 in 2007, those aged 91 in 2008, those aged 92 in 2009, and so on. Equally, the peak in the number of births in 1920 is still visible in the number of those aged 90 in 2010, those aged 91 in 2011 and those aged 92 in 2012.

It is remarkable how historic birth registrations during this period are still reflected in the population estimates in the early part of the 21st century, despite other events such as the 1918 influenza outbreak and the Second World War, as well as emigration throughout the years.

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

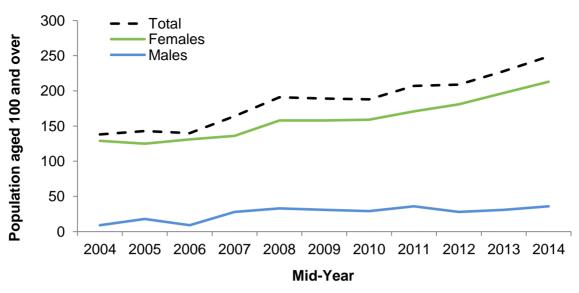
It is estimated that there were 249 centenarians living in Northern Ireland on 30 June 2014, the vast majority of whom (85.5 per cent) were female.

Figure 5 shows how the size and gender composition of the relatively small centenarian group has changed over the ten year period mid-2004 to mid-2014.

Throughout the period in question, the centenarian group is estimated to have increased by 80.4 per cent (138 centenarians in mid-2004 compared with 249 centenarians in mid-2014). with the number of females consistently and notably exceeding the number of males (see Figure 5). During this decade, the male proportion of those aged 100 and over increased from 6.5 to 14.5 per cent.

<sup>&</sup>lt;sup>7</sup>Figures derived from the live births figures available on the Vital Statistics website. As these figures are collected for the calendar year (January to December) rather than the mid-year to mid-year estimates of the population, the average of the year in question and the preceding year is taken to provide an estimate of the number of births in the period between two mid-year points.

Figure 5: Population aged 100 and over by sex, mid-2004 to mid-2014



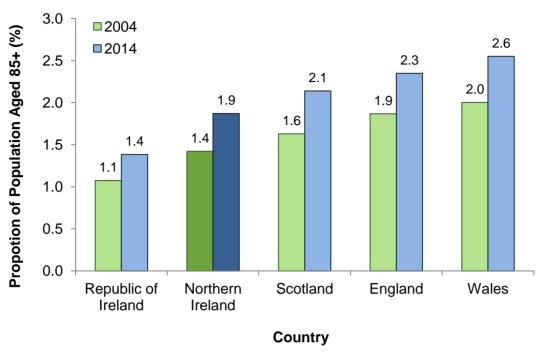
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## 7. Comparison of Population aged 85 and over across the UK and Ireland

Population estimates by age are available for each UK country and the Republic of Ireland. Figure 6 shows that in mid-2014, Northern Ireland had the lowest proportion of its population aged 85 and over (1.9 per cent) of the UK countries, whereas Wales had the highest (2.6 per cent). This was also the case 10 years previously in mid-2004 (1.4 per cent in Northern Ireland, and 2.0 per cent in Wales). This is mainly due to higher fertility rates in Northern Ireland, leading to a large proportion of the population aged under 20. However, the Republic of Ireland had even lower rates: its proportion of the population aged 85 and over in 2014 was similar to that for Northern Ireland a decade ago. Historically, fertility rates in the Republic of Ireland have been higher than those in Northern Ireland.

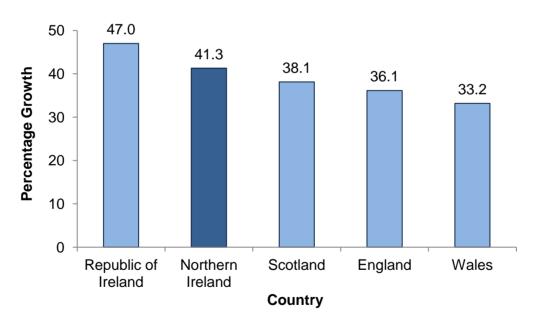
In contrast, Figure 7 shows that the percentage growth of this age group over the decade mid-2004 to mid-2014 has been noticeably higher in Northern Ireland (41.3 per cent) than in the other countries of the UK, but still lower than in the Republic of Ireland (47.0 per cent). This is the result of a combination of differences in age distribution within this age group, age specific mortality rates, and cohort effects of those aging into this age group.

