

# Registrar General Northern Ireland Annual Report 2009

November 2010







#### The Northern Ireland Statistics and Research Agency

The Northern Ireland Statistics and Research Agency (NISRA) was established as an Executive Agency within the Northern Ireland Department of Finance and Personnel on 1 April 1996. NISRA is the principal source of official information of socio-economic conditions in Northern Ireland. The Agency provides statistics and social research services, undertakes the Northern Ireland census of population and administers the civil registration of births, deaths, marriages, civil partnerships and adoptions.

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- Provide a statistical and research service to support the decision making by Government in Northern Ireland and to inform the Assembly and the wider community through the dissemination of reliable official statistics; and
- Administer the marriage laws and to provide a system for the civil registration of births, marriages, civil partnerships, adoptions and deaths in Northern Ireland.

NISRA can be found on the internet at www.nisra.gov.uk

Northern Ireland Statistics and Research Agency
McAuley House
2-14 Castle Street
Belfast
BT1 1SA

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# Eighty-Eighth Annual Report of the Registrar General 2009

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Section 154 of the Civil Partnership Act 2004

by the

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This report has been prepared by the Demography and Methodology Branch of the Northern Ireland Statistics and Research Agency. All queries relating to its statistical or data content and requests for further information should be addressed to Customer Services. All of the data included in this report is available on the NISRA web site (www.nisra.gov.uk) or can be obtained in electronic format from Customer Services, NISRA.

#### **Customer Services**

Northern Ireland Statistics and Research Agency

McAuley House 2-14 Castle Street Belfast BT1 1SA

Telephone: 02890 348160

Facsimile: 02890 348161

e-mail: census.nisra@dfpni.gov.uk

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#### **Foreword**

I have pleasure in presenting my 2009 Annual Report to the Northern Ireland Assembly. The report outlines the work of the General Register Office and presents detailed information on the demography of Northern Ireland. Detailed statistical tables are presented as a supplement to the report on the attached compact disc and on the Northern Ireland Statistics and Research Agency website (www.nisra.gov.uk).

During 2009 the United Kingdom and indeed most of the world experienced difficult economic conditions. While the population of Northern Ireland has continued to grow over the period, the number of migrants coming to live in Northern Ireland has decreased by almost 9,000 between 2006-7 and 2008-9.

In August 2011 the Northern Ireland Statistics and Research Agency is hosting an international conference on "The Demography of Ageing and Official Statistics" in partnership with the International Association for Official Statistics. The conference will take place in Queen's University, Belfast and will include internationally renowned speakers. As the population is ageing it is vitally important that we understand the reasons for this, at what rate the population is ageing and what the potential consequences are for policy makers, and society in general. In this context, a special chapter has been included in this year's report which examines ageing in Northern Ireland.

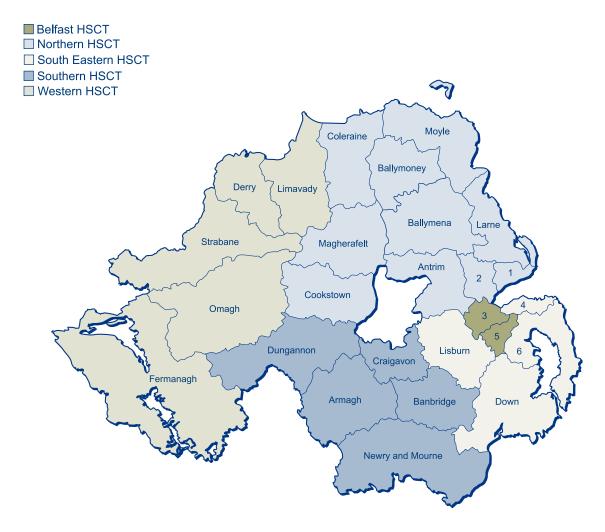
This year, within the General Register Office, there has been significant progress in the digitising of the paper based records which will lead to efficiency savings as well as preserving important historical documents. In addition, preparations for the 2011 Census on 27 March 2011 are well under way.

I welcome comments on the format and content of the Annual Report. I hope you find it informative and useful.

**Norman Caven** 

Registrar General for Northern Ireland November 2010

# Northern Ireland's Health & Social Care Trusts and Local Government Districts



- 1. Carrickfergus
- 4. North Down
- 2. Newtownabbey
- 5. Castlereagh
- 3. Belfast
- 6. Ards

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# Chapter 1 Demographic Overview of Northern Ireland



#### 1.1 Introduction

- 1.1.1. The number of people living in Northern Ireland continues to rise. The estimate of the population resident in Northern Ireland at 30 June 2009 was 1,788,900.
- 1.1.2. The mid-2009 figure is an increase in population over the preceding twelve months of 13,900 people or 0.8 per cent of the population. This increase in population is due to two factors. Firstly, there were significantly more births than deaths giving a natural increase in population of 10,600 people. Secondly, it is estimated that the Northern Ireland population grew by 2,100 people as a result of net migration. There was also a net gain of 1,200 due to other changes, including Her Majesty's Forces stationed in Northern Ireland.
- 1.1.3. The rate of population growth in 2009 exceeds that seen, on average, over the last 30 years. The increase over the period mid-1979 to mid-2009 is estimated to be 260,600 people, or 17 per cent of the mid-1979 population of 1,528,300. This increase is equivalent to an average annual rate of growth over the last 30 years of 0.5 per cent, just over half the increase seen between 2008 and 2009.
- 1.1.4. In terms of civilian migration it is estimated that in the year to mid-2009, 23,500 people came to live here and 21,400 people left Northern Ireland to live elsewhere; thus giving a net migration gain of 2,100 people. Of the 23,500 people who came to live here; 5,900 came from the eight Eastern European countries that joined the European Union in May 2004.
- 1.1.5. In 2009, there were 24,910 births registered to Northern Ireland mothers, a decrease of 2.8 per cent on the 2008 figure of 25,631 births. The decrease in the number of births last year comes after six consecutive years of increases in the number of births registered.
- 1.1.6. The number of births registered in 2009 remains well above the record low in 2002 when only 21,385 births were registered, but is still much lower than historical numbers observed. As a comparison the number of births registered in Northern Ireland in 1979 was 28,178 births, which is 11.6 per cent higher than the number registered in 2009. Moreover the peak during the baby boom was 34,345 births registered in 1964; 9,435 higher than the 2009 figure.
- 1.1.7. In 2009 there were 14,413 deaths registered in Northern Ireland, a decrease of 494 deaths or 3.3 per cent on the 14,907 deaths registered in 2008. Over the last thirty years the death rate has fallen by around a

- quarter; from 11.0 deaths per 1,000 population in 1979, to 8.1 deaths per 1,000 population in 2009.
- 1.1.8. In 2009 there were 7,931 marriages celebrated, a decrease of 579 marriages or 6.8 per cent on the 2008 figure of 8,510 marriages. Marriage law was reformed in 2004 introducing, among other things, less strict residency requirements for marriage. This allowed couples to marry in the venue of their choice and making it easier for people from outside Northern Ireland to get married here. One result of the new law is that of civil marriages in 2009, 44 per cent took place in an approved venue, rather than the Registrar's Office.
- 1.1.9. There were 2,176 divorces granted in 2009, this is a decrease of 597 divorces or 21.5 per cent from the 2008 figure of 2,773 divorces. The number of divorces recorded in 2007 (2,913) was the largest on record for Northern Ireland.
- 1.1.10. On 5 December 2005 the Civil Partnership Act came into force across the United Kingdom. The new legislation enabled same-sex couples to obtain legal recognition of their relationship. During 2009 there were 96 civil partnerships registered here, this compares to 86 civil partnerships registered in 2008 and 111 civil partnerships registered in 2007.

#### **Key Points**

#### **Population and Migration**

- The size of the Northern Ireland resident population rose in the year to 30 June 2009 by 13,900 people or 0.8 per cent to 1,788,900.
- There are more births than deaths in Northern Ireland leading to the population growing through natural change. In the year to 30 June 2009, births exceeded deaths by 10,600. This figure was similar to that for the year to 30 June 2008, which was the highest level of natural change seen since the year to mid-1992.
- In the year to mid-2009 there was population gain for Northern Ireland of 2,100 people due to civilian migration. Other changes added a further 1,200 people to the population, including Her Majesty's Forces stationed in Northern Ireland.
- In terms of civilian migration it is estimated that in the year to mid-2009, 23,500 people came to live here and 21,400 people left Northern Ireland to live elsewhere; thus giving a net migration gain of 2,100 people. Of the 23,500 people who came to live here; 5,900 came from the eight Eastern European countries that joined the European Union in May 2004.

- Since 1999 the number of children in the population has fallen from 407,500 to 382,100 a fall of 6.2 per cent. In contrast, the number of pensioners has increased from 258,000 to 301,900 a rise of 17.0 per cent between 1999 and 2009. The working age population has increased by 9.0 per cent, from 1,013,500 in 1999 to 1,104,900 in 2009.
- Over the longer term since 1979, the number of children has fallen by 16.0 per cent, while the working age and pensioner populations have increased by 28.6 and 41.1 per cent respectively.

#### **Projected Population (2008-Based)**

- The Northern Ireland population is projected to exceed 1.8 million by 2010 and 1.9 million by 2019. Longerterm projections indicate the population will reach 2.0 million by the early 2030s.
- The number of children aged under 16 is projected to increase marginally over the next fifteen years from 381,000 children in 2008 to a projected 398,000 children in 2023 (four per cent increase).
- The number of adults aged 16-64 is projected to increase from 1,145,000 in 2008 to 1,192,000 by 2023, an increase of 47,000 or 4.1 per cent.
- The number of people aged 65 and over is projected to increase from 249,000 in 2008 to 356,000 by 2023, an increase of 107,000 or 43.1 per cent.
- The number of older people is projected to increase markedly relative to the number of younger people; as a consequence the average (mean) age of the population is expected to rise from 37.6 years in 2008 to 40.4 years by 2023.

#### Births

- There were 24,910 births registered in 2009, a decrease of 721 (or 2.8 per cent) on the 2008 figure and almost 3,300 fewer than the number of births registered in 1979.
- In 2009, the average age of women at childbirth was 30 years compared with 29 years in 1999, 28 years in 1989 and 28 years in 1979.
- In 2008 fertility reached replacement level (2.10 children per "average woman") for the first time since 1991. In 2009 fertility levels fell slightly below replacement level (2.04); however this is a 17 per cent recovery from the record low of 1.75 in 2000.

#### **Deaths/Stillbirths**

- In 2009 there were 14,413 deaths registered in Northern Ireland, a decrease of 494 deaths or 3.3 per cent on the 14,907 deaths registered in 2008.
- The expectation of life at birth for males and females based on mortality rates of recent years was 76.7 and 81.3 years respectively, with corresponding figures for men and women based on the mortality rates of 1922 of 53.8 and 54.4 years respectively.
- In 2009, the two most common causes of death were cancer (3,885 deaths – 27.0 per cent of deaths) and ischaemic heart disease (2,305 deaths – 16.0 per cent of deaths).
- There were 4.8 stillbirths per 1,000 births (live and still) in 2009, a substantial reduction from 20.5 stillbirths per 1,000 births in the early 1960s.
- There was a similar fall in infant deaths from 26.5 infant deaths per 1,000 live births in the early 1960s to 5.1 infant deaths per 1,000 live births in 2009.

#### Marriages/Divorces

- There were 7,931 marriages celebrated in 2009, a decrease of 579 marriages on the 2008 figure of 8,510 marriages. This is in contrast to the early 1970s when around 12,000 marriages were celebrated each year.
- On 1 January 2004, new marriage legislation came into effect in Northern Ireland. The new law allows civil marriage ceremonies to be conducted outside Registrar's Offices in a number of approved venues. In 2009, 1,018 civil marriage ceremonies (43.7 per cent of all civil marriage ceremonies) were held in approved venues; this compares with 1,056 (42.7 per cent of all civil marriage ceremonies) such ceremonies in 2008.
- There were 2,176 divorces granted in 2009, this is a decrease of 597 divorces or 21.5 per cent from the 2008 figure of 2,773 divorces. The number of divorces recorded in 2007 (2,913) was the largest on record for Northern Ireland.

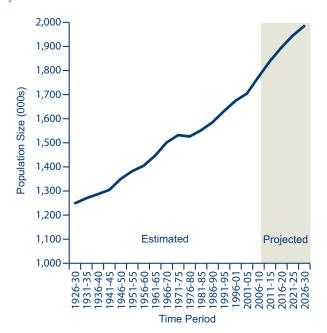
#### **Civil Partnerships**

 On 5 December 2005 the Civil Partnership Act came into force across the United Kingdom. The new legislation enabled same-sex couples to obtain legal recognition of their relationship. During 2009 there were 96 civil partnerships registered here, this compares to 86 registered in 2008 and 111 registered in 2007.

#### 1.2 Population

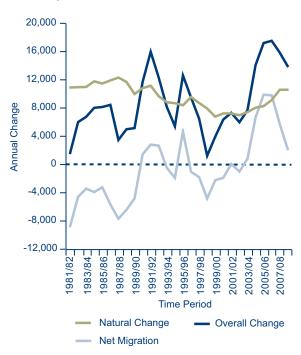
- 1.2.1. The latest estimate of the size of the Northern Ireland population (30 June 2009) is 1,788,900 people. Twenty-one per cent of the population were aged under 16 years, 17 per cent were of pensionable age (60 years and over for women and 65 years and over for men), with the remaining 62 per cent of the population of working age.
- 1.2.2. In the 12 months to 30 June 2009, Northern Ireland's population is estimated to have risen by 13,900 persons. This is made up of an increase of 10,600 people attributable to natural growth (i.e. more births than deaths), and a net inward migration to Northern Ireland of 2,100 people. Other changes added a further 1,200 persons, including Her Majesty's Forces stationed in Northern Ireland.
- 1.2.3. Figure 1.1 shows the trend of increasing population, although there was a slight decrease in population in the early 1970s as a result of high levels of net outward migration at that time. Latest 2008-based population projections for Northern Ireland show that the population is projected to continue to increase.

Figure 1.1: Population of Northern Ireland (1926 to 2009 estimated – 2010 to 2030 projected) – non-zero y-axis



1.2.4. It can be seen from the trends in natural change and net migration presented in Figure 1.2 that, prior to 2004, population increase was mostly due to natural change. However, in contrast, in 2004-5 the contributions to population increase from natural change and migration were of a similar magnitude. From 2005-6 to 2007-8, the contribution from migration was larger than the contribution from natural change. For the most recent year though, natural change has again become the main driver, accounting for three-quarters of population change in 2008-9.

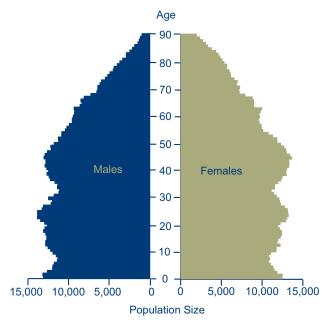
Figure 1.2: Components of population change (1981-2 to 2008-9)



#### Age and Sex Structure

1.2.5. The age structure of Northern Ireland's population continues to get older due to a long period of below replacement level fertility (in western countries a total period fertility rate of about 2.1 is required to maintain long-term population levels) and increasing life expectancy. In mid-2009, there were more females (51 per cent) than males in Northern Ireland. Twenty-two per cent of males were aged under 16 years old compared with 20 per cent of females, while 65 per cent of males and 58 per cent of females were of working age. Figure 1.3 shows the age structure of the population in 2009.

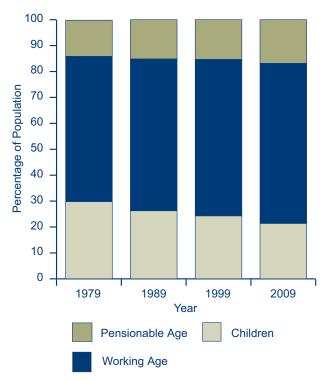
Figure 1.3: Northern Ireland population pyramid by sex and age (2009)



1.2.6. During the twelve months to June 2009, the number of children aged 0-15 years increased by 0.3 per cent, the number of people of working age increased by 0.6 per cent while those of pensionable age increased by 2.0 per cent. In overall terms the Northern Ireland population increased by 0.8 per cent or 13,900 people. In the decade to 2004, the overall annual rate of population increase was around 6,700 persons (equivalent to 0.4 per cent each year). From mid-2004 onwards, increases were significantly larger at between 0.8 and 1.0 per cent each year.

1.2.7. Over the past thirty years, low fertility levels have resulted in a decrease in the number of children aged 0-15 years (16.0 per cent decrease). In contrast, the number of people of working age has increased by 28.6 per cent; and those of pensionable age have increased by 41.1 per cent. The changing age structure of the population since 1979 is illustrated in Figure 1.4.

