

General Register Office
for
SCOTLAND
information about Scotland's people

Centenarians in Scotland, 2002 - 2006

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Centenarians in Scotland 2002-2006

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1. Introduction

- 1.1. The number of centenarians (people aged 100 years and over) across the industrialised world has been growing at an increasing rate since the 1950s¹. At the start of the 20th century, Scottish centenarians were extremely rare, but by the start of the 21st century, there were estimated to be over 500 people aged 100 or over in Scotland. Since the 1950s, centenarians have been growing at a faster rate than any other age group.
- 1.2. This increase in centenarians has been largely driven by increased survival rates of older people, brought on by improvements in hygiene, sanitation, medical treatment, housing and living standards in general.
- 1.3. In recent years, there has been an increased interest in estimating the population of very elderly people in Scottish society, as the numbers are expected to carry on increasing in the foreseeable future and reflect the general trends seen in today's ageing societies.
- 1.4. This report details the numbers of people aged 85 to 104, by single year of age, and the number of people aged 105 and over in Scotland, yearly, from 2002 to 2006. As the data shows, in Scotland in 2002, there were approximately 29,460 people (22,910 females and 6,550 males) aged between 90 and 99. By 2006, this figure had risen to 31,730 people (24,180 females and 7,550 males). Over the same period, centenarians (people aged 100 and over) had risen from 520 (460 females and 60 males) to 680 (600 females and 80 males).

2. Methodology

- 2.1. The General Register Office for Scotland (GROS) produces population estimates using the 'cohort component' method. Starting with the most recent census (2001), each year the population of a given area is aged on by one year, births in the area are added on to the population, deaths in the area are subtracted and estimates of migration are also used to allow for people moving in and moving out.
- 2.2. However this method is not reliable for single year of age populations for the very elderly because the census itself is less reliable for populations aged 90 and over (as it becomes harder to establish firmly someone's age the older they get). So, in the standard GROS Mid-Year Estimate of the Scottish population, people aged 90 and over are aggregated together into one group.
- 2.3. For England & Wales, the Office for National Statistics uses the Kannisto-Thatcher² (KT) method to estimate single year of age populations for people aged 90 and over, which can be found in the Population section (<http://www.statistics.gov.uk/CCI/nugget.asp?ID=1875&Pos=&ColRank=1&Rank=358>) of the ONS web site. In order to produce comparable estimates, GROS has used the same method to produce estimates for Scotland.
- 2.4. The KT method uses 'age at death' data to build up distribution profiles of the numbers of elderly people in Scotland in previous years. For example, if

¹ 'Kannisto, V 1997 The Advancing frontier of survival. Odense Monographs on Population Aging 3. Odense University Press.'

² 'Thatcher, R, 1999, The demography of centenarians in England and Wales. Population Trends 96.'

someone dies in 2006 aged 105, then this means that they were alive and aged 104 in 2005 and 103 in 2004 etc. By collating 'age at death' data for a series of years, it becomes possible to make an estimate of the number of people of a given age alive in any particular year and so create age distribution profiles, assuming that migration at these oldest ages is minimal.

- 2.5. To make estimates for 2006, it is not possible to use death data, as we are interested in the population who are currently or very recently alive. So the KT method uses an average of the last 5 years of age at death information to produce an estimate of the number of survivors for the most current year. Estimates are then controlled to agree with the GROS Mid-Year Estimate of people aged 90 and over.
- 2.6. One consequence of this method is that, with each year, previous years' estimates become more accurate; more death data become available to inform the age profiles. For example, the 2008 estimates of 2006 will be more accurate than the 2007 estimates of 2006.
- 2.7. Population estimates for single year of age from 85 to 89 and the 90 and over age group were found to be broadly similar to comparable data available from the Department for Work and Pensions (DWP). GROS are currently researching the appropriate use of alternative data sources in this context, for quality assurance purposes.