Figure 6: Proportion of population aged 85 and over by country, mid-2004 and mid-2014



**Download Chart** (XLS Format – 1,508KB)

Figure 7: Growth of population aged 85 and over by country, mid-2004 to mid-2014



<u>Download Chart</u> (XLS Format – 1,504KB)

The methodologies used to create statistics for the population aged 85 and over in each of the UK countries are very similar, and produce comparable results (see <u>UK comparison paper</u> for further details).

#### 8. Methodology

#### **Mid-Year Population Estimates**

The Northern Ireland Statistics and Research Agency produce annual <u>mid-year population</u> <u>estimates</u> 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 estimate, ages 90 and over are aggregated into one age-group.

Population estimates for the 11 new Local Government Districts and other areas within Northern Ireland are first created for Super Output Areas (SOAs) which, on average, have a population of 2,000 people. These SOAs become the building blocks to create population estimates for other geographies. Population estimates at the SOA level are generally calculated from an average of two statistical methods: the ratio change and cohort-component methods. In the Ratio Change method, selected indicators of population change are used to update the population from some earlier or base period. The method assumes an unchanged relationship over time between the chosen indicator and the true population. For example, if the chosen indicator increases by five per cent over the period for which estimates are required, the base population is also increased by five per cent. As both methods are equally robust and each have separate advantages and disadvantages, the average of both methods is taken for the final figures. Further information is available in the Methodology Report.

#### Estimates of the population aged 90 and over

To produce single year of age estimates of the population aged 90 and over, NISRA have adopted the Kannisto-Thatcher Survivor Ratio Method<sup>9</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.

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<sup>&</sup>lt;sup>8</sup> That is, the ratio of the true population to the indicator remains constant between the base period and the later period for which estimates are required, hence the name Ratio Change method.

<sup>&</sup>lt;sup>9</sup> The Survivor Ratio Method for Estimating Numbers at High Ages, Thatcher R, Kannisto V, Andreev K, 2002. <a href="http://www.demographic-research.org/Volumes/Vol6/1/">http://www.demographic-research.org/Volumes/Vol6/1/</a>. The Demography of Centenarians in England and Wales, *Population Trends 96* pp5-12, Thatcher R, 1999.

For earlier years, if someone died aged 100 in 2014, this means that they were alive in 2013 aged 99, and aged 98 in 2012 and so on. This is used to produce age distribution profiles. The number of people aged 99 alive in 2013 is estimated from the number of people alive aged 100 in 2014, plus the number of deaths of people aged 100 in 2014. 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.

#### 9. Data Quality

#### 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 statistical bulletin. A more in-depth description on these processes is available in the population and migration Quality Report.

#### 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 between the 1 July and 30 June the following year are included.

During registrations, information provided is first checked by the informant before being finalised on the GRO's electronic Registration and Certificate Modernisation System (RCMS). Appropriate validation checks are embedded within the RCMS to help the Registrar with this process. Statistics are extracted directly from RCMS 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.

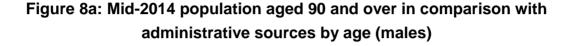
Quality Assessment Reports are available online and contain further details on the quality of death statistics.

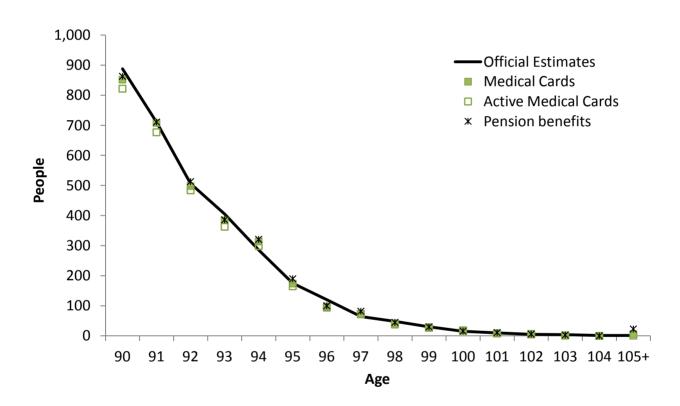
Further checks are made on deaths registrations of people aged 100 and over. Such registrations are flagged by the Vital Statistics and sent back to the GRO in order to manually check their validity.

#### Quality Assurance of the Population aged 90 and over - mid-2014

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 8a and 8b 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>10</sup>, and Pensions data. These graphs show a good degree of comparability across the various data sources, both in terms of numbers<sup>11</sup> and trends.