Figure 1.4: Changing age structure of Northern Ireland population (1979 to 2009)



#### Estimates of the Population aged 85 and over

1.2.8. More detailed statistics of the population aged 85 and over in Northern Ireland were released on 30th September 2010<sup>1</sup>, providing estimates by sex and single year of age. In June 2009, 28,700 people or around 1.6 per cent of the population were aged 85 years and over. This number has increased by 5,100 people (+22 per cent) in the seven year period between June 2002 and June 2009. Within the population aged 85 and over, women significantly outnumber men at 70 per cent of this population group.

1.2.9. It is estimated that in June 2009 there were just under 200 centenarians (those aged 100 and over) living in Northern Ireland, with the number of centenarians living in Northern Ireland having increased by around 50 per cent since June 2002. Table 1.1 shows the Northern Ireland estimated population aged 85 and over in 2002 and 2009.

<sup>1</sup> Further detail available at http://www.nisra.gov.uk/demography/ default.asp134.htm

Table 1.1: Estimated population aged 85 and over in Northern Ireland (2002 and 2009)

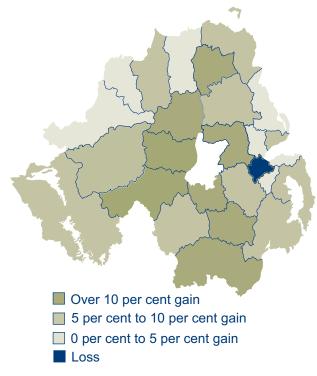
Age Group		2002		2009
	Males	Females	Males	Females
85 - 89	4,822	11,349	6,572	13,464
90 - 94	1,432	4,613	1,819	4,966
95 - 99	215	1,030	306	1,371
100+	9	114	20	162
Total 85+	6,478	17,106	8,717	19,963

#### **Area Comparisons within Northern Ireland**

- 1.2.10. The pattern of continuing population growth is evident within the majority of Northern Ireland's 26 Local Government Districts. Indeed, all Local Government Districts experienced a natural increase of population (more births than deaths) between mid-2008 and mid-2009. The largest natural increase of population was in Belfast Local Government District, adding nearly 1,000 people.
- 1.2.11. However, when one accounts for migration, including Armed Forces movement, the population of Belfast (0.0 per cent) and Limavady (-0.4 per cent) Local Government Districts experienced either virtually no growth or a loss in population between 2008 and 2009.
- 1.2.12. In contrast Craigavon and Dungannon Local Government Districts had the greatest increases in population (+1.7 per cent and +1.9 per cent respectively). These rates of increase are more than twice the Northern Ireland percentage increase (+0.8 per cent). The populations of Antrim, Lisburn and Newry & Mourne Local Government Districts also increased by 1.5 per cent.
- 1.2.13. Newry and Mourne was the Local Government District with the highest proportion of children among its population (24.0 per cent), while North Down had the lowest proportion (18.4 per cent). In 2009, North Down Local Government District had the highest proportion of the population of pensionable age (21.3 per cent) and Derry Local Government District had the lowest proportion (13.7 per cent).
- 1.2.14. Figure 1.5 shows the percentage change in population between mid-2001 and mid-2009 for each Local Government District area. It is better to compare population change over a longer time frame, as population change tends to fluctuate from year to year, particularly

for smaller areas. The areas with the fastest growing population (e.g. Banbridge, Craigavon and Dungannon Local Government Districts) tend to experience both net population in-migration and natural growth.

Figure 1.5: Percentage population change by Local Government District Area (2001 to 2009)



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#### Small Area Population Estimates<sup>2</sup>

- 1.2.15. Population estimates for smaller geographical areas were created as part of the update of the Multiple Deprivation Measure 2010. Estimates for broad age-sex groups for the period 2001 to 2008 were published for Super Output Areas (SOAs), Electoral Wards and Neighbourhood Renewal Areas. Also, estimates of the total population were produced for Census Output Areas (COAs) and Settlements (2008 only).
- 1.2.16. The fastest growing areas tended to be located in suburban areas within commuting distance of major urban centres. Dispersal from Greater Belfast followed a distinct pattern, with the direction of growth following the M1 and A1 corridors, mainly to LGDs such as Banbridge, Craigavon, and Newry & Mourne.
- 1.2.17. West of the Bann, the fastest-growing areas were mainly located on the outskirts of the major urban centres. This 'overspill' effect was most pronounced in Derry Urban Area, with a cluster of areas on the eastern fringe of the City registering growth rates in excess of 20 per cent.

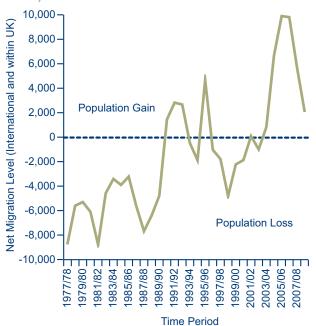
#### 1.3 Migration

- 1.3.1. Measures of population movement or migration are based on the United Nations definition of a long-term international migrant <sup>3</sup>. This definition is in use in population statistics for countries across the European Union. Unlike some other European countries, there is no comprehensive system which registers population movement in the United Kingdom. Therefore, estimates of population movement into, and out of, Northern Ireland are derived from proxy indicators. In Northern Ireland the primary source for estimating this is family doctor registrations. At the Northern Ireland level, the overall effect of population movement is derived from the difference in two "population flows": the number of people coming to live in Northern Ireland and the number of people leaving Northern Ireland to live elsewhere.
- 1.3.2. Between July 2008 and June 2009, over 23,500 people came to live here and just over 21,400 people left Northern Ireland. This resulted in an overall gain in population (or net-migration) of 2,100 people. In contrast, since the Second World War it is estimated that around 300,000 more people have left Northern Ireland to live elsewhere than came here to live.
- 1.3.3. Estimates of net migration for Northern Ireland since the mid-1970s are shown in Figure 1.6. The graph can be viewed in terms of three distinct phases of migration. The first phase during the 1970s and 1980s was when Northern Ireland experienced consistently large net population loss due to population movement (or outmigration) approaching 10,000 people in some years. Clearly, the impact of "The Troubles" is significant here.
- 1.3.4. The second phase from the early 1990s until 2004 shows population movement has been in balance, with broadly the same number of people coming to live in Northern Ireland as leaving. Over this period it is estimated that each year around 20,000 people have come to live in Northern Ireland and 20,000 left. However, in the last or third phase since 2004, the annual number of people estimated to have come here to live rose to, on average, 30,000 persons each in between mid-2004 and mid-2008. By mid-2009, this number has fallen to 23,500. In contrast, the number leaving Northern Ireland annually

<sup>2</sup> Reports, statistics and interactive maps are available at http://www.nisra.gov.uk/demography/default.asp125.htm

<sup>3 &</sup>quot;A person who moves to a country other than that of his or her usual residence for a period of at least a year, so that the country of destination effectively becomes his or her new country of usual residence." - Taken from "Recommendations on Statistics of International Migration. UN 1998" available at http://unstats.un.org/unsd/pubs/gesgrid.asp?ID=116

Figure 1.6: Estimated level of net migration (1977-8 to 2008-9)



increased marginally from 20,300 to 21,400 over the period 2004 to 2009.

1.3.5. This indicates a marked increase in international inflows and is related to the enlargement of the European Union in May 2004, when people from countries in Eastern Europe were allowed to come to work in the United Kingdom and Ireland.

# Place of Origin/Destination of People Coming to Northern Ireland (2008-9)

1.3.6. Table 1.2 shows where people coming to Northern Ireland last lived. Of the 23,500 people who came to live here during 2008-9; around 54 per cent (12,700) came from outside the United Kingdom. Of this just under half (5,900) came from the eight Eastern European Accession countries (A8)<sup>4</sup> that joined the European Union in May 2004.

4 The A8 countries are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. Malta and Cyprus also joined the EU on 1 May 2004 but are considered separately from the A8 countries as they have full free movement rights to work throughout the EU.

Table 1.2: Number of people coming to live in Northern Ireland by country of last residence (Mid 2006 to Mid 2009)

Country of Last	Number of pe to live in Nort (Mid-2006 to	thern Ireland	Number of pe to live in Nort (Mid-2007 to	thern Ireland	Number of pe to live in Nort (Mid-2008 to	thern Ireland
Residence	Number	Percentage	Number	Percentage	Number	Percentage
England and Wales	10,200	31%	9,800	36%	8,900	38%
Poland	6,700	21%	5,300	19%	3,300	14%
Republic of Ireland	1,500	5%	1,400	5%	1,400	6%
Scotland	2,600	8%	2,300	8%	1,300	5%
Lithuania	1,600	5%	1,200	4%	1,100	5%
Slovakia	1,100	4%	800	3%	600	3%
India	800	2%	700	3%	500	2%
USA	300	1%	400	1%	500	2%
China	600	2%	400	1%	400	2%
Portugal	300	1%	500	2%	300	1%
Philippines	500	2%	500	1%	300	1%
All other EU Accession Countries	900	3%	900	3%	900	4%
All other countries	5,000	15%	3,300	13%	4,300	18%
Total Inflow	32,300	100%	27,500	100%	23,500	100%

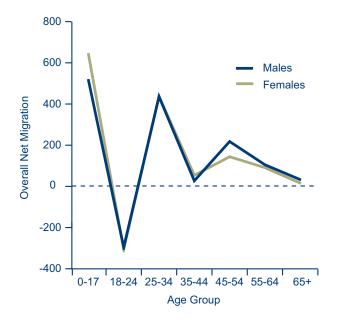
Source: HSC Business Services Organisation, May 2010, Health Card Registration

- 1.3.7. Table 1.2 reflects where people coming to live here last lived *not* their nationality. Thus some people coming from Great Britain or Ireland will be non-British/Irish nationals, and some people coming from outside the British Isles will be returning British/Irish nationals.
- 1.3.8. In contrast looking at the 21,400 people who left Northern Ireland to live elsewhere in 2008-9; just under half, 10,200 left for Great Britain while the remaining 11,200 left for outside the UK. Therefore, in total, it is estimated that just under 700 more people came to live here from Great Britain, than moved in the opposite direction, and just under 1,500 more people came to live here from outside the UK than moved in the opposite direction.

#### **Age-Distribution of Migrants**

1.3.9. Figure 1.7 shows the age distribution of net migration in Northern Ireland for 2008-9. Most net migration gain for both males and females is in the 0-17 and 25-34 age groups. Interestingly Northern Ireland is losing people at student ages (18-24 years).

Figure 1.7: Net total migration by age group and gender (2008-9)



#### **Other Data Sources on Migration**

1.3.10. As noted earlier measuring migration is challenging. There are a number of sources available to count people coming to or leaving Northern Ireland. However the sources use different definitions of how,

- when and where migrants are recorded. That said recent data from all administrative and statistical sources show increased migration from mid-2004 and then a slowing down since mid-2007. The sources also give a consistent picture on which parts of Northern Ireland new migrants are working and living in.
- 1.3.11. Most people coming to Northern Ireland to work from one of the eight Eastern European countries that joined the EU in 2004 must register through the Worker Registration Scheme (WRS). In the year to June 2009, some 3,700 people registered with the WRS to work in Northern Ireland, this is a decrease on the 7,800 people who registered in the same period between mid-2007 and mid-2008.
- 1.3.12. Non-EEA nationals coming to work in Northern Ireland require work permits, and there is an average flow of about 2,000 persons per year, although numbers in the year to June 2009 are significantly down on previous years. Numerically Indian and Filipino are the largest nationalities applying for work permits for jobs in Northern Ireland.
- 1.3.13. In 2009, 2,300 births here (nine per cent of all births) were to mothers born outside the UK and Ireland, compared to 700 such births in 2001. Of these, 1,100 births in 2009 were to mothers from the eight Eastern European countries that joined the EU in 2004, compared to 10 such births in 2001.
- 1.3.14. The School Census (October 2009) shows that about 4,800 primary school children have a language other than English as their 'first' language. This is about three per cent of the primary school population, and an 11 per cent increase on the corresponding figure (4,300) for the previous year. For secondary school children, the increase has been from 2,100 to 2,400 (two per cent of the secondary school population) between 2008 and 2009.
- 1.3.15. In 2009 the total number of new registrations with family doctors from migrants coming from outside the UK was 12,200 registrations. Around 49 per cent of those registering with family doctors gave their reason for coming to the UK as work related, while 28 per cent came for family reasons, 14 per cent for education reasons and 10 per cent gave another or no specific reason.
- 1.3.16. The overall migration trends described above vary across Northern Ireland. Flows around areas such as Botanic (Belfast), Rostulla (Newtownabbey) and Strand (Derry) wards are driven by students, but work is the main reason given by people for coming to Northern Ireland.

Information from registrations with family doctors shows that in parts of Ballymena, Belfast, Craigavon, Dungannon and Fermanagh Local Government Districts, annual immigration flows in 2009 exceed one in 30 of the resident population.

1.3.17. There is also spatial variation in migration related statistics for children. In 2009 about three per cent of primary school children did not have English as their 'first' language; however this figure for schools in Dungannon Local Government District was 10 per cent. Similarly, while births to mothers born outside the United Kingdom and Ireland accounted for nine per cent of all 2009 births, in Dungannon Local Government District the figure was 20 per cent.

#### 1.4 Projected Population – Northern Ireland

- 1.4.1. Population projections are produced every other year and the latest projections use 2008 as the base year. Based on this the Northern Ireland population, 1.775 million in 2008, is projected to increase to 1.839 million in 2013. This is equivalent to an average annual rate of growth of 0.7 per cent. Over the longer term the population is projected to reach 1.946 million by 2023 an increase of 171,000 people (10 per cent).
- 1.4.2. The projected increase in population is primarily due to natural growth. In the five years (2008 to 2013) it is projected that there will be 55,000 more births than deaths.
- 1.4.3. Projections indicate a marked increase in the size of the population at older ages. The number of people of current pensionable age is projected to increase by around 11 per cent in the next five years and by around 40 per cent over the fifteen year period 2008-2023.
- 1.4.4. In total, the population will also gradually become older with the average age expected to rise from 37.6 years in 2008 to 40.4 years by 2023. In 2008 there were 132,000 more children aged under 16 than people aged 65 and over. The number of people aged 65 and over is projected to exceed the number of children from 2027 onwards. The number of children aged under 16 is projected to increase marginally over the next fifteen years from 381,000 children in 2008 to a projected 398,000 children in 2023 (four per cent increase).
- 1.4.5. The number of males aged 16-64 and females aged 16-59 (the current definition of working age) is projected to increase from 1,098,000 in 2008 to 1,132,000 by 2023, an increase of about 34,000 (three per cent).
- 1.4.6. Between 2010 and 2020, the pension age\* for females will be increased incrementally from 60 to 65. Taking this into account, the number of people of working age in Northern Ireland is projected to rise by nine per cent from 1,098,000 in 2008 to 1,192,000 in 2023. Table 1.3 shows the estimated and projected dependency ratios.

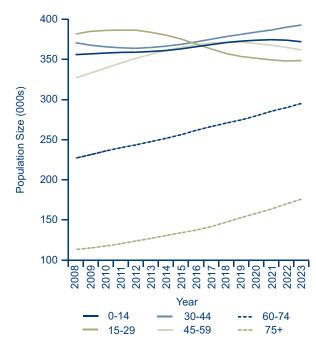
<sup>\*</sup> This document was written prior to 20th October 2010 announcement of further changes to pension age.

Table 1.3: Estimated and projected dependency ratios, 1978, 1988, 1998, 2008 and 2023

	Number of dependents per 100 persons of working		ns of working age
Mid-Year Population Estimates/Projections	Children (Under 16 years)	Persons of State Pension Age	All Dependants
Mid-1978	54	25	79
Mid-1988	45	26	71
Mid-1998	41	25	66
Mid-2008	35	27	62
Mid-2023 (State pension age as at 2023)*	33	30	63
Mid-2023 (State pension age as at 2008)	35	37	72

- 1.4.7. The number of people of pensionable age (as currently defined, aged 60 and over for females and aged 65 and over for males) is projected to increase from 296,000 in 2008 to 416,000 by 2023, an increase of 41 per cent. In 2023, after allowing for the change in age at which females can claim retirement pension, the number of people of pensionable age is projected to be 356,000 (20 per cent higher than 2008).
- 1.4.8. The number of people aged 85 and over will also rise; it will almost double within the next 17 years. Figure 1.8 shows the changes different age groups are projected to experience over the next 15 years.

Figure 1.8: Projected population by age group (2008 to 2023) – non-zero y-axis



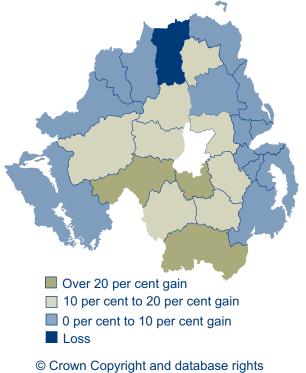
#### **Area Comparisons within Northern Ireland**

1.4.9. Population projections are also calculated for areas within Northern Ireland, with the latest local area projections, like the Northern Ireland projections, also using 2008 as the base year. Based on this over the period 2008 to 2023, each of Northern Ireland's 26 Local Government Districts is projected to experience population growth, with the exception of Coleraine Local Government District (three per cent loss).