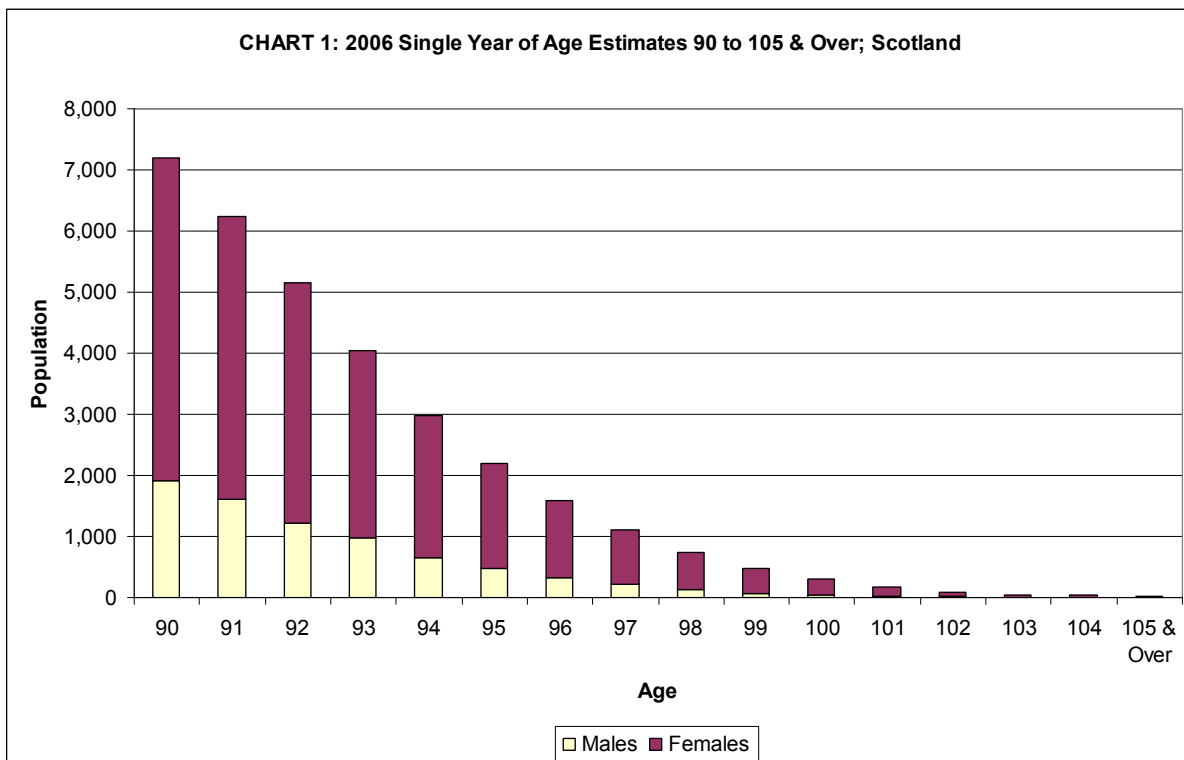
3. Results

- 3.1. The population estimates for males and females aged 85 and over, by single year of age (85, 86, 87 etc) up to the age of 104 and then aggregated to 105 and over, for Scotland, from 2002 to 2006, are shown in [Table 1](#).
- 3.2. The figures have been rounded to the nearest 10, to allow for methodological inaccuracies.
- 3.3. As [Chart 1](#) below shows, in 2006, elderly females outnumbered elderly men. In fact, females made up just over 76% of the '90 and over' age group and 88% of centenarians.
- 3.4. [Chart 2](#) shows the number of centenarians in Scotland from 2002 to 2006. The population of centenarians increased from 560 to 680 over the period and the proportion of male centenarians rose from 9% to 12%.