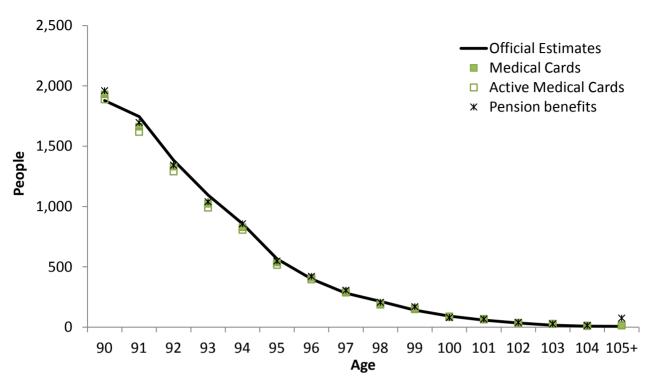




<sup>&</sup>lt;sup>10</sup> Active Medical Card data is Medical Card Registration data that has been used in recent years (further information is available in the mid-2014 population and migration Quality Report

<sup>&</sup>lt;sup>11</sup> Some differences are found between the official estimates and the State Pension data at very high ages. This may be due to different methodologies, and data cleansing processes. State Pension figures are also produced using unvalidated Midas 100% scans of State Pension data. Scans are available on 6-weekly intervals. Data is extracted from administrative systems and can therefore be affected by administrative error.

Figure 8b: Mid-2014 population aged 90 and over in comparison with administrative sources by age (females)



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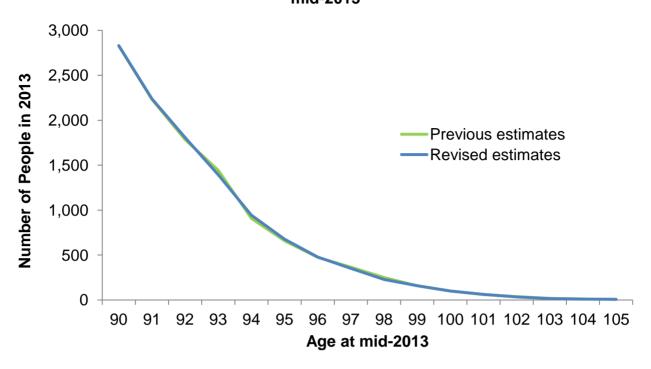
Quality Assurance of the Population aged 90 and over – revised <sup>12</sup> mid-2001 to mid-2013

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>13</sup>. Figure 9 plots the previous estimates for mid-2013 alongside with the revised mid-2013 estimates.

<sup>&</sup>lt;sup>12</sup> "Revised" estimates refer to the estimates of those aged 90 and over at single year of age from mid-2001 to mid-2013 that have been updated with the release of the mid-2014 population estimates at the same ages.

<sup>&</sup>lt;sup>13</sup> http://www.ons.gov.uk/ons/guide-method/revisions/revisions-policies-by-theme/population/population-statistics-revision-policy.pdf

Figure 9: Previous and revised estimates of the population aged 90 and over by age, mid-2013

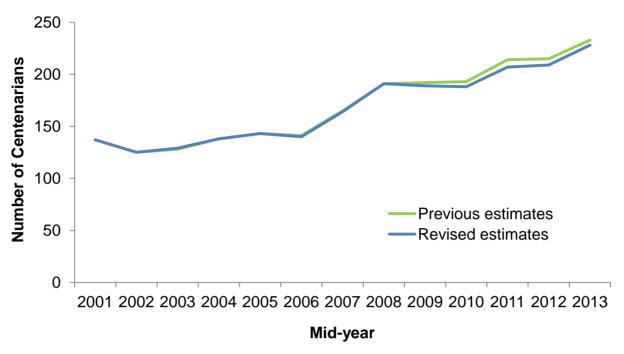


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Most differences are relatively small: the revised figures for the population aged 90 to 94 was 0.2 per cent higher than the previously published estimate, i.e. the number of people aged 90 to 94 in mid-2013 has risen by 19 out of 9,200 people. The population aged 95 to 99 years was 0.7 per cent lower than the previous estimates, decreasing by 14 people to 1,900. The number of centenarians was 2.1 per cent smaller in the revised series. While this percentage change is comparatively larger than for those aged 90 to 94 and 95 to 99, the overall numbers of centenarians is much smaller. Therefore, while the revised estimates of centenarians for mid-2013 are 2.1 per cent lower, this relates to a decrease of five people aged 100 and over, from 233 in the previous estimates to 228 in the revised estimates. As a result, the impact of change in the revised estimates is seen as minor, and the improvement in accuracy is worth the revision.