This document was written prior to 20th October 2010 announcement of further changes to pension age.

1.4.10. Of those Local Government Districts projected to grow, Dungannon is projected to have the highest percentage growth of 26 per cent with an increase from 55,400 to 69,800 between 2008 and 2023. Craigavon (23 per cent) and Newry & Mourne (22 per cent) are also projected to experience population growth that is more than double than that for Northern Ireland (10 per cent). Figure 1.9 shows the percentage change in all Local Government Districts.

Figure 1.9: Overall projected percentage change in population size of Local Areas between 2008 and 2023



NIMA MOU207.2

1.4.11. Coleraine Local Government District is projected to experience the greatest percentage decrease in the percentage share of the Northern Ireland population from 3.2 per cent in 2008 to 2.8 per cent in 2023. In contrast Dungannon Local Government District is projected to experience the greatest percentage increase from 3.1 per cent to 3.6 per cent of the Northern Ireland population.

1.4.12. The number of children aged 0-15 is projected to increase in 17 of the 26 Local Government Districts by 2023, with the largest percentage increases in Dungannon (+29 per cent) and Craigavon (+24 per cent).

The biggest decreases are projected in Coleraine (-22 per cent) and Limavady (-10 per cent).

1.4.13. The population aged 16-64 years is projected to increase in 17 of the 26 Local Government Districts by 2023, with the largest percentage increases in Dungannon (+19 per cent) and Craigavon (+17 per cent). The biggest decreases are projected in Coleraine (-10 per cent) and North Down (eight per cent loss).

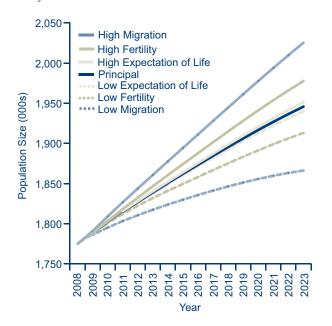
1.4.14. The population aged 65 years and over is projected to increase in all Local Government Districts by 2023, with the largest percentage increases in Omagh (+65 per cent) and Limavady (+64 per cent) and the smallest increase is projected in Belfast (14 per cent).

#### **Assumptions and Variant Projections**

1.4.15. Population projections provide a consistent starting point for all government planning. Projections are however based on assumptions and due to the inherent uncertainty of demographic behaviour, any set of projections will inevitably, to a greater or lesser extent, be proved wrong. Therefore, alternative variant assumptions of future fertility, mortality and migration are available for the population projections.

1.4.16. In these projection variants, different fertility, mortality and migration assumptions have been treated as separate and independent departures from the assumptions in the principal projection. Figure 1.10 shows that, for example, holding the fertility and mortality assumptions unchanged, an assumption of high migration (net in-migration of 5,000 per year) would lead to a population in 2023 of 2.03 million while an assumption of low migration (net out-migration of 4,000 per year) would lead to a population in 2023 of 1.87 million.

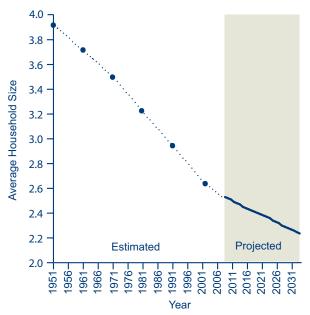
Figure 1.10: Population projections - principal and variant 2008-based projections (2008 to 2023) – non-zero y-axis



#### 1.5 Household Projections

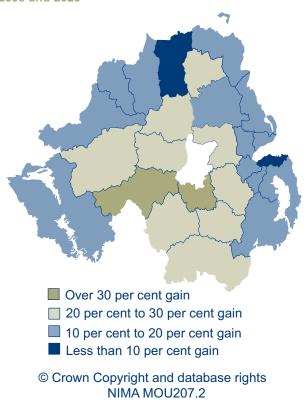
- 1.5.1. Clearly one impact of the projected increase in population is housing. Over recent years NISRA has worked with Government Departments in Northern Ireland with responsibility for housing to create official household projections for Northern Ireland. These figures are based on both population projections and trends in household formation (for example, increasing trends in the number of people living in one person households).
- 1.5.2. The latest household projections for Northern Ireland are based on the 2008 population projections. The number of households in Northern Ireland is projected to grow by 44,200 or six per cent over the five year period 2008 to 2013, from 688,700 households in 2008 to 738,800 households in 2013. Over this period, the average household size will fall from 2.53 to 2.47 persons per household.
- 1.5.3. In the longer term, over the period 2008 to 2023, it is projected there will be around 121,700 (18 per cent) additional households in Northern Ireland. This increase is a combined result of population growth (61,100 households), changing age structure (32,300) and continuing trends towards smaller households (28,300). The average household size is projected to drop to 2.36 persons per household in 2023. The projected average household sizes demonstrate a slowdown in the downward trend observed since 1951 (see Figure 1.11).

Figure 1.11: Average household size, Northern Ireland, 1951-2033 (Census estimates between 1951 and 2001, projections 2008 onwards) – non-zero y-axis



- 1.5.4. The fall in the average household size is primarily caused by a rise in the number of single and two adult households. The number of one-person households is projected to rise from 204,500 in 2008 to 227,300 in 2013 (11 per cent). At the same time, the number of two-adult households is projected to increase from 178,700 in 2008 to 194,800 in 2013 (nine per cent). The number of households with four or more persons is projected to stable at 177,800 in 2008 and 178,100 in 2013.
- 1.5.5. The number of lone adult with dependent children households is projected to remain relatively stable at around 37,000 households. The number of other households with children is projected to rise from 170,500 in 2008 to 176,400 in 2013 (three per cent). The number of households with three or more persons without dependent children is projected to fall slightly in the short term, from 98,200 in 2008 to 97,300 in 2013 (one per cent loss).
- 1.5.6. In 2008, it is estimated that 98.3 per cent of the population resides in households. This percentage is set to fall slightly to 98.1 per cent in 2023. This is primarily due to the increase in the proportion of the older population who are more likely to reside in residential care.
- 1.5.7. Over the period 2008 to 2023, all of Northern Ireland's Local Government Districts are projected to experience a growth in the number of households. The largest percentage increases are projected in Craigavon and Dungannon (+32 per cent) and the smallest increase is projected in Coleraine (+seven per cent). Figure 1.12 below shows the projected change in each Local Government District.

Figure 1.12: Overall percentage change in number of households by Local Government District between 2008 and 2023



#### 1.6 Births

#### **Numbers**

- 1.6.1. In 2009, there were 24,910 births registered to Northern Ireland mothers, a 2.8 per cent decrease on the 2008 figure of 25,631 births. Indeed, the number of births has recovered from an all-time low of 21,385 births registered in 2002. However, the number of births in 2009 is still below corresponding levels of the late-1970s, when almost 28,200 births were registered in 1979.
- 1.6.2. The number of births registered each year since 1922 is shown in Figure 1.13. This graph shows a noticeable peak after the Second World War. Like many western countries, Northern Ireland experienced a "baby boom" during the second half of the 1950s and early 1960s. Specifically in Northern Ireland, births peaked in 1964 at just over 34,000 live births and then fell dramatically in the early 1970s. The drop in the number of births levelled off in the 1980s at 27,000 births per annum. However, this was mainly a result of the larger number of women, who were born in the baby boom passing through their childbearing years. The decline in births resumed in the 1990s as these women started to complete their families. The increase in the number of births since 2002 arrests the recent decline.

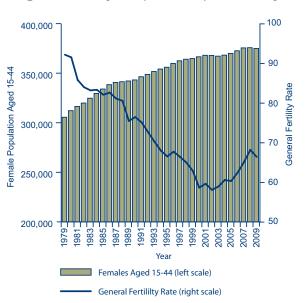
Figure 1.13: Number of births registered (1922 to 2009) – non-zero y-axis



#### **Fertility Rates**

- 1.6.3. The crude birth rate in 2009 was 13.9 births per 1,000 population, which is an increase on the 2008 figure of 14.4 births per 1,000 population. However, over the longer term the birth rate has fallen from its peak in the early 1960s when it was 23.0 births per 1,000 population.
- 1.6.4. Figure 1.14 shows the general fertility rate (births per 1,000 females aged 15-44), along with the number of women aged 15-44. The population of females aged 15-44 has increased since 1979, however, the general fertility rate has fallen. In 2009, the general fertility rate was 66.4 births per 1,000 females aged 15-44. Whilst this is an increase from the record low in 2002 of 58.1 births per 1,000 females aged 15-44 it is still well below the general fertility rate in 1979 of 92.2 births per 1,000 females aged 15-44.

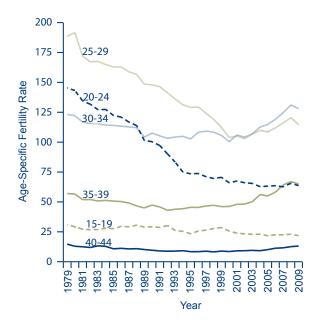
Figure 1.14: Estimated female population aged 15-44 and general fertility rate (1979-2009) - non-zero y-axes



1.6.5. There has been a recent trend towards later childbearing by mothers. In 2009, for all live births, the average age of the mother was 30 years, compared with 29 in 1999, 28 in 1989 and 28 in 1979. Just under half of all births registered in 2009 were to mothers aged 30 and over; this is a significant increase from 1979 when around 32 per cent of births were to mothers aged 30 and over. This indicates that women are delaying child-bearing; indeed, the average age of first time mothers was 27 in 2009 compared with 24 in 1979.

- 1.6.6. In 2009, for all live births, the average age of the father was 33 years compared with 32 in 1999. However, around eight per cent of births in 2009 compared to 11 per cent in 1999 were registered by the mother with no father's details recorded.
- 1.6.7. This trend to later childbearing is most apparent in the decline in fertility rates among 20-24 year old females. Over the past three decades fertility for this age group has fallen substantially from 145 babies per 1,000 women in 1979 to 64 babies per 1,000 women in 2009.
- 1.6.8. In 2009, women aged 30-34 years experienced the highest age-specific fertility rate, with 128 babies per 1,000 women, while women aged 25-29 years experienced the second highest rate (115 babies per 1,000 women). Figure 1.15 shows the change in age-specific fertility rates by age group over the last 30 years.

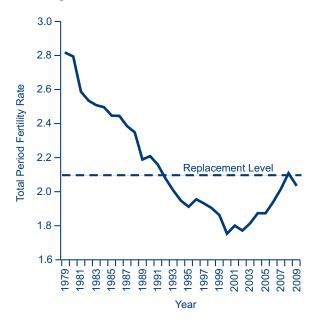
Figure 1.15: Live births per 1,000 women by age group of mother (1979 to 2009)



1.6.9. The total period fertility rate is derived from the sum of age-specific fertility rates. It gives the theoretical average number of children who would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year. A value of 2.1 is generally taken to be the level at which the population would replace itself in the long run, ignoring migration.

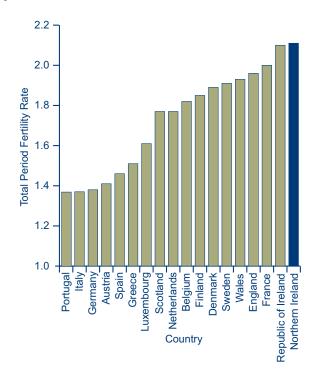
1.6.10. The total period fertility rate dropped below replacement level (2.1) in Northern Ireland for the first time in 1992. The total period fertility rate for 2009 was 2.04, which is a recovery from a record low of 1.75 in 2000, but still below the fertility rates in the 1980s. The total period fertility rate for Northern Ireland since 1979 is shown in Figure 1.16.

Figure 1.16: Total period fertility rate (1979 to 2009) – non-zero y-axis



1.6.11. Figure 1.17 shows the total period fertility rate for Northern Ireland compared to the European Union 15 (EU15) and the other constituent countries of the United Kingdom (UK). Northern Ireland has the highest total period fertility rate of the constituent countries of the UK and has a higher total period fertility rate than all other EU15 countries. The most recent data available for all countries is for 2008; with the exception of Belgium and Italy which is 2007 data.

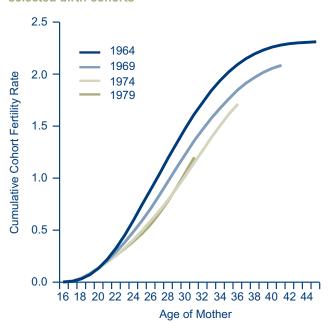
Figure 1.17: Total period fertility rate, EU15 and Constituent Countries of the UK, 2008 - non-zero y-axis



1.6.12. A further measure of fertility is completed family size which is a more accurate picture of fertility for a cohort of women born in a specific year. Figure 1.18 shows the achieved family size, sometimes called cumulative cohort fertility, at specific ages for women born in particular years (or cohorts). Family size at age 45 is taken to represent completed family size. This enables easy comparison between selected cohorts as women pass through the child-bearing ages.

1.6.13. In Northern Ireland those women born in 1964 had attained an average completed family size of 2.3 children by the time they reached 45. Figure 1.18 also permits the comparison of family size at selected ages for the various cohorts as they pass through the childbearing ages. For example, by age 30 the cumulative childbearing of the 1979 cohort is 0.4 children lower than that of the 1964 cohort.

Figure 1.18: Cumulative cohort fertility rate for selected birth cohorts



#### Birth Order

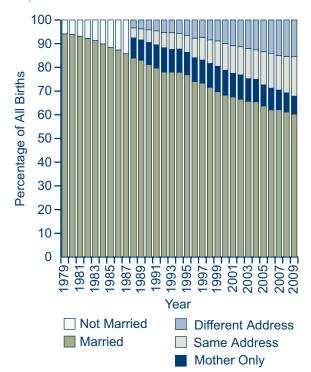
1.6.14. A total of 10,733 births (43 per cent) were to first-time mothers in 2009. Second-time mothers had 8,177 babies (33 per cent) and third-time mothers had 3,888 babies (16 per cent). Only eight per cent of mothers, in 2009, already had three or more live born children reflecting the trend towards smaller family sizes.

#### **Births Outside Marriage**

1.6.15. In 2009, 39.8 per cent of all live births occurred outside marriage. This proportion has been increasing steadily since the early 1960s when the proportion of children born outside marriage was about 2.5 per cent. Since 1988, information has been gathered that identifies births registered by married parents, unmarried parents (living at the same address or at different addresses) or by the mother only. In 2009, 80.9 per cent of births

outside marriage were jointly registered by both parents. Figure 1.19 shows the change in births by registration status since 1979.

Figure 1.19: Live births by registration status (1979 to 2009)



1.6.16. In 2009, 97.2 per cent of births to mothers under the age of 20 were outside marriage, 81.6 per cent of births to mothers aged between 20 and 24 were outside marriage, while for those aged 25 and over 27.0 per cent of births were outside marriage.

#### **Multiple Births**

1.6.17. In 2009, the percentage of maternities resulting in a multiple birth was 1.5 per cent. There were 372 sets of twins, three sets of triplets, one set of quadruplets and one set of sextuplets registered in 2009.

1.6.18. The percentage of maternities resulting in multiple births has increased from 1.1 per cent in the 1970s to 1.5 per cent in 2009. The percentage of maternities that result in a multiple birth increases with the age of the mother. In 2009, less than one per cent of maternities to mothers aged under 25 resulted in multiple births, while 1.6 per cent of maternities to mothers aged between 40 and 44 resulted in multiple births.

#### Place of Birth

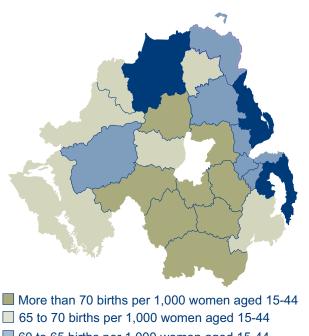
1.6.19. In 2009, just under 100 babies were born in places other than a hospital; this is a similar figure to 2008.

#### Births by Area

1.6.20. Health and Social Care Trust level crude birth rates ranged from 13.0 births per 1,000 population in the Northern Health and Social Care Trust to 15.6 births per 1,000 population in the Southern Health and Social Care Trust. The birth rate in the South Eastern, Belfast and Western Health and Social Care Trusts were 13.2, 14.0 and 14.1 births per 1,000 population respectively.

1.6.21. Dungannon had the highest birth rate (16.1) closely followed by Newry and Mourne (16.0) of all the Local Government Districts in 2009 while the lowest birth rate (10.6) was in Carrickfergus. Figure 1.20 shows the 2009 birth rates per 1,000 women of child-bearing age by Local Government District.