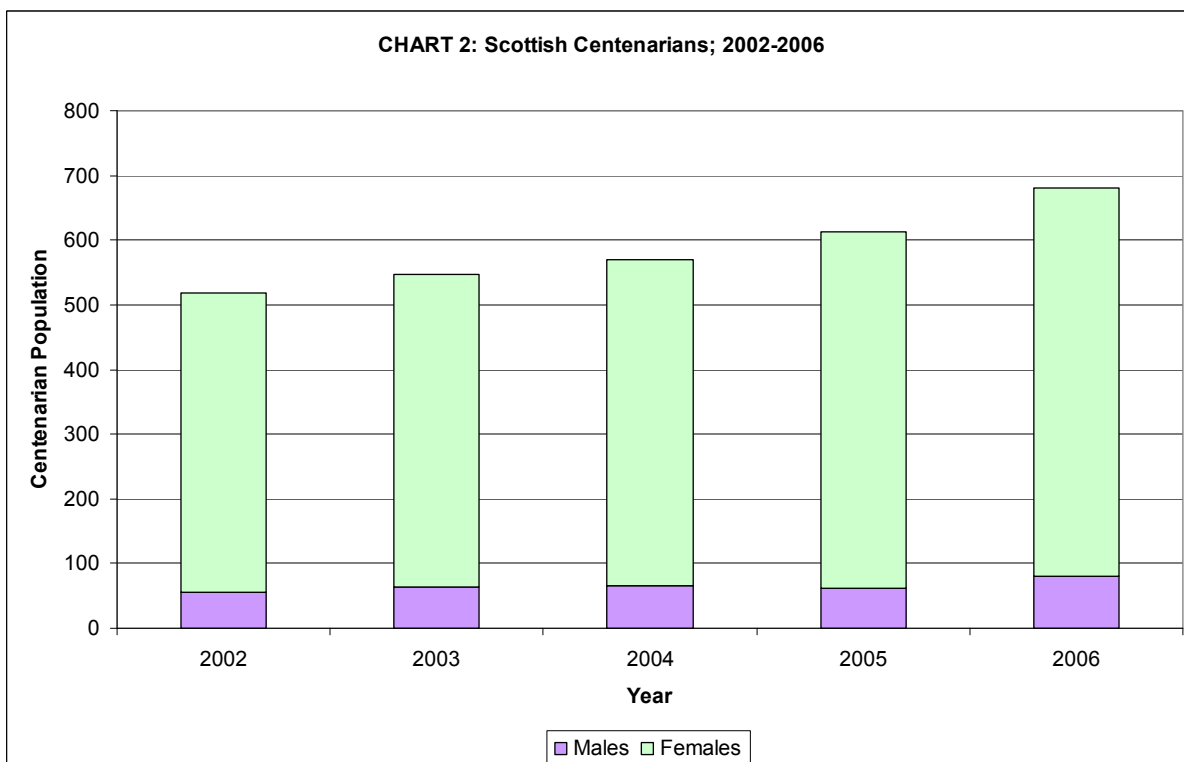
4. Sources

- 4.1. Population Estimates for Scotland 2002 - 2006: General Register Office for Scotland
- 4.2. 2006-based National Population Projections: Office for National Statistics
- 4.3. Old Persons Benefit Recipients: Department of Work & Pensions
- 4.4. Death Registration Data, 1997 – 2006, General Register Office for Scotland

5. Chart 1:



6. Chart 2:



7. Table 1 – Scottish Centenarian Data; 2002-2006

Mid-2002 to Mid-2006 Population Estimates of the very elderly (including centenarians) (provisional).