Figure 10 shows the previous and current estimates of the number of centenarians over the period mid-2001 to mid-2013. 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 2009. Following the methodology, the estimate of the number of centenarians in 2004 will only change if a death is recorded in 2014 of a person aged 110, which is very unlikely.

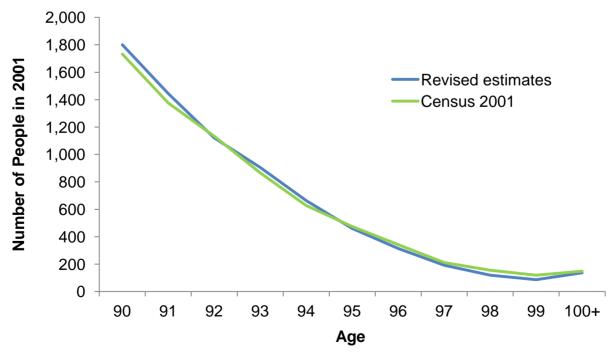
Figure 10: Previous and revised estimates of centenarians, mid-2001 to mid-2013



<u>Download Chart</u> (XLS Format – 1,513KB)

The revised estimates are also quality assured against 2001 and 2011 Census data, and as can be seen in Figures 11a and 11b, the estimates are again broadly in line with both the 2001 and 2011 Census figures.

Figure 11a: Revised estimates of the population aged 90 and over by age, mid-2001 compared to the 2001 Census

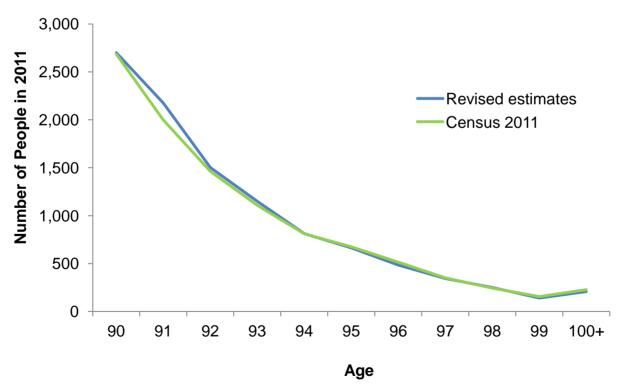


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In 2001, the greatest percentage difference by five year age-bands is for male centenarians, where the revised estimates for males aged 100 and over in mid-2001 are 38.9 per cent smaller than the 2001 Census figures for the same age-sex band. This 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, the 2001 Census refers to the population at 29 April 2001 and 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 (see Figure 11b), with the revised estimates of male centenarians in mid-2011 being 10.0 per cent smaller than the 2011 census figure of the same age-sex group (36 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 11b: Revised estimates of the population aged 90 and over by age, mid-2011 compared to the 2011 Census



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#### 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.

#### **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. The Population and projection data and related information published by NISRA have recently undergone a reassessment of compliance by UKSA. The result of this assessment confirmed that the population statistics for Northern Ireland are designated as National Statistics, subject to NISRA implementing certain requirements within a specific timeframe. The full report and NISRA action plan for meeting the stated requirements can be found on the <u>NISRA website</u>.

#### 10. 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. This makes them consistent with these estimates, however, due to the different methods used to create these estimates (cohort component method for mid-year estimates and Kannisto-Thatcher Survival Ratio Method for estimates of the population aged 85 and over), the trend going from 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.

NISRA September 2015

#### **NOTES TO EDITORS**

- 1. The Northern Ireland 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; the statistics are therefore often referred to as the mid-year estimates. The most recent estimates, published in June 2015, relate to the population at mid-2014.
- 2. 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 death registration data of a new year is added.
- 3. Estimates of the population aged 90 and over, by single year of age and sex, are constrained to mid-year population estimates for the 90 and over age group.
- 4. 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 whole population of Northern Ireland.
- 5. Statistics for the population aged 85 and over are available on the <u>NISRA Website</u>. An <u>infographic</u> highlighting the important figures and trends in the data has also been released.
- 6. An age friendly profile of older people in each Local Government District, in terms of numbers, health and living environment, is available on NINIS.
- 7. Equivalent and comparable estimates of the population aged 90 and over for <a href="England and Wales">England and Wales</a> by the Office for National Statistics (ONS), and for <a href="Scotland">Scotland</a> by National Records Scotland (NRS) will also be released on 30 September 2015. A <a href="UK">UK</a> comparison paper analysing the comparability of these estimates between the four UK countries is also available.
- 8. Estimates of the population aged 85 and over for mid-2015, as well as a revised series for mid-2001 to mid-2014, are expected to be published in September 2016.
- 9. The revisions policy for Northern Ireland migration statistics is available <a href="here">here</a>.
- 10. We welcome feedback from users on the content, format and relevance of this release. Please complete a short survey or send feedback directly to census.nisra@dfpni.gov.uk.
- 11. Follow NISRA on <u>Twitter</u> and <u>Facebook</u>.
- 12. All media inquiries should be directed to the DFP Communications Office:

Telephone: 028 9016 3389

13. Further statistical information can be obtained from NISRA Customer Services:

Telephone: 028 9034 8160 Fax: 028 9034 8161

E-mail: <u>census.nisra@dfpni.gov.uk</u>

Responsible Statistician: Brian Green

Annex A: Estimates of those aged 85 years and over by sex and 5 year age bands, mid-2001 to mid-2014

Mid-Year	Persons 85-89	Persons 90-94	Persons 95-99	Persons 100-104	Persons 105+	Persons 85+	Persons All Ages
2001	16,200	5,935	1,172	128	9	23,460	1,688,838
2002	16,160	6,183	1,259	119	6	23,727	1,697,534
2003	15,925	6,423	1,339	124	5	23,816	1,704,924
2004	16,300	6,567	1,371	131	7	24,376	1,714,042
2005	17,392	6,870	1,450	133	10	25,855	1,727,733
2006	18,343	7,021	1,536	131	9	27,040	1,743,113
2007	19,208	6,980	1,594	153	11	27,946	1,761,683
2008	20,028	7,058	1,653	186	5	28,930	1,779,152
2009	20,562	7,247	1,734	183	6	29,732	1,793,333
2010	20,977	7,819	1,846	182	6	30,830	1,804,833
2011	21,335	8,340	1,883	204	3	31,765	1,814,318
2012	21,673	8,934	1,897	204	5	32,713	1,823,634
2013	21,947	9,216	1,893	222	6	33,284	1,829,725
2014	22,406	9,753	2,036	242	7	34,444	1,840,498
Mid-Year	Males 85-89	Males 90-94	Males 95-99	Males 100-104	Males 105+	Males 85+	Males All Ages
2001	4,771	1,396	197	11	0	6,375	824,273
2002	4,805	1,463	227	5	0	6,500	828,986
2003	4,817	1,518	238	8	0	6,581	833,104
2004	5,012	1,591	267	9	0	6,879	838,251
2005	5,520	1,682	274	18	0	7,494	845,301
2006	5,934	1,741	291	9	0	7,975	853,110
2007	6,187	1,727	281	28	0	8,223	862,256
2008	6,476	1,778	298	33	0	8,585	870,998
2009	6,679	1,887	297	30	1	8,894	878,562
2010	6,879	2,136	338	28	1	9,382	884,535
2011	7,116	2,263	377	36	0	9,792	889,322
2012	7,389	2,480	382	27	1	10,279	894,548
2013	7,545	2,580	419	31	0	10,575	897,145
2014	7,800	2,794	437	35	1	11,067	902,711
Mid-Year	Females 85-89	Females 90-94	Females 95-99	Females 100-104	Females 105+	Females 85+	Females All Ages
2001	11,445	4,539	975	117	9	17,085	864,565
2002	11,355	4,720	1,032	114	6	17,227	868,548
2003	11,108	4,905	1,101	116	5	17,235	871,820
2004	11,288	4,976	1,104	122	7	17,497	875,791
2005	11,872	5,188	1,176	115	10	18,361	882,432
2006	12,409	5,280	1,245	122	9	19,065	890,003
2007	13,021	5,253	1,313	125	11	19,723	899,427
2008	13,552	5,280	1,355	153	5	20,345	908,154
2009	13,883	5,360	1,437	153	5	20,838	914,771
2010	14,098	5,683	1,508	154	5	21,448	920,298
2011	14,219	6,077	1,506	168	3	21,973	924,996
2012	14,284	6,454	1,515	177	4	22,434	929,086
2013	14,402	6,636	1,474	191	6	22,709	932,580
2014	14,606	6,959	1,599	207	6	23,377	937,787

<u>Download Table</u> (XLS Format – 1,504KB)