Figure 1.20: Live births per 1,000 women aged 15-44, by Local Government District (2009)



- 60 to 65 births per 1,000 women aged 15-44
- Fewer than 60 births per 1,000 women aged 15-44
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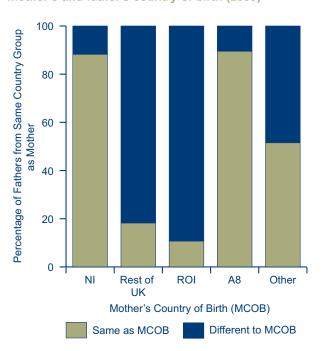
#### **Country of Birth of Parents**

1.6.22. In 2009, the majority of women having babies were themselves born in Northern Ireland (82 per cent). Of the remaining new mothers (18 per cent), 31 per cent were born elsewhere in the UK and 16 per cent in the Republic of Ireland. However, over nine per cent of all births (2,318 births) were to mothers who themselves were born outside the UK and Ireland. This is a marked rise on previous years, for example, there were fewer than 600 such births in 1999 or two per cent of all births.

1.6.23. Over recent years, the number of births to mothers born in the A8<sup>4</sup> countries has increased. The number of births in 2001 to mothers born in one of the A8 countries was 12. In 2009 the number of such births increased to 1,113.

1.6.24. Figure 1.21 shows father's country of birth in relation to the mother's country of birth, where both parents were registered on the birth certificate. (Two-thirds of all children born in Northern Ireland have both parents born in Northern Ireland in 2009). For births where the mother was born in the rest of the UK or the Republic of Ireland, the majority of fathers have been born in a different country to the mother, with 72 per cent from Northern Ireland. The trend is different for children whose mother was born in an A8 country, where 85 per cent of these children have an A8 father as well.

Figure 1.21: Live births in Northern Ireland by mother's and father's country of birth (2009)



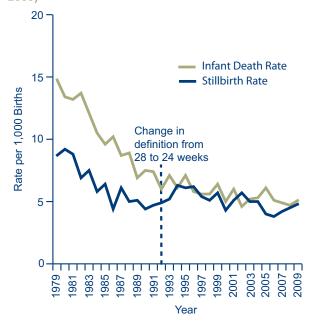
The A8 countries are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. Malta and Cyprus also joined the EU on 1 May 2004 but are considered separately from the A8 countries as they have full free movement rights to work throughout the EU.

#### 1.7 Stillbirths and Infant Deaths

#### **Numbers**

- 1.7.1. The number of stillbirths in 2009 was 119, an increase of four from the 2008 figure of 111. The number of infant deaths in 2009 was 130, an increase of seven from the 2008 figure of 123. Deaths in the first week of life accounted for 62 per cent of all infant deaths. The number of infants dying on the first day of life accounted for 59 deaths in 2009, 12 more than the number registered in 2008.
- 1.7.2. Looking further back the recent infant death figures show a large decrease from the 1920s when over 2,000 infant deaths were registered each year. The number of infant deaths was highest in 1943, with 2,464 infant deaths and lowest in 2002 with 100 infant deaths registered.
- 1.7.3. As can be seen in Figure 1.22, there have been significant reductions in stillbirth and infant death rates in the period since 1979. The stillbirth rate has reduced from 8.7 stillbirths per 1,000 births (live and still) in 1979 to 4.8 in 2009. This fall has happened despite a change in the definition of stillbirths in 1992, which reduced the minimum period of gestation from 28 weeks to 24 weeks (thus increasing the number classified as stillbirths). The infant death rate (deaths of children aged under 1) has decreased by 66 per cent from 14.8 infant deaths per 1,000 live births in 1979 to 5.1 in 2009.

Figure 1.22: Stillbirth and Infant Death rates (1979 to 2009)



1.7.4. As with stillbirths and infant deaths, the numbers of perinatal, neonatal and postneonatal deaths (see Appendix 3 for definitions) have reduced greatly to around one tenth of their values several decades ago. In 2009, there was an increase in the number of perinatal deaths (194 to 199), an increase in the number of neonatal deaths (95 to 97) and an increase in postneonatal deaths (28 to 33) from the numbers seen in 2008. Males accounted for more neonatal and infant deaths than females in 2009.

#### **Causes of Infant Deaths and Stillbirths**

- 1.7.5. Congenital malformations, deformations and chromosomal abnormalities (ICD10 codes Q00-Q99) were the cause of 35 per cent of all infant deaths. A further 15 per cent were caused by disorders related to length of gestation and fetal growth (ICD10 codes P05-P08), and another 11 per cent of infant deaths were caused by disorders related to respiratory and cardiovascular disorders specific to the perinatal period (ICD10 codes P20-P29). Three infants died of external causes of injury (ICD10 code V01-Y98) in 2009.
- 1.7.6. Nine infants died as a result of ill-defined and unknown causes of mortality (ICD10 code R95-R99). This is an increase from the five deaths registered in 2008 but a small decrease from the 10 deaths registered in 2007. Between 2005 and 2009, 42 infants died of these causes, compared to 30 in the previous five years (2000-2004).
- 1.7.7. Forty-six per cent of all stillbirths in 2009 were caused by 'other conditions and disorders originating in the perinatal period' (ICD10 codes P75-P96) while placental and cord conditions (ICD10 code P02) accounted for a further 24 per cent.

#### Pregnancy, Childbirth and Puerperium

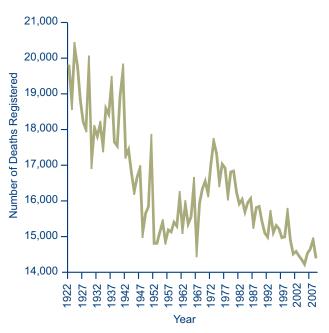
1.7.8. There were five maternal deaths (ICD10 codes O00-O99) in 2009, compared to none in 2008 and 2007 and three deaths in 2006, and there were 10 maternal deaths in the period 1995-2005.

#### 1.8 Deaths

#### **Numbers**

- 1.8.1. In 2009, there were 14,413 deaths registered in Northern Ireland, a decrease of just over 494 deaths or 3.3 per cent on the 14,907 deaths registered in 2008. Figure 1.23 shows the number of deaths registered from 1922 to 2009.
- 1.8.2. Although the number of deaths increased last year, the long-term trend is one of falling death rates. The reduction in the number of deaths in recent years has occurred despite the population increasing in size and containing a higher proportion of elderly people. The current population is 17 per cent larger than it was in 1979 and those aged 75 and over represent six per cent of the population now compared to only four per cent in 1979. Indeed, if the age-specific death rates of 1979 still applied today, the number of deaths registered in 2009 would have been just under 26,800; almost 12,400 higher than the actual number registered. This reduction in the number of deaths reflects the continuing reduction in mortality rates across all age groups and the corresponding increase in life expectancy.

Figure 1.23: Number of deaths registered (1922 to 2009) – non-zero y-axis



#### **Mortality by Age**

- 1.8.3. In 2009, 62 per cent of deaths were of people aged 75 and over, and a further 23 per cent were of people aged 60 to 74. Children aged under five accounted for one per cent of all deaths.
- 1.8.4. The average age at death in 2009 was 72 years for males and 78 years for females, an increase of six years on the average age at death for males in 1979 and six years for females. This reflects the increased survival of males and females over the period and the consequential ageing of the population.
- 1.8.5. From the relatively high rates of death in infancy, death rates sharply decline through childhood. The lowest age-specific death rates (ASDRs) were experienced by males and females aged 10–14 years, with an ASDR of 0.1 per 1,000 population for males and females. ASDRs begin to increase after age 15 years, for both males and females. Throughout the life span, ASDRs are higher for males. However, the difference between males and females becomes more prominent after the age of 60 years. Figures 1.24a and 1.24b show age-specific deaths rates for males and females by age group for 1979 and 2009.

Figure 1.24a: Age-specific death rates by age group and sex (1979 and 2009)

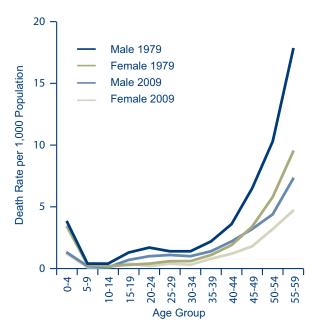
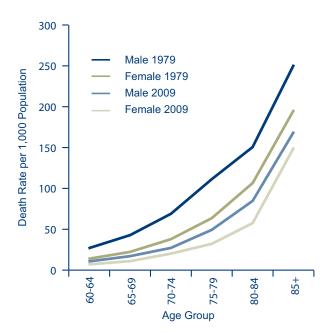


Figure 1.24b: Age-specific death rates by age group and sex (1979 and 2009)



1.8.6. In the past 30 years the annual risk of dying has declined for people of all ages. The largest declines in male age-specific death rates occurred in the 10-14 years age group (down 68 per cent), followed by those aged 0-4 years (down 67 per cent), and 70-74 years (down 61 per cent). Female age-specific death rates declined most substantially for 10-14 years (down 72 per cent), 0-4 years (down 63 per cent), followed by those aged 5-9 years (down 62 per cent).

#### Mortality by Sex

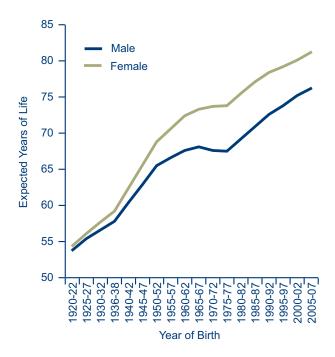
1.8.7. Female deaths (7,499) outnumbered male deaths (6,914) registered in 2009, giving a sex ratio of 108 female deaths for every 100 male deaths. The number of female deaths has outnumbered male deaths for each of the last 21 years.

1.8.8. In 1979, males had a death rate of 11.7 deaths per 1,000 population compared to females with a death rate of 10.3 deaths per 1,000 population. By 2009, the male death rate was 7.9 deaths per 1,000 population and the female rate was higher at 8.2 deaths per 1,000 population.

#### Life Expectancy

1.8.9. Children born today can expect to have longer lives than children born in the past. Based on current death rates, males born in recent years could expect to live until they are 76.7 years and females could expect to live until they are 81.3 years, with corresponding figures for men and women born around 1920-22 of 53.8 and 54.4 years respectively. While women aged 65 today could expect to live another 19.9 years, their male counterparts could expect to live another 17.1 years. Figure 1.25 shows the change in the expectation of life at birth for males and females since 1920.

Figure 1.25: Period expectation of life at birth, by sex (1920-22 to 2005-07) - non-zero y-axis



1.8.10. Expectation of life varies across the Local Government Districts within Northern Ireland. Males born in recent years in Ballymena, Banbridge, Coleraine, Down, Magherafelt, Moyle and North Down Local Government Districts can all expect to live until they are at least 78 years, while males born in Belfast have the lowest life expectancy of all Local Government Districts at 73.5 years. Females born in recent years in Limavady have the highest life expectancy at 83.5 years, while females born in Belfast, Derry and Strabane have the lowest life expectancy of just under 80 years.

1.8.11. Figures 1.26 and Figure 1.27 show that Northern Ireland has generally lower expectation of life at birth for both males and females compared to other European (EU15) countries. The figures also show that only Scotland amongst the other United Kingdom countries have lower life expectancy for both males and females. The most recent data available for all countries is for 2008, with the exception of Belgium and Italy which is 2007 data.

Figure 1.26: Life expectancy at birth, EU15 and constituent countries of the UK, 2008, male - non-zero y-axis

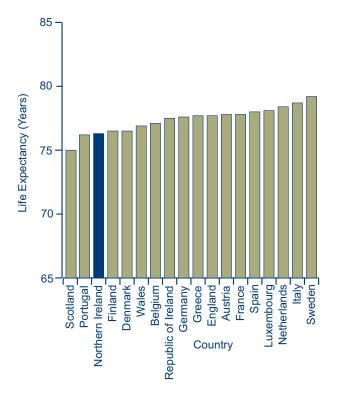
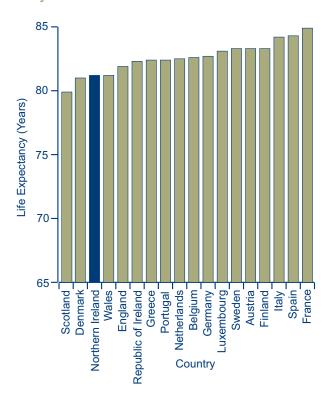


Figure 1.27: Life expectancy at birth, EU15 and constituent countries of the UK, 2008, female - non-zero y-axis



1.8.12. Expectation of life statistics are a standard way of comparing mortality rates over time. Typically, these statistics are calculated using today's age-specific mortality rates - this is known as the 'period life expectancy' calculation. This enables the comparison of mortality rates over time, or for different areas, and allows the expectancy of life statistics of today to be compared with those of the past. Expectation of life statistics given in Figures 1.25, 1.26 and 1.27 are an example of this. However, in practice period life expectancy is unlikely to be a true reflection of what is likely to happen. Throughout the twentieth century, mortality has improved significantly, with around a one per cent year on year improvement in mortality rates.

1.8.13. Expectation of life statistics can however be calculated another way. This alternative is known as a 'cohort life expectancy' calculation. Cohort expectation of life statistics are calculated using age-specific mortality rates over the lifetime of a group of people born in the same year (a cohort). The cohort method allows for projected improvements in mortality rates over time. As the cohort estimates incorporate population projections

Table 1.4: Period (2007-09) and projected cohort (2009) expectations of life - males and females

Expectation of Life (years)	Males	Females
At birth - Period	76.7	81.3
At birth - Projected Cohort	87.8	92.0
Percentage difference	14%	13%
Age 65 - Period	17.1	19.9
Age 65 - Projected Cohort	20.7	23.5
Percentage difference	21%	18%

they inherently have more uncertainty than period estimates. Table 1.4 shows period (2007-09) and projected cohort (2009) expectations of life.

#### **Mortality by Marital Status**

1.8.14. Of all men whose deaths were registered during 2009, 52 per cent were married at the time of death, while 22 per cent were widowed and 21 per cent were single. In contrast, of all women whose deaths were registered during 2009, 56 per cent were widows at the time of death, with a further 25 per cent married and 15 per cent single. This difference is a consequence of the greater longevity of women.

#### Centenarians

1.8.15. There were 98 deaths of centenarians in 2009. Only 16 of these deaths were males, comprising four aged 100, seven aged 101, three aged 102 and two aged 103. There were 82 female deaths of centenarians, 28 aged 100, 21 aged 101, 14 aged 102, seven aged 103, eight aged 104 and four aged 105 or over. In contrast, there were 25 deaths of centenarians in 1979 of which 10 were male and 15 were female.

#### Place of Death and Type of Death Certificate Issued

1.8.16. Of the 14,413 deaths registered in 2009, 51 per cent of these occurred in hospitals. A further 16 per cent of deaths occurred in nursing homes. The remaining 33 per cent occurred in all other places.

1.8.17. For 77 per cent of deaths registered in 2009, a medical certificate was issued, while coroner's certificates were issued for the remaining 23 per cent of deaths. A death must be reported to a coroner if the person has not seen a doctor in the 28 days before they died or immediately afterwards, a doctor had not looked after,

seen or treated the person during their last illness (in other words, death was sudden), the cause of death is unknown or uncertain, the death was violent or unnatural (for example, suicide, accident or drug or alcohol overdose), the death was in any way suspicious, the death took place during surgery or recovery from an anesthetic, the death took place in prison or police custody, or the death was caused by an industrial disease or accident.

## Deaths by Date of Registration and Date of Occurrence

1.8.18. All figures recorded in this report are based on the year that the death was registered and not the year in which the death occurred. While the vast majority of deaths are registered shortly after death, some can take time to be registered. Over the registration period 1999 to 2006, 91.6 per cent of all deaths were registered in the year the death occurred. However in more recent years a larger percentage of deaths are being registered a significant period after death. In 2007, 90.9 per cent of deaths were registered in the year they occurred. This increased slightly to 91.7 per cent for deaths occurring in the registration year 2008 and has again increased to 92.0 per cent in 2009. Events such as infant death or suicide must be referred to a coroner and this legal process can take some time.

#### **Deaths by Area**

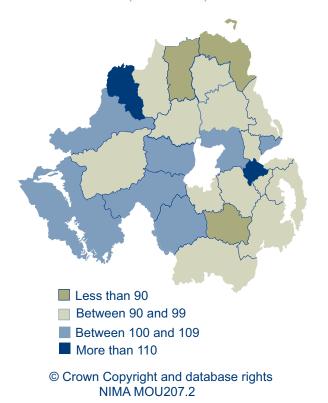
1.8.19. The standardised death rate, which allows for the age and sex structure of the population, was highest in the Belfast Health and Social Care Trust at 9.1 deaths per 1,000 population and lowest for the Northern and South Eastern Health and Social Care Trust at 7.5 deaths per 1,000 population. The standardised death rates in the

Southern and Western Health and Social Care Trust were 8.0 and 8.5 deaths per 1,000 population respectively.

1.8.20. Standardised mortality ratios (SMRs), based on three years data (2007-2009), compare local death rates with death rates in Northern Ireland as a whole, taking account of the different population structure of each area. SMRs by Local Government District are presented in Figure 1.28. Two Local Government Districts, Belfast and Derry have a standardised mortality ratio significantly above the Northern Ireland average of 100. The highest, Belfast, is 18 per cent higher than the Northern Ireland average.