Scotland

Rounded to the nearest ten

Mid-year population	Persons 90-99	Persons 100+	Persons 85	Persons 86	Persons 87	Persons 88	Persons 89	Persons 90	Persons 91	Persons 92	Persons 93	Persons 94	Persons 95	Persons 96	Persons 97	Persons 98	Persons 99	Persons 100	Persons 101	Persons 102	Persons 103	Persons 104	Persons 105+
2002	29,460	520	13,510	12,960	12,210	10,700	8,650	7,240	5,910	4,720	3,710	2,680	1,890	1,350	930	620	390	230	130	80	40	30	20
2003	29,970	550	12,570	11,900	11,310	10,550	9,050	7,480	5,920	4,750	3,650	2,820	2,000	1,370	950	630	410	250	140	80	40	20	10
2004	30,660	570	13,680	11,130	10,360	9,780	9,070	7,530	6,160	4,810	3,730	2,800	2,100	1,480	980	660	420	260	150	80	40	20	10
2005	31,430	610	19,480	12,250	9,740	8,850	8,280	7,600	6,260	5,040	3,810	2,900	2,140	1,510	1,030	670	450	280	160	90	50	20	20
2006	31,730	680	18,530	17,520	10,820	8,380	7,540	7,210	6,240	5,150	4,050	2,980	2,200	1,590	1,110	740	480	300	180	100	50	30	30
	Males 90-99	Males 100+	Males 85	Males 86	Males 87	Males 88	Males 89	Males 90	Males 91	Males 92	Males 93	Males 94	Males 95	Males 96	Males 97	Males 98	Males 99	Males 100	Males 101	Males 102	Males 103	Males 104	Males 105+
2002	6,550	60	4,290	3,730	3,480	2,840	2,260	1,880	1,450	1,070	780	520	330	220	140	90	60	30	10	10	<5	<5	<5
2003	6,810	60	3,890	3,690	3,140	2,920	2,320	2,000	1,470	1,130	780	560	360	230	150	90	60	30	10	10	10	<5	<5
2004	7,040	70	4,370	3,350	3,100	2,670	2,430	1,970	1,540	1,150	850	580	390	260	160	100	50	30	20	10	<5	<5	<5
2005	7,420	60	6,450	3,810	2,860	2,560	2,180	2,030	1,580	1,270	860	650	420	280	180	100	60	30	20	10	<5	<5	<5
2006	7,550	80	6,150	5,690	3,270	2,350	2,100	1,900	1,610	1,220	970	650	480	320	210	120	70	40	20	10	10	<5	<5
	Females 90-99	Females 100+	Females 85	Females 86	Females 87	Females 88	Females 89	Females 90	Females 91	Females 92	Females 93	Females 94	Females 95	Females 96	Females 97	Females 98	Females 99	Females 100	Females 101	Females 102	Females 103	Females 104	Females 105+
2002	22,910	460	9,220	9,230	8,730	7,850	6,400	5,350	4,460	3,640	2,930	2,160	1,560	1,130	800	530	340	200	120	70	40	20	20
2003	23,160	490	8,680	8,210	8,170	7,640	6,730	5,480	4,450	3,620	2,870	2,260	1,640	1,140	800	540	350	220	130	70	40	20	10
2004	23,620	500	9,310	7,790	7,260	7,120	6,640	5,550	4,630	3,660	2,880	2,220	1,710	1,220	830	560	370	220	140	80	40	20	10
2005	24,020	550	13,030	8,440	6,890	6,300	6,100	5,580	4,690	3,770	2,960	2,260	1,720	1,240	860	570	390	240	140	80	50	20	20
2006	24,180	600	12,380	11,830	7,550	6,040	5,430	5,300	4,630	3,930	3,080	2,330	1,720	1,280	900	620	410	260	160	80	50	30	20

Source: General Register Office for Scotland

Please note these figures are estimates and have been rounded to the nearest ten people.

These estimates are provisional. They will be revised when final deaths data become available.

The survivorship rate methodology used in these estimates means that previous years estimates may change when a new year of data are added.

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ENQUIRIES ABOUT THIS PUBLICATION Enquiries should be addressed to: Statistics Customer Services, General Register Office for Scotland, Ladywell House, Edinburgh, EH12 7TF Telephone: (0131) 314 4299, Fax: (0131) 314 4696, E-mail: customer@gro-scotland.gsi.gov.uk.

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The NORTHERN IRELAND STATISTICS AND RESEARCH AGENCY (NISRA) is Northern Ireland's official statistics organisation. The Agency also has responsibility, in Northern Ireland, for the registration of births, marriages, adoptions and deaths and the Census of Population.	Northern Ireland Statistics and Research Agency, McAuley House, 2-14 Castle Street, Belfast, BT1 1SA Telephone 028 9034 8100 Fax 028 9034 8106 Website: www.nisra.gov.uk

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