1.8.21. At the other end of the scale, 12 Local Government Districts, Ballymena, Ballymoney, Banbridge, Castlereagh, Coleraine, Craigavon, Down, Limavady, Lisburn, Magherafelt, Moyle and Newtownabbey have SMRs significantly below the Northern Ireland average of 100. The lowest were Ballymena, Banbridge and Moyle Local Government Districts all 10 per cent below the Northern Ireland average.

Figure 1.28: Standardised mortality ratios by Local Government District (2007 to 2009)



#### **Deaths by Country of Birth**

1.8.22. In 2009, 89 per cent of all deaths registered in Northern Ireland were to persons who had been born in Northern Ireland. A further 10 per cent of deaths were to persons who had been born in the rest of the United Kingdom or the Republic of Ireland. The remaining one per cent were to persons born in other countries of the world.

#### 1.9 Cause of Death

#### **Numbers**

- 1.9.1. All deaths registered in 2009 have been coded using the tenth revision of the International Statistical Classification of Diseases, Injuries and Causes of Death (ICD10).
- 1.9.2. In total, circulatory diseases, malignant neoplasms (cancer) and respiratory diseases accounted for 72 per cent of all deaths in 2009.
- 1.9.3. In 2009, 3,885 people died from cancer, a slight increase on recent years. Cancer deaths (ICD10 codes C00-C97) represent 27 per cent of all deaths registered in 2009 compared to 17 per cent of all deaths in 1979. By contrast, in 2009, 2,305 people died from ischaemic heart disease (ICD10 codes I20-I25), a decrease of 53 per cent from the 1979 figure of 4,923 deaths.
- 1.9.4. Some of the principal causes of death are considered in the following sections.

# Diseases of the Circulatory System (ICD10 Codes 100-199)

- 1.9.5. In 2009, these diseases accounted for 4,485 deaths; 31 per cent of all deaths in Northern Ireland. Between 1999 and 2009 the number of deaths due to diseases of the circulatory system, fell from 6,422 to 4,485 (30 per cent). Circulatory diseases account for the largest number of deaths attributable to a single group of causes.
- 1.9.6. Deaths due to the diseases of the circulatory system are mostly accounted for by ischaemic heart disease (ICD10 Codes I20-I25) and cerebrovascular disease or stroke (ICD10 Codes I60-I69), which accounted for, respectively, 16 per cent and eight per cent of all deaths in 2009. The number of male deaths from ischaemic heart disease exceeds the number of female deaths, whereas female deaths from cerebrovascular disease are more numerous than male deaths.

#### Malignant Neoplasms (ICD10 Codes C00-C97)

1.9.7. Cancer accounted for 3,885 deaths in 2009, 27 per cent of all deaths, a small decrease on the 3,971 deaths due to cancer registered in 2008. Prior to 2007 the number of deaths due to cancer had remained broadly stable over recent years at about 3,700 per year. The most common cancer site for males and females was the trachea, bronchus or lung (ICD10 Codes C33-C34), which

accounted for 26 per cent of male cancer deaths and 21 per cent of female cancer deaths in 2009. Deaths of females due to breast cancer (ICD10 Code C50) accounted for 16 per cent of female cancer deaths in 2009.

#### Respiratory Diseases (ICD10 Codes J00-J99)

- 1.9.8. Deaths from respiratory diseases numbered 2,017 in 2009; 14 per cent of all deaths in Northern Ireland. These included 820 deaths from pneumonia (ICD10 Codes J12-J18), 786 from chronic lower respiratory diseases (ICD10 Codes J40-J47) and 411 due to all other respiratory diseases. Between 1999 and 2009, the number of deaths due to diseases of the respiratory diseases fell from 3,161 to 2,017 (36 per cent). Part of this drop in the numbers is associated with a change in the coding rules for pneumonia that were implemented when ICD10 was introduced in 2001.
- 1.9.9. In April 2009 a worldwide outbreak of the H1N1 virus (swine flu) reached Europe. As a result more strict influenza monitoring procedures were put into place to assess the impact of the virus. During the 2009 registration year 14 people in Northern Ireland died from the H1N1 virus. During the full monitoring period, which ran into the year 2010, a total of 18 people in Northern Ireland died from the virus.

#### External Causes of Death (ICD10 Codes V01-Y98)

- 1.9.10. The number of deaths from external causes registered in 2009 was 805, of which 535 were males and 270 were females with the corresponding figures for 2008 being 854 deaths 577 male and 277 female. In the period 1998-2007, there were 655 deaths per year on average from external causes of death.
- 1.9.11. The number of deaths from transport accidents (ICD10 Codes V01-V99) in 2009 (127) has fallen by 18 per cent compared to 154 deaths in 2008. Within this figure, 80 per cent of transport accident deaths were of males.

## Deaths from Suicide and Events of Undetermined Intent (X60-X84, Y87.0, Y10-Y34, Y87.2)

1.9.12. In the United Kingdom, deaths classified as 'events of undetermined intent' along with 'intentional self-harm' are classified as suicide. In 2009, there were 260 such deaths registered in Northern Ireland, of which 205 were of males and 55 were of females. This is a decrease from the 282 registrations in 2008 (218 males and 64 females).

- 1.9.13. All suicides are referred to the coroner. These deaths can take time to be fully investigated and there is often a period of time between when the suicide occurs and when it is registered. A significant number of suicides registered in 2009 occurred in earlier years. Of the 260 such deaths registered in 2009, 86 actually occurred in 2009, 115 occurred in 2008, 30 occurred in 2007, with the remaining 29 occurring in 2006 or earlier.
- 1.9.14. Prior to 2004, there were seven coroner's districts in Northern Ireland. Following a review of the coroner's service, the separate districts were amalgamated into one centralised coroner's service. This change may have affected the timing of the registration of deaths, with more recent statistics being more timely and consistent.
- 1.9.15. Table 1.5 compares the number of suicide and undetermined deaths being registered each year with the number occurring in those years. Occurrence figures for 2007 to 2009 have been excluded as a significant number of deaths occurring in these years will, as yet, not have been registered. The occurrence figures show more accurately the upward trend in the number of suicide and undetermined deaths.

Table 1.5: Number of suicide and undetermined deaths registered and actual number occurring (1999-2009)

Year	Suicide and Undetermined Deaths (Year Registered)	Suicide and Undetermined Deaths (Year Occurred)
1999	154	164
2000	185	186
2001	158	183
2002	183	201
2003	144	161
2004	146	232
2005	213	226
2006	291	211
2007	242	
2008	282	
2009	260	

#### **Smoking Related Deaths**

- 1.9.16. Information is not recorded on the death certificate on whether the deceased was a smoker. Estimates can however be made of the number of deaths attributable to smoking, by using information on the contribution of smoking to specific conditions which are recorded at death, for example lung cancer.
- 1.9.17. Research has been undertaken by the Health Development Agency to derive attributable proportions of smoking related deaths based on published relative risk factors for mortality of current and ex-smokers from various diseases, counts of death by cause, and estimates of current and ex-smoking behaviour.
- 1.9.18. The attributable proportions derived were then applied to Northern Ireland counts of cause-, sex- and age- specific mortality. Table 1.6 shows the estimated number of smoking related deaths between 2001 and 2009 using this method. On average there are around 2,300 deaths per annum attributable to smoking. Further information on the method used is given in Appendix 3.

Table 1.6: Estimated number of smoking related deaths registered (2001-2009)

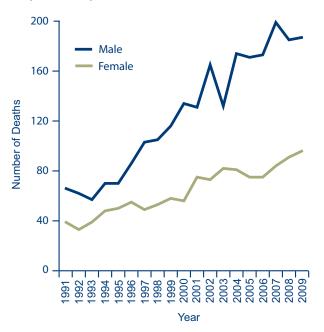
Year	Smoking Related Deaths
2001	2,350
2002	2,340
2003	2,390
2004	2,350
2005	2,290
2006	2,320
2007	2,310
2008	2,400
2009	2,360

#### **Alcohol Related Deaths**

1.9.19. In 2005, the definition of alcohol related deaths was widened to include additional causes of death with a clear causal relationship to alcohol consumption. The main addition is 'mental and behavioural disorders due to use of alcohol' (see Appendix 3 for further details). In 2009, a total of 283 people died from alcohol related deaths using the new definition; 187 males and 96 females. The equivalent 2008 figure is 276 deaths (185

males and 91 females) and the number of alcohol related deaths in 2009 is over 63 per cent higher than the 174 deaths registered in 1999. Figure 1.29 shows the trend in the number of alcohol related deaths since 1991 using the new definition.

Figure 1.29: Deaths from alcohol related diseases by sex (1991-2009)

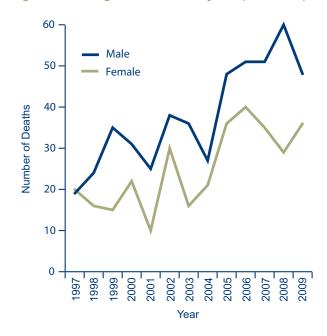


#### **Drug Related Deaths**

1.9.20. Drug related deaths include deaths where the underlying cause of death recorded on the death certificate is drug poisoning, drug abuse or drug dependence. Deaths from substances of abuse which are not traditionally regarded as drugs, such as alcohol and tobacco, are also excluded from the definition. Further information on the definition can be found in Appendix 3.

1.9.21. In 2009, there were 84 drug related deaths; 48 males and 36 females. This is a slight decrease from the equivalent 2008 figure of 89 deaths (60 males and 29 females). The number of drug related deaths in 2009 is 68 per cent higher than the number of drug related deaths registered in 1999 when there were 50 deaths. Figure 1.30 shows the trend in the number of drug related deaths since 1997.

Figure 1.30: Drug related deaths by sex (1997-2009)



#### **Asbestos Related Deaths**

1.9.22. In 2009, 63 asbestos related deaths were registered in Northern Ireland while there were 53 such deaths in 2008. The 2004 figure of 92 deaths was the highest number recorded in the period from 2001 to 2009. See Appendix 3 for further information on asbestos related deaths.

#### **Healthcare Associated Infections**

1.9.23. In 2009, 50 deaths were registered where Methicillin resistant *Staphylococcus aureus* (MRSA) was mentioned on the death certificate. Of these, 16 deaths had MRSA recorded as the underlying cause of death. Corresponding figures for 2008 were 84 deaths where MRSA was mentioned on the death certificate and 32 cases where MRSA was the underlying cause of death.

1.9.24. The number of deaths where *Clostridium difficile* was mentioned on the death certificate in 2009 was 124. Of these, 39 deaths had *Clostridium difficile* as the underlying cause of death. This compares to equivalent figures for 2008 of 191 deaths with *Clostridium difficile* mentioned on the death certificate and 64 where *Clostridium difficile* was the underlying cause of death.

1.9.25. In 2008 there was an outbreak of *Clostridium difficile* infection in Northern Ireland. A public inquiry is ongoing regarding this. The purposes of the inquiry are to

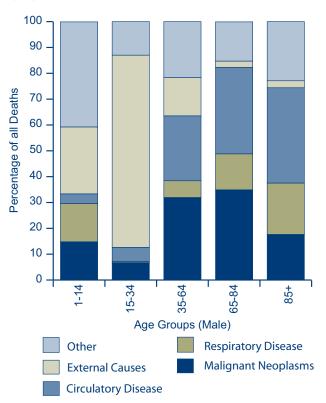
(i) establish how many deaths occurred for which *Clostridium difficile* was the underlying cause of death, or was a condition contributing to death and (ii) to examine and report on the experiences of patients and others who were affected directly by the outbreak <sup>5</sup>. However the impact of this outbreak is reflected in the increase in *Clostridium difficile* deaths registered in 2008.

#### Main Causes of Death by Age and Sex

- 1.9.26. Mortality rates by cause of death vary with age and sex. A total of 130 deaths of children aged less than one year were registered in 2009, 75 per cent of whom died within the first four weeks of life. The majority of infant deaths were attributed to certain conditions originating in the perinatal period (ICD10 Codes P00-P96, 60 deaths) and congenital anomalies (ICD10 Codes Q00-Q99, 45 deaths).
- 1.9.27. A total of 51 children aged 1-14 died in 2009. External causes of death accounted for 14 of these deaths, while diseases of the nervous system and sense organs (G00-H95) accounted for 12 deaths, cancer (ICD10 Codes C00-C97) accounted for seven deaths and diseases of the respiratory system (J00-J99) accounted for a further seven deaths.
- 1.9.28. A total of 327 people aged 15-34 died in 2009. As with children, external causes of death accounted for more deaths than any other cause (211 deaths, 65 per cent of deaths of persons aged 15 to 34). Thirty-eight per cent of all suicide and self-inflicted injury and events of undetermined intent (100 out of 260 suicides) and 49 per cent of deaths due to transport accidents (62 out of 127 transport accident deaths) involved people aged 15-34.
- 1.9.29. Of the 2,490 people who died between the ages of 35-64 (of which 60 per cent were male), cancer accounted for 38 per cent of deaths in 2009, while diseases of the circulatory system accounted for a further 21 per cent of deaths in this age group.
- 1.9.30. Deaths of people aged 65 and over accounted for 79 per cent of all deaths in 2009. Although the death rate from cancer continues to increase with age and accounted for 25 per cent of deaths in this age group, the death rates from diseases of the circulatory system increase more quickly with age and this accounted for 34 per cent of deaths to those aged 65 and over. For those aged 85 or more, diseases of the circulatory system accounted for 39 per cent of deaths, cancer 13 per cent

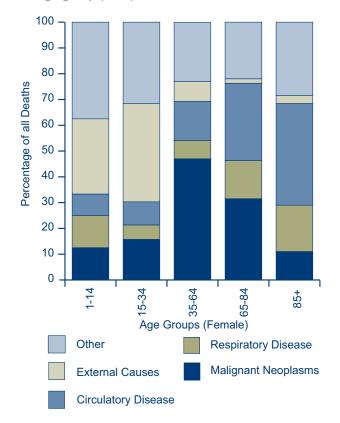
and diseases of the respiratory system 19 per cent. Figures 1.31 and 1.32 show the main causes of death by age group for male and female deaths respectively.

Figure 1.31: Percentage of male deaths by cause and age group (2009)



<sup>5</sup> Further details can be found on the Inquiry website at: http:// www.cdiffinquiry.org/

Figure 1.32: Percentage of female deaths by cause and age group (2009)

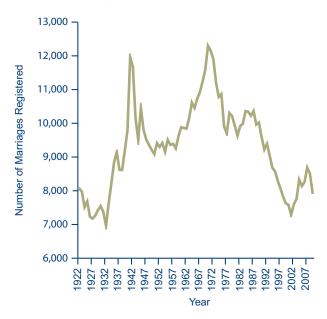


### 1.10 Marriages

#### **Numbers**

1.10.1. There were 7,931 marriages registered in 2009, a decrease of 579 marriages or 6.8 per cent on the 2008 figure of 8,510 marriages. Figure 1.33 shows the number of marriages from 1922. The number of marriages registered in 2009 is significantly higher than the recent low of 7,281 marriages in 2001, but still below the levels seen 30 years ago of around 10,000 marriages a year.

Figure 1.33: Number of marriages registered (1922 to 2009) – non-zero y-axis



#### **Age at Marriage**

1.10.2. The average age at marriage has increased markedly in the last two decades. The average age at marriage for all brides in 2009 was 31 years of age. This compares to 29 years in 1999, 26 years in 1989 and 24 years in 1979. The average age for the groom was 33 years of age, an increase of two years from 1999 (31 years), five years from 1989 (28 years) and seven years from 1979 (26 years).

1.10.3. The average age for first marriages has also increased and is now 29 for single females and 31 for single males, both around six years older than their counterparts 30 years ago.

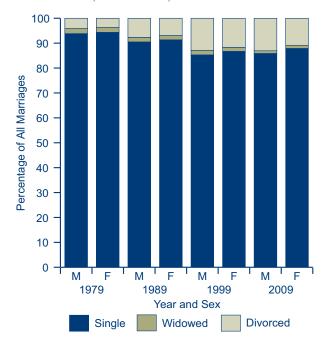
1.10.4. The age difference at first marriage is around two years. This has remained fairly constant over the last 30 years, while the age difference for those who have been married previously is greater at around six years; again this has been a constant value since 1979.

#### **Marital Status at Marriage**

1.10.5. Figure 1.34 gives the percentage of marriages by marital status at the time of marriage between 1979 and 2009. The percentage of people marrying who are divorcees rose from four per cent in 1979 to around 12 per cent during 1999 and has remained at about this level since. The majority of this shift reflects a reduction in the proportion of marriages where one of the partners was single before marriage. The proportion of those marrying who were widowed has decreased slightly over the past 30 years from around two to one per cent for both brides and grooms.

1.10.6. Just over half (51 per cent) of couples who married in 2009 lived at the same address before marriage.

Figure 1.34: Percentage of marriages by sex and marital status (1979 to 2009)



#### **Bride and Groom Usual Residence**

1.10.7. Of the 7,931 marriages in 2009, 7,042 (89 per cent) were to couples where one or both partners lived in

Northern Ireland. In the remaining 889 marriages (11 per cent) neither partner lived in Northern Ireland. Of these 889 marriages just under three-quarters (74 per cent) were marriages where one or both partners were born in Northern Ireland; clearly relating to people returning home to get married.

#### **Bride and Groom Country of Birth**

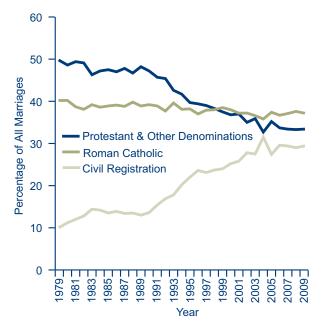
1.10.8. Overall in 70 per cent (5,542 marriages) of marriages registered in 2009 both partners were born in Northern Ireland, in 24 per cent (1,934 marriages) one partner was born in Northern Ireland and in six per cent (455 marriages) neither partner was born in Northern Ireland.

#### **Religious and Civil Marriages**

1.10.9. Twenty-nine per cent of all marriages (2,330) in 2009 were civil ceremonies compared to 10 per cent in 1979.

1.10.10. Of the 5,601 religious marriages in 2009, 53 per cent were Roman Catholic ceremonies, 19 per cent Presbyterian, 14 per cent Church of Ireland, four per cent Methodist and 11 per cent other denominations. Figure 1.35 shows the change in type of ceremony from 1979 to 2009.

Figure 1.35: Percentage of marriages by method of celebration (1979 to 2009)



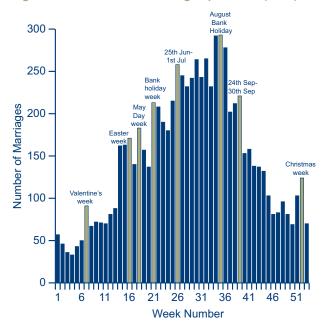
#### **Place of Ceremony**

- 1.10.11. The Marriage (Northern Ireland) Order 2003 now allows civil marriage ceremonies to be conducted in a number of approved venues outside of Registrar's Offices. In 2009, 1,018 civil marriage ceremonies (44 per cent of all civil marriage ceremonies) were held in approved venues other than a Registrar's Office compared to 1,056 in 2008. The most popular location was Belfast Castle (73 civil weddings) followed by Galgorm Manor Hotel, Ballymena and the Old Inn, Crawsfordsburn (55 civil marriages each).
- 1.10.12. The ability to conduct religious marriage ceremonies other than in religious buildings varies by religion and denomination. In 2009, 465 religious marriage ceremonies (eight per cent of all religious marriage ceremonies) were held outside of religious buildings.
- 1.10.13. Belfast Registrar's Office had the most weddings of all Registrar Offices in 2009 and St. Eugene's Cathedral in Derry Local Government District had the most weddings of all religious buildings.

#### **Marriage Day**

- 1.10.14. The most common day of the week for all marriages was a Saturday (40 per cent). Friday was the most common day for civil marriages (34 per cent); and the most common month to get married was August (1,197 couples) followed by July (1,102 couples). Saturday 22nd August 2009 was the most popular day in 2009 to get married, with 115 couples marrying on that date. Only 63 marriages took place on a Sunday in 2009, 17 of which were civil marriages the latter only becoming possible under the 2003 legislation.
- 1.10.15. Figure 1.36 shows the number of marriages by week, with dates of selected weeks highlighted. The most popular week to get married was from Monday 17th August to Sunday 23rd August (293 couples).

Figure 1.36: Number of marriages per week (2009)



#### **Marriages by Area**

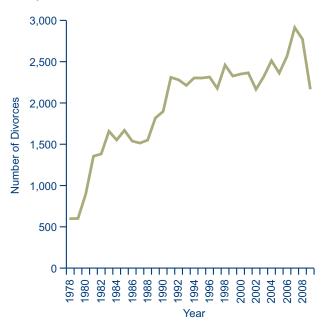
- 1.10.16. Almost 16 per cent of all marriages in 2009 occurred in Belfast, followed by seven per cent in Newry and Mourne and six per cent in Derry, Lisburn and North Down Local Government Districts.
- 1.10.17. The average age of males and females at the time of marriage varies across Local Government Districts. Ards had the highest average ages at 33 for females and 35 for males, compared to Dungannon with the lowest average age at 29 for females and Magherafelt with the lowest average age at 31 for males.
- 1.10.18. Eighty-two per cent of religious ceremonies in Newry and Mourne and Omagh Local Government Districts were Roman Catholic compared to two per cent of religious ceremonies in Carrickfergus Local Government District, reflecting the community background of the populations in these Local Government Districts.

#### 1.11 Divorces

#### **Numbers**

- 1.11.1. The divorce figures reported here are based on Decree Absolutes. Decree Nisi information can be obtained from the Northern Ireland Courts and Tribunals Service. A Decree Nisi does not terminate the marriage; a couple remain married until the Decree Absolute has been granted.
- 1.11.2. The number of marriages dissolved in Northern Ireland in 2009 was 2,176. This is a decrease of 22 per cent from last year's figure of 2,773. However the 2008 figure is the second highest on record after the 2007 figure (2,913) which was the highest number of divorces ever recorded in Northern Ireland.
- 1.11.3. During the 1970s the number of divorces was around 500 per year, by the 1980s the figure had tripled to around 1,500 per year, and in the 1990s and early part of this decade there has been another increase in the number of divorces to around 2,300 per year. Figure 1.37 shows the number of divorces from 1979 to 2009.

Figure 1.37: Number of divorces registered (1979 to 2009)



#### **Grounds for Divorce**

- 1.11.4. Non-cohabitation remains the most frequently recorded reason for divorce (75 per cent), followed by behaviour (13 per cent) and combined grounds (nine per cent).
- 1.11.5. As in previous years, more women (65 per cent) than men (35 per cent) lodged applications for divorce in 2009. Just eight divorces granted in 2009 were the result of joint applications.

#### **Duration of Marriage**

- 1.11.6. The average duration of marriage ending in divorce is increasing over time. The average duration of marriage ending in divorce was 18 years in 2009; the comparable duration for 1989 was 15 years.
- 1.11.7. Of the divorcing couples in 2009, five per cent were married less than five years, 18 per cent between five and nine years and 76 per cent were married for 10 years or more. Around 23 per cent of divorces occurred to couples that had been married for 25 years or more.

#### **Marital Status at Time of Marriage**

1.11.8. While the majority of people getting divorced in 2009 had been single at the time of marriage (89 per cent for both males and females), the proportion of people getting divorced who had been divorced previously has been rising since the early 1980s and this group now accounts for 10 per cent of all divorcees in 2009. Just under one per cent of all divorcees were widows or widowers when they married.

#### Age at Marriage of Divorcees

1.11.9. The average ages at marriage of men and women who got divorced in 2009 were 27 years and 26 years respectively. In 2009, 45 per cent of men and 59 per cent of women who divorced were under 25 years when they married.

#### **Age at Divorce**

1.11.10. The average ages at divorce for men and women who got divorced in 2009 were 45 and 44 years respectively. More women get divorced at younger ages than men reflecting the difference in their ages at marriage with husbands generally being older than their wives.

#### **Method of Celebration of Marriage**

1.11.11. In 2009, 32 per cent of divorces were of marriages that had been celebrated in a Roman Catholic Church. Corresponding figures for Presbyterian (including Free Presbyterian), Church of Ireland, Methodist and marriages in a Registrar's Office were 17 per cent, 13 per cent, four per cent and 26 per cent respectively. The remaining nine per cent were either unknown or other denominations. The average duration of marriage before divorce for marriages celebrated in a religious ceremony was 19 years compared to 14 years for those who celebrated marriage in a civil ceremony.

1.11.12. Over the last three years 15 per cent of divorces here were following a marriage which took place outside Northern Ireland. Of these divorces, a significant proportion leads to one partner living outside Northern Ireland at the time of their divorce.

#### **Divorcees by Area of Residence**

1.11.13. Just over 15 per cent of all divorcees in 2009 were residing in Belfast followed by around six per cent in Ards, Derry, Lisburn, Newtownabbey and North Down Local Government Districts. Seven per cent of divorcees were residing outside Northern Ireland at the time of divorce, but this figure differed by gender – four per cent of female divorcees were living outside Northern Ireland compared to 10 per cent of male divorcees.

#### **Children Affected by Divorce**

1.11.14. In 2009, almost 3,900 children/stepchildren were affected by divorce; 2,300 children aged under 18 at the time of divorce and 1,600 children aged 18 and over at the time of divorce.

### 1.12 Civil Partnerships

1.12.1. The Civil Partnership Act 2004 came into force in late 2005, enabling same-sex couples to obtain legal recognition of their relationship. During 2009, 96 civil partnerships were registered in Northern Ireland. Of these 46 partnerships were male partnerships and 50 were female partnerships. This compares to 86 civil partnerships registered in 2008 (43 male partnerships and 43 females partnerships).

#### **Marital Status and Age of Civil Partners**

1.12.2. For 79 civil partnerships both partners were single, while in 17 civil partnerships at least one partner had previously been married. For 37 of the 46 male civil partnerships both partners were single, while for nine civil partnerships at least one partner had previously been married. For 42 of the 50 female civil partnerships both partners were single; in the remaining eight female civil partnerships at least one partner had previously been married.

1.12.3. For male civil partnerships the average age of partners was just over 39 years and was just under 36 years for female civil partnerships.

#### **Place of Ceremony**

1.12.4. In 2009, 74 civil partnership ceremonies were held in Registrar's Offices. The remaining 22 ceremonies were held in an approved venue.

#### **Civil Partnerships by District**

1.12.5. Civil partnerships celebrated in a particular district are not necessarily between residents of that district. In 2009, Belfast Local Government District was the most popular district for civil partnerships (63 civil partnerships), with Derry Local Government District the second most popular (nine civil partnerships).

## 1.13 Adoptions

- 1.13.1. Registers of children adopted under the provisions of the Adoption (NI) Order 1987 and Adoption (Hague Convention) Act (NI) 1969 and of previous adoption Acts of 1929, 1950 and 1967 are kept in the General Register Office, to which adoption orders made to the courts are transmitted.
- 1.13.2. A certified copy of an entry in the Adopted Children Register is evidence of adoption, and is also evidence of the date of birth of the adopted child.
- 1.13.3. The number of children recorded in the Adopted Children Register during 2009 was 100, an increase of three from the 2008 figure of 97. The number of adoptions had been falling steadily since 1970 when over 500 children were adopted; the 2008 figure was the lowest recorded figure since the early 1930s.

### 1.14 Re-Registrations of Births

1.14.1. In 2009, 765 births were re-registrations, 62 less than in 2008. The most common reasons for a re-registration are because the parents have got subsequently married or to add the father's name to the birth entry.

# 1.15 Gender Recognition Registration

- 1.15.1. The Gender Recognition Act 2004 was passed on 1 July 2004 and established a Gender Recognition Panel that will issue Gender Recognition Certificates to those who have satisfactorily proved that they have been living in their new gender.
- 1.15.2. The Gender Recognition Regulations (Northern Ireland) 2005 that came into operation from 1 April 2005 will allow the Registrar General, on receipt of a Gender Recognition Certificate, to re-register a birth, showing the new gender, in the Gender Recognition Register. In 2009 there were three births re-registered in this way.

# Chapter 2 Northern Ireland: An Ageing Population

By Gillian McCrory, Naomi O'Neill, Jos IJpelaar and David Marshall Northern Ireland Statistics and Research Agency



This report was written prior to 20th October 2010 announcement of further changes to pension age.

Registrar General Northern Ireland Annual Report 2009

#### 2.1 Introduction

- 2.1.1. Over the last century there have been some marked changes in the make-up of the Northern Ireland population. One of the most significant has been the relative ageing of the population. Population ageing is not unique to Northern Ireland; indeed it is being witnessed across the world. The reasons for population ageing vary. In some countries ageing is primarily due to increased longevity whilst in other countries the driving force is falling fertility levels.
- 2.1.2. Northern Ireland has witnessed both of these phenomena. There have been significant falls in fertility rates from on average four or more children per woman to around two today. This has been coupled with increased life expectancy, with improvements to public health, health care provision, nutrition and sanitation being instrumental.
- 2.1.3. These improvements, whilst extremely welcome, will create changes in the make-up of the Northern Ireland population. Most notably it is projected that the ageing of the Northern Ireland population over the next five decades will be the fastest in the United Kingdom [1].
- 2.1.4. Population ageing will have an impact on the wider society in Northern Ireland. In areas such as grandparents caring for their grandchildren, more opportunities for older people to work until later in life and a host of other changes.
- 2.1.5. Government has had to respond to these changes in a number of areas of social and economic policy. Most notable are changes in the economic sphere, with increases in state pension age brought about by the Turner Pensions Commission [2] and more recently the United Kingdom Government consultation on phasing out the default retirement age [3].
- 2.1.6. Locally the Northern Ireland Government in 2005 published "Ageing in an Inclusive Society" [4]. The strategy sought to promote greater inclusion of older people in Northern Ireland in society. The strategy forms part of the wider equality agenda; with age being one of the areas assessed by the Equality Commission for Northern Ireland.
- 2.1.7. In this context it is important that the demographic evidence base around population ageing is available for policy makers, politicians and the wider society. This will help ensure that future changes in policy are evidence based. Therefore, this year, the Registrar General's special section relates to the demography of older people and the ageing population.

- 2.1.8. This report looks at population ageing in detail with specific emphasis on the changing age structure of the Northern Ireland population and the numbers of older people. The report also projects what is likely to happen in terms of future numbers of older people, life expectancy and the proportion of life likely to be in good health.
- 2.1.9. The remainder of this report is split into various sections looking at: the different definitions of ageing, an insight into why the population is ageing, comparisons of the ageing population across the United Kingdom, the European Union and the Rest of the World, the number of centenarians, mortality and cause of death for the older population, life expectancy and healthy life expectancy, projections for the older population and living arrangements for the older population.

#### 2.2 Definitions

- 2.2.1. When writing a report on ageing it is necessary to have standard definitions. It is important to recognise that older people are a disparate group and that ageism both towards old and young people exists in society and this needs to be addressed through better information, advice and legislation where appropriate. Allied to this is the concept that it is perhaps incorrect to categorise people with respect to their age. Indeed descriptors of chronological age are very much a subjective issue; what is young or old for one person may not be for another. However age is used across society and is recorded effectively. Therefore whilst accepting the general point it has been necessary to adopt some standard age-related classifications solely around chronological age.
- 2.2.2. For the purposes of this report a number of definitions are used. Firstly a general definition, the older population are those aged 65 and over, with the youngest old those aged 65 to 84 years and the oldest old those aged 85 and over. This definition of the oldest old is used across the developed world [5].
- 2.2.3. Secondly in terms of state pension in the United Kingdom, up until 5 April 2010 women aged 60 and over and men aged 65 and over were eligible for the state pension and are thus of "pensionable age". People of working age are thus defined as women aged 16 to 59 years and men aged 16 to 64 years, whilst children are defined as those aged under 16.
- 2.2.4. From 2020 onwards women will only be eligible for the state pension when they are aged 65 and over.\* The change in pension rules for women will be introduced incrementally over the period 2010 to 2020. The Pension Commission, an independent body, was established by the Government to assess the United Kingdom pensions and retirement savings system and to advise the Government on the present state pension system [2]. On the current timetable, set in 2007, the pension age is due to rise to 66 years by 2026, to 67 years by 2036 and to 68 years by 2046 for both males and females [6]. However, following the Pension Commission reports, the United Kingdom Government are currently consulting on this and are actively considering the impact on the demographic and economic situation. To help ensure sustainability of the pension system over the long term the UK Government will be considering the future timing of increases to the state pension age [3]. It seems possible that there may be further increases to the definition of state pension age.

2.2.5. Given these changes this report primarily uses the definition of older persons (aged 65 and over) and not pension age. Occasionally current working age and current pensionable age will be used and these are defined as laid out in paragraph 2.2.3 (i.e. prior to the 5 April 2010 change). All age-related definitions are summarised in Box 1 below.

Box 1: Age-related classifications used in this chapter

Children:	Those aged under 16 years
Current Working Age:	Women aged 16 to 59 years and men aged 16 to 64 years
Current Pensionable Age: (2009 definition)	Women aged 60 and over and men aged 65 and over
Older Population:	All persons aged 65 years and over
Youngest Old Population:	All persons aged 65 to 84 years
Oldest Old Population:	All persons aged 85 years and over

2.2.6. Finally the term 'ageing' as used in this report covers two factors: not only the ageing of the population i.e. the general increase in the average or median age of the population, but also the increasing number of people reaching old age.

<sup>\*</sup> This document was written prior to 20th October 2010 announcement of further changes to pension age.

## 2.3 Why is the Population Ageing?

- Population ageing is expected to be one of the 2.3.1. most prominent global demographic trends of this century and widespread across the vast majority of countries of the world. However population ageing is not a new phenomenon. In Northern Ireland the 1937 Census recorded the older population at just under 116,000 (nine per cent of the population), compared to the latest 2009 population estimates which show almost 255,000 older people (14 per cent of the population). Population ageing is likely to be faster over the next 30 years, with older people projected to reach half a million by 2041 (24 per cent of the population) and 600,000 by the late 2070s (29 per cent of the population). The future increases in ageing should therefore be seen as a continuation of a long-run trend rather than a new phenomenon.
- 2.3.2. Demographers attribute population ageing to a number of "demographic transitions". Such demographic transitions have been occurring across western societies since the 1700s. Demographic transition refers to a gradual process where a society moves from a situation of high to low rates of fertility and mortality in stages, see Figure 2.1. The first stage is high fertility and mortality rates. In stage two the population begins to increase as mortality rates fall due to a decline in infant and childhood mortality, while fertility rates still remain high. At the third
- stage the population still increases but begins to age when fertility declines and adult mortality rates improve. This lowering of mortality results in more children surviving and thus people having larger surviving families. People eventually react to this increased survival of children by having fewer children per family and this drop in family size becomes much larger than the improvement due to infant survival. At stage four the population begins to stabilise as both the fertility and mortality rates are low, this is the current situation in Northern Ireland. There may be a fifth stage, which Northern Ireland has not experienced, where the population will begin to decline and age with mortality rates being greater than fertility rates.
- 2.3.3. The process of population ageing is primarily driven by fertility and mortality rates. Populations with high fertility tend to have low proportions of older people while populations with low fertility tend to have high proportions of older people. In Northern Ireland there have been falls in both fertility and mortality rates since the early 1900s and these sustained levels of lower fertility and higher life expectancies have resulted in increases in the proportion of older people in the population. The next section details the population in Northern Ireland and relates this position to the United Kingdom, the European Union and the Rest of the World.

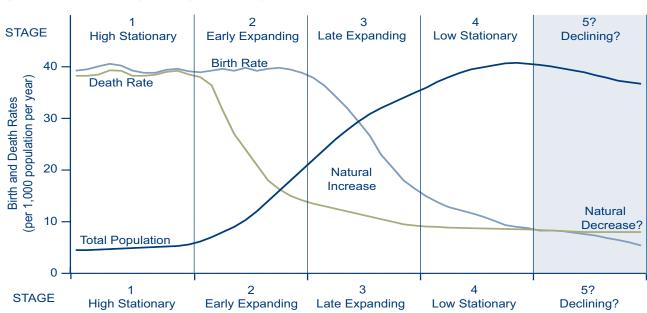


Figure 2.1: Chart showing the stages of demographic transition<sup>1</sup>

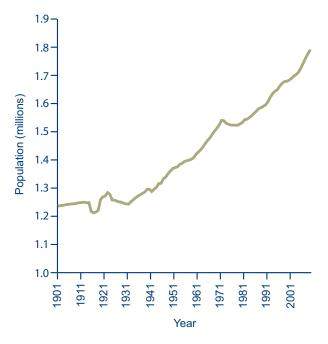
<sup>1</sup> The demographic transition chart is available at: http://www.nssgeography.com/worldissues%20web/Unit%20population/What %20is%20 the%20Demographic%20Transition%20Model.htm

## 2.4 Ageing Demography of Northern Ireland, the United Kingdom, the European Union and the Rest of the World (Past and Present)

#### Northern Ireland

2.4.1. The population of Northern Ireland is growing in size. In 1901, the regions of Ireland which eventually formed Northern Ireland in 1922, had a combined population of 1.24 million people; by the 1937 Census the population had increased to 1.28 million, it reached 1.4 million in 1956, 1.5 million by 1968, 1.6 million by 1990, 1.7 million by 2002 and is projected to reach 1.8 million in 2010. The change in population can be seen in Figure 2.2.

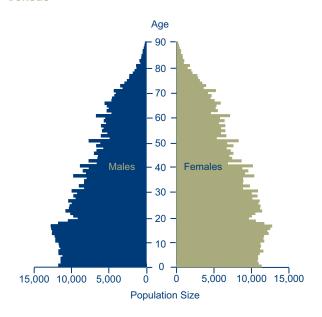
Figure 2.2: Northern Ireland population (1901-2009) – non-zero y-axis



- 2.4.2. The population growth has not been consistent across all age groups. In 1937 the median age of the Northern Ireland population was 28.6 years; it reached 30.1 years by 1987 and by 2009 it had increased by over eight years from 1937 to 36.7 years. Thus showing that on average the population of Northern Ireland has become markedly older.
- 2.4.3. In the 1937 Census for Northern Ireland the population was 1.3 million people. At that time 29 per cent of the population were aged under 16, 11 per cent were of

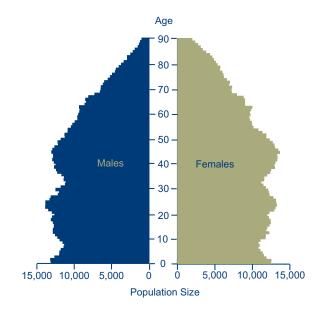
current pensionable age (aged 60 and over for women and aged 65 and over for men), with the remaining 60 per cent of the population of current working age (16 to 59 years for women and 16 to 64 years for men). Figure 2.3 shows the population age distributions for males and females from the 1937 Census.

Figure 2.3: Northern Ireland population pyramid, 1937 Census



2.4.4. The latest estimate of the size of the Northern Ireland population (30 June 2009) is 1,788,900 people. Twenty-one per cent of the population were aged under 16 years, 17 per cent were of current pensionable age, with the remaining 62 per cent of the population of current working age. Figure 2.4 shows the male and female age distribution of the population in 2009.

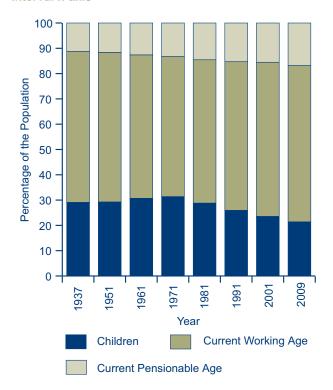
Figure 2.4: Northern Ireland population pyramid, 2009 mid-year population estimate



2.4.5. The age structure of the Northern Ireland population has been changing over time. The number of children increased between 1937 and 1971 from 372,100 to 482,700 as a result of a baby boom in the years following the Second World War. Since 1971, lower fertility levels have resulted in a 21 per cent decrease in the number of children aged 0-15 years to 382,100 by 2009. When fertility starts to decline this causes the population to age.

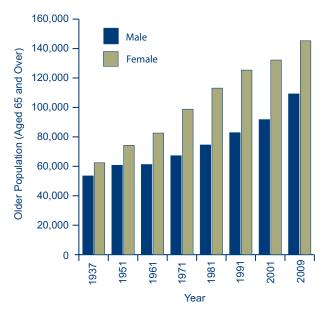
2.4.6. In contrast to children, the number of people of current working age has increased by 45 per cent from 764,400 to 1,104,900 between 1937 and 2009; and those of current pensionable age have increased by 111 per cent from 143,200 to 301,900 between 1937 and 2009. The changing age structure of the population since 1937 is illustrated in Figure 2.5.

Figure 2.5: Changing age structure of the Northern Ireland population (1937 to 2009) – non-standard interval x-axis



2.4.7. Between 1937 and 2009 the older population (aged 65 and over) increased by 120 per cent or 138,900 people from 115,600 to 254,500 older persons. In 1937 the older population represented nine per cent of all the people in Northern Ireland; by 2009 this had increased to 14 per cent. Within the figure the older male population more than doubled between 1937 and 2009 while the older female population increased by 130 per cent. The change is shown in Figure 2.6.

Figure 2.6: Older population (aged 65 and over) in Northern Ireland, by sex (1937 to 2009) – non-standard interval x-axis



2.4.8. Within the older population the number of youngest old (65 to 84 years) doubled from 111,500 in 1937 to 225,800 in 2009. In 1937 the youngest old made up nine per cent of the population and by 2009 they made up 13 per cent (an increase of 45 per cent in representation).

- 2.4.9. More markedly the number of oldest old (aged 85 and over) increased almost seven fold, from just under 4,200 in 1937 to 28,700 in 2009. In terms of representation the oldest old have increased from 0.3 per cent of the population in 1937 to 1.6 per cent in 2009.
- 2.4.10. Both the male and female youngest old and oldest old populations increased during this period. The youngest old male population increased by 95 per cent and the female youngest old population increased by 109 per cent, while the male oldest old population increased five fold and the female oldest old population increased almost eight fold between 1937 and 2009. Figures 2.7 and 2.8 show the scale of the increase over the period.

Figure 2.7: Youngest old population (65 to 84 years) in Northern Ireland, by sex (1937 to 2009) – non-standard interval x-axis

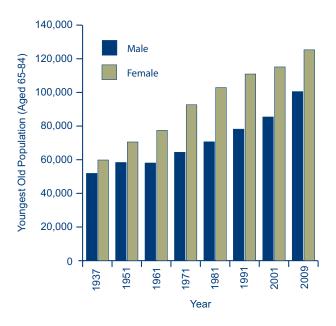
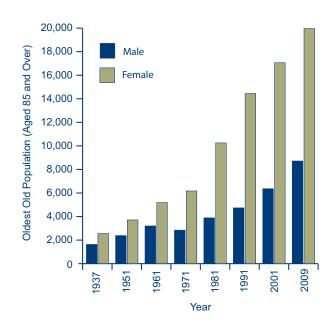


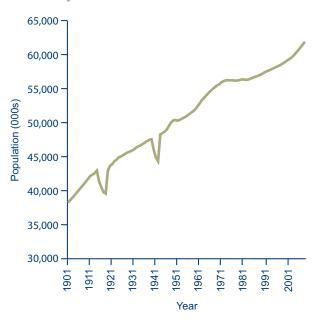
Figure 2.8: Oldest old population (aged 85 and over) in Northern Ireland, by sex (1937 to 2009) – non-standard interval x-axis



#### **United Kingdom**

2.4.11. Between 1901 and 2001 the population of the United Kingdom increased by 54 per cent from just over 38 million to just over 59 million. During this period, England and Wales, Scotland and Northern Ireland all experienced increases in population to varying degrees: 61 per cent, 13 per cent, and 37 per cent respectively. Figure 2.9 shows the population from 1901 to 2009. This graph shows an overall increasing population for the United Kingdom with notable exceptions around the two World Wars.

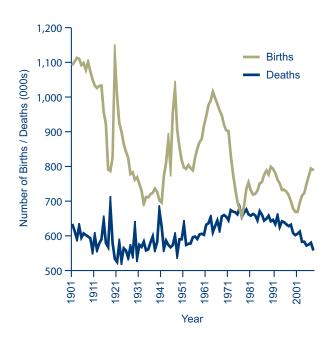
Figure 2.9: United Kingdom population (1901 to 2009) – non-zero y-axis



- 2.4.12. This increase in population did not happen uniformly across all age-groups; instead the United Kingdom population is growing older. The proportion of the older United Kingdom population (aged 65 and over) is 16 per cent in 2009, compared to 11 per cent in 1951 and five per cent in 1911.
- 2.4.13. Throughout the last century the number of births in the United Kingdom has generally been declining with the exception of post-war 'baby booms' and also a secondary peak when the post Second World War babies reached child-bearing age in the 1960s. There were 1,093,000 births in 1901 and this had decreased by almost 40 per cent to 669,000 by 2001.

- 2.4.14. In 1901 there were 632,000 deaths in the United Kingdom. Following this the number generally fell for the first quarter of the 20th century, but since then, deaths rose steadily until the 1970s before they began to decrease again. In 1976 in the United Kingdom the number of deaths (681,000) exceeded the number of births (676,000); the only time this happened in the 20th century. The number of United Kingdom births and deaths since 1901 can be seen in Figure 2.10.
- 2.4.15. The reduction in the number of births and the death rate over time has resulted in the population of the United Kingdom ageing.

Figure 2.10: United Kingdom live births and deaths (1901 to 2009) – non-zero y-axis



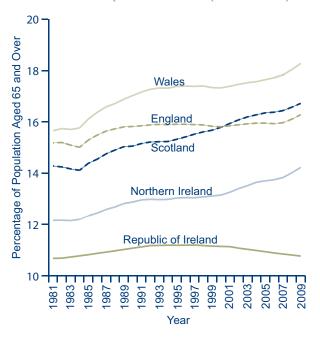
# Northern Ireland Comparisons with the United Kingdom, European Union and the Rest of the World

2.4.16. Northern Ireland has a younger population than the other parts of the United Kingdom; this is primarily because Northern Ireland's fertility rate has remained higher than the other parts of the United Kingdom. The latest population estimates, the 2009 mid-year estimates, show that Wales has proportionally the largest older population with 18 per cent of its population aged 65 and over, followed by Scotland on 17 per cent, England on 16 per cent and Northern Ireland with 14 per cent. In contrast, the Republic of Ireland has an even younger

population than the United Kingdom, with just 11 per cent representing the older population.

2.4.17. Figure 2.11 shows that historically there was also a difference between Northern Ireland and the other parts of the United Kingdom in older population representation. However this difference has remained constant over the last 30 years. In contrast, the share of older people in the Republic of Ireland population has been decreasing slightly over recent years and is now diverging from the United Kingdom experience.

Figure 2.11: Percentage of the older population (aged 65 and over) in England, Scotland, Wales, Northern Ireland and the Republic of Ireland (1981 to 2009)



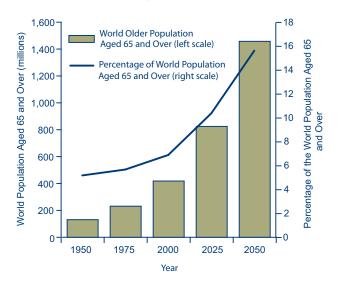
2.4.18. Looking at other countries in the European Union (EU27) over the last decade using Eurostat data [7], in 1999 Italy had the largest proportion of older people in its population at 18 per cent. By 2009 both Germany and Italy had the highest proportion of older people at 20 per cent. While at the other extreme Cyprus, the Republic of Ireland and Slovakia had the smallest percentage share of the older population in 1999 at 11 per cent. In 2009 the Republic of Ireland had the smallest proportion which remained at 11 per cent over the decade.

2.4.19. In world terms, in 1950, there were 131 million older people according to UN data [8]. At that time, only three countries had more than 10 million older people: China (24 million), India (12 million), and the United

States of America (13 million). Fifty years later, by 2000, the number of older people had increased three fold to 417 million. In 2000, four countries had more than 20 million older people: China (86 million), India (44 million), Japan (22 million) and the United States of America (36 million). Over the first half of the 21st century, the global older population is projected to expand three fold to reach nearly 1.5 billion in 2050.

2.4.20. As the world older population has grown faster than the total population, the proportion of older persons relative to the rest of the population has increased considerably. At the global level, almost one person in every 20 was aged 65 and over in 1950. By the year 2000, this ratio had increased to almost one person in every 15. By the year 2050, one person in every six throughout the world is projected to be aged 65 and over as shown in Figure 2.12.

Figure 2.12: World older population and percentage of the world population aged 65 and over (1950-2050)



2.4.21. Between 1950 and 2000, the median age of the world's population increased by three years, from 24 years in 1950 to 27 years in 2000. Over the period 2000 to 2050, the increase in median age is projected to be 11 years, so by 2050, half of the world's population is projected to be more than 38 years old.

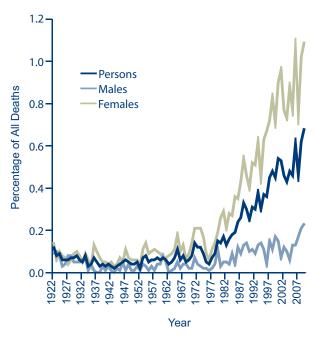
2.4.22. While the older population is growing rapidly globally, the oldest old population is accelerating at a much faster rate. There were five million people aged 85 years and over in 1950 which accounted for just 0.2 per cent of the total population; by 2000 the oldest old had increased to 29 million or 0.5 per cent of the total

population. This proportion is projected to increase four fold over the next 50 years, to reach two per cent of the population by 2050. By 2050 the oldest old age group is projected to number over 189 million worldwide. Projections for Northern Ireland are discussed later in section 2.9.

#### 2.5 Centenarians

- 2.5.1. As the number of older persons increases the age of the oldest person tends to increase. The age of 100 years is commonly seen as a milestone with people reaching this age being referred to as centenarians. This section discusses estimates of the population aged 100 and over.
- 2.5.2. The trend in the number of centenarians in the population can be assessed by looking at the number of deaths to centenarians; as all death certificates of centenarians are checked by tracing their birth certificate to confirm their age. Figure 2.13 shows the percentage of all deaths to centenarians since 1922 in Northern Ireland. In 1922, 23 deaths of centenarians were recorded which accounted for just 0.1 per cent of all deaths. In contrast in 2009 this figure had risen to 98 deaths, with deaths of centenarians representing 0.7 per cent of all deaths registered in Northern Ireland.

Figure 2.13: Percentage of deaths to centenarians, Northern Ireland (1922 to 2009)



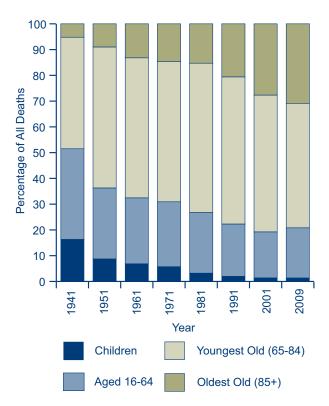
2.5.3. To produce estimates of the number of centenarians for Northern Ireland, the Kannisto-Thatcher method [9] is adopted. This is an internationally recognised method used to produce estimates of the very old. Using death registration data, an estimate can be made of the number of very old people at a given age alive in a particular year.

2.5.4. There were an estimated 182 centenarians living in Northern Ireland in 2009. This is an increase of 48 per cent compared to the estimated 123 centenarians in 2002. Females outnumber males by a ratio of nine to one. In 2009, centenarians made up 0.01 per cent of the total Northern Ireland population. A more detailed paper on the estimates of the Northern Ireland population aged 85 and over is available [10]. Similar statistics are also available for Scotland and England & Wales [11, 12]. Across the UK although the proportion of people who live beyond the age of 100 is small, their number has grown and is projected to continue to grow rapidly.

### 2.6 Mortality Statistics

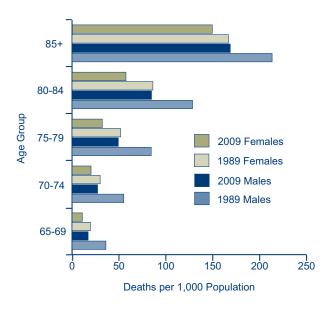
- 2.6.1. In most countries, including Northern Ireland, the demographic transition began with a decline in mortality rates and an increase in life expectancy which was primarily due to a reduction in deaths from infectious diseases.
- 2.6.2. The effect of mortality on the age structure of the population depends on the age at which mortality decline occurs. If mortality decreases at all ages equally, the population will eventually age. If the decrease only occurs at younger ages, the population will quickly become younger and if the decrease only occurs at the older ages, the population will become older. In Northern Ireland, most population ageing has been caused by the decline in fertility. However, in recent years, ageing has started to occur due to sustained deceases in the mortality of the older population, and this is set to continue.
- 2.6.3. In 1941, there were just under 20,000 deaths registered in Northern Ireland and the youngest old population (aged 65 to 84) accounted for most deaths at 43 per cent. Just five per cent of the deaths related to the oldest old population (aged 85 and over), while children aged 0 to 15 accounted for 16 per cent and those aged 16-64 accounted for 35 per cent of the deaths.
- 2.6.4. Over the remainder of the 20th century the number of deaths decreased to around 16,000 per year with the percentage of deaths to children decreasing dramatically to just one per cent from 1996 onwards while the percentage of deaths in the oldest old population increased significantly; and since 1997 deaths of the oldest old have made up at least one quarter of all deaths.
- 2.6.5. During 2009 there were 14,413 deaths registered of which 189 or one per cent were to children and 4,449 or 31 per cent were to the oldest old population, while the youngest old accounted for just under half of all deaths (48 per cent). Figure 2.14 shows the changes in the age structure of those dying since 1941.

Figure 2.14: Changing age structure of deaths in Northern Ireland (1941 to 2009) – non-standard interval x-axis



2.6.6. Figure 2.15 shows the age-specific mortality rates for older males and females in 1989 and 2009. Male mortality rates are consistently higher than female rates at the older ages, however, the gap has narrowed over the last 20 years and mortality rates have reduced across all older age groups for both males and females. The largest reduction has occurred in the 65 to 69 age group which reduced by 53 per cent for males and 44 per cent for females, while the oldest old population had the smallest reduction between 1989 and 2009 of 21 per cent for males and 11 per cent for females.

Figure 2.15: Mortality rates at older ages by age group and sex in Northern Ireland (1989 and 2009)



#### 2.7 Cause of Death

- 2.7.1. Over the last century mortality rates have declined, people are therefore living longer and dying of different diseases today than in the past. During the first half of the 20th century, antibiotics were developed and sanitation improved and this made previously fatal infectious diseases such as tuberculosis and polio treatable. By the second half of the 20th century as a consequence of the reduction in deaths from infectious disease, deaths were largely concentrated to chronic conditions such as heart disease and cancer that tend to impact on people at older ages.
- 2.7.2. Between 1922 and the late 1940s a significant number of deaths were grouped as 'other causes'. This includes many diseases of early infancy. While in 1922, 13 per cent of all deaths registered had 'old age' recorded as the cause of death.
- 2.7.3. From the late 1940s onwards circulatory diseases, which includes heart disease and strokes, became the most prominent cause of death. There have been large decreases in mortality rates from circulatory diseases since the 1970s which have resulted in a decline in mortality at the oldest ages. However, while deaths from circulatory diseases have been reduced greatly in recent years, it remains the major cause of death in Northern Ireland. Cancer mortality rates have not experienced the same improvement as heart disease and stroke over the past thirty years, with some cancer site-specific mortality rates having risen and some reduced [13]. Table 2.1 shows the top five causes of death over the past 80 years.

Table 2.1: Top five causes of death in Northern Ireland (1929 to 2009)

Top Five Causes of Death	1929	1949	1969	1989	2009
1	Other Causes (28%)	Circulatory Diseases (33%)	Circulatory Diseases (55%)	Circulatory Diseases (47%)	Circulatory Diseases (31%)
2	Infectious Diseases (19%)	Other Causes (28%)	Cancer (16%)	Cancer (22%)	Cancer (27%)
3	Respiratory Diseases (16%)	Cancer 13%	Other Causes (12%)	Respiratory Diseases (18%)	Other Causes (21%)
4	Circulatory Diseases (16%)	Respiratory Diseases (9%)	Respiratory Diseases (11%)	Other Causes (8%)	Respiratory Diseases (14%)
5	Old Age (11%)	Old Age (7%)	External Causes (4%)	External Causes (4%)	External Causes (6%)

2.7.4. As mentioned previously 'old age' was recorded as a cause of death on death certificates in the early 1920s. It remained as an accepted cause of death until the 1950s when coding practices were changed and a more accurate diagnosis of death was required. Figures 2.16 and 2.17 show the difference in the cause of death for each age group in 1922 and 2009. The majority of older people were simply recorded as dying of old age in 1922, but by 2009, the oldest old are more likely to die due to diseases of the circulatory system followed by diseases of the respiratory system.

Figure 2.16: Major causes of death in Northern Ireland, by age group (1922)

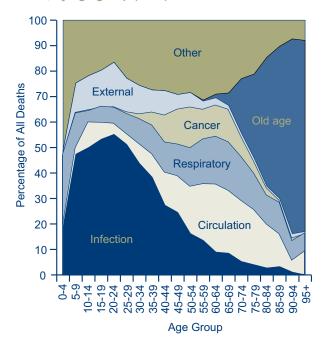
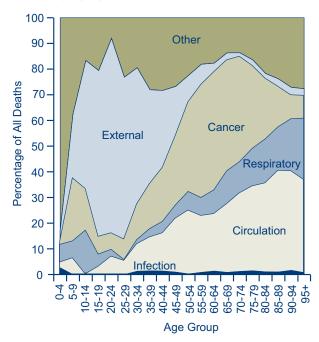


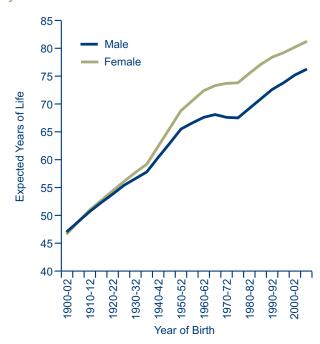
Figure 2.17: Major causes of death in Northern Ireland, by age group (2009)



# 2.8 Life Expectancy and Healthy Life Expectancy

- 2.8.1. The previous two sections looked at overall mortality and cause of death. In terms of the ageing of the population, life expectancy is a key summary statistic. This section looks at changes in life expectancy and also introduces a relatively new statistic called 'healthy life expectancy' which measures the number of years one might expect to live in good health.
- 2.8.2. Life expectancy is an estimate of the number of years that a person can expect to live, on average, if they experienced the age–specific mortality rates for a certain period of time.
- 2.8.3. In 1900-02 baby boys and girls were expected to live for 47 years. By 2000-02 baby boys could expect to live to 75 years and baby girls to 80 years, an increase of 28 years for boys and 33 years for girls. This is a remarkable increase and one of the success stories of the last Century. Figure 2.18 shows the change in life expectancy at birth for males and females since 1900-02.
- 2.8.4. The figures quoted in this chapter on life expectancy are period life expectancy figures which are the most commonly and widely used. Period life expectancy does not take any account of changes in age-specific mortality rates over time and is simply calculated using the current mortality rates. Across the United Kingdom figures are also calculated on cohort life expectancy which looks at mortality over the life span of a generation or cohort. Further information is available in Chapter 1, section 1.8 on period and cohort life expectancy including comparisons between the two methods.

Figure 2.18: Northern Ireland life expectancy at birth for males and females (1900-02 to 2005-07) – non-zero y-axis



- 2.8.5. While life expectancy is an important measure of the length of life, it does not look at quality of life, and therefore takes no account of whether people are living longer in good health or bad health. Quality of life can be examined by looking at the expected years of life which are free from a limiting long-term illness.
- 2.8.6. Limiting long-term illness (LLTI) is a measure of health which is used in the Census and it is also asked in the Continuous Household Survey (CHS) [14] each year (see Box 2 for details of the question asked). The CHS is asked of around 6,000 people each year and about 20 per cent respond that they have a LLTI. Figure 2.19 shows that the percentage of people who say they have a LLTI increases with age.

Box 2: Continuous Household Survey and 2001 Census questions on Limiting Long-Term Illness (LLTI)

# **Continuous Household Survey on Limiting Long Term Illness**

Do you have any long-standing illness, disability or infirmity?

By long-standing I mean anything that has troubled you over a period of time or that is likely to affect you over a period of time.

Yes

No

#### 2001 Census on long-term illness:

Do you have any long-term illness, health problem or disability which limits your daily activities or the work you can do?

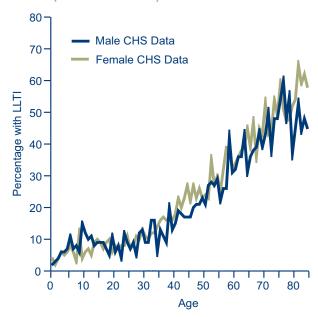
Include problems which are due to old age.

Yes

No

2.8.7. The Continuous Household Survey is not asked of people who live in communal establishments, for example nursing homes. To account for this gap in the data the results of the Continuous Household Survey have been adjusted to include the percentage of people who lived in communal establishments and had a LLTI in the 2001 Census and a trend line has been created to model the percentage of people with LLTI.

Figure 2.19: Percentage of people reporting they have a LLTI in the Continuous Household Survey by age and sex (2005/6 to 2009/10)



2.8.8. Using the information from the LLTI calculated trend along with population and death registration data it is possible to create both a life expectancy at birth and a LLTI-free expectancy [15]. This is defined as the number of years an individual can expect to live in a healthy state; in this case without a limiting long-term illness.

2.8.9. Table 2.2 shows the life and LLTI-free expectancy at birth for males and females. On average males can expect to live 76.6 years with 80 per cent or

Table 2.2: Life expectancy and Limiting Long-Term Illness free expectancy for males and females (2005/6 to 2009/10)

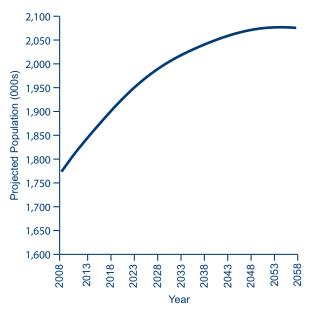
		At Birth			At 65 Years	
	Life Expectancy	Healthy Life Expectancy (LLTI-Free)	% LLTI-Free	Life Expectancy	Healthy Life Expectancy (LLTI Free)	% LLTI-Free
Male	76.6	61.5	80%	17.1	9.4	55%
Female	81.3	62.3	77%	19.9	9.0	45%

- 61.5 years LLTI-free, while females can expect to live for 81.3 years with 77 per cent or 62.3 of those years LLTI-free.
- 2.8.10. At the age of 65, males will on average live a further 17.1 years but only 55 per cent will be LLTI–free (9.4 years) while females will live longer at 19.9 years but a smaller percentage (45 per cent) will be spent LLTI-free, equating to 9.0 years.
- 2.8.11. The analysis of LLTI shows that after the age of 65 the Northern Ireland population will spend around half their remaining years in poor health. Further research is needed to assess the needs of the ageing population in relation to this. The 2011 Census will ask additional questions on disability and health which will help to produce better estimates of the population who are in poor health and the nature of their illness [16]. Clearly an increased understanding of this is vital for assessing the impact of an ageing population on the social and economic policy areas. This is discussed further in the conclusion.

# 2.9 Ageing Demography of Northern Ireland (Future)

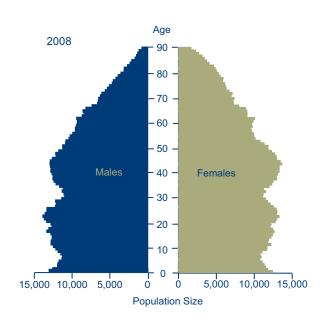
- 2.9.1. It is important to understand and plan for the future number of people in Northern Ireland. To assist this, standard population projections are produced for Northern Ireland. The latest set of population projections, which are 2008-based, show that the Northern Ireland population will continue to age and the older population will continue to rise. However, it is important to note that these projections are dependent upon assumptions of fertility, mortality and migration. The assumptions are examined later in this section but it is most notably the assumptions and changes in life expectancy which are driving the ageing population.
- 2.9.2. The latest 2008-based population projections for Northern Ireland show that the population will increase until the early 2050s before it will begin to stabilise. The 2008 population was 1.78 million and it is projected to exceed two million by 2031. By the year 2058 the population is projected to reach 2.08 million which will be an additional 300,000 people and a population 17 per cent larger than 2008. The population projections from 2008 to 2058 are shown in Figure 2.20.

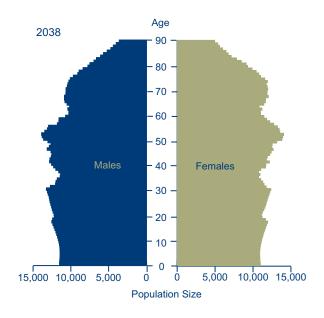
Figure 2.20: Projected population in Northern Ireland (2008 to 2058) – non-zero y-axis

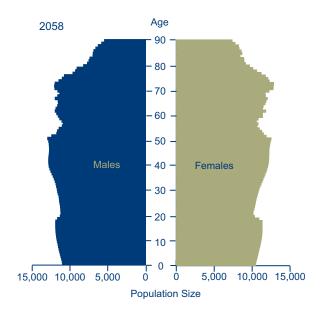


- 2.9.3. The population projections show that, over time, the population pyramid begins to look less like a pyramid and more like a rectangle, as more people are surviving to older ages. Figure 2.21 illustrates the population in 2008 and the 2008-based population projections for 2038 and 2058.
- 2.9.4. Population projections indicate a marked increase in the size of the population at older ages. The number of people of current pensionable age is projected to increase by around 11 per cent in the next five years (2008-2013) and by 41 per cent in the next 15 years (2008-2023). However between 2010 and 2020, the age

Figure 2.21: Northern Ireland population pyramids (2008, 2038 and 2058)

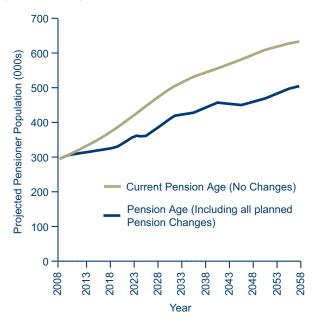






at which women are eligible for the state pension will increase from 60 to 65 years as noted in Section 2.2. Taking this into account, the number of actual pensioners will grow by 20 per cent between 2008 and 2023.\* Figure 2.22 shows the effect of changing the pension age for females from 60 years to 65 years between 2010 and 2020 and then increasing the pension age to 66 years by 2026, 67 years by 2036 and 68 years by 2046 on the number of pensioners (both males and females). If all these changes go ahead as planned, by 2058 there will be 128,600 less pensioners than there would be if current pensionable age continued.

Figure 2.22: Northern Ireland projected pensioner population with and without planned pension changes (2008 to 2058)



 This document was written prior to 20th October 2010 announcement of further changes to pension age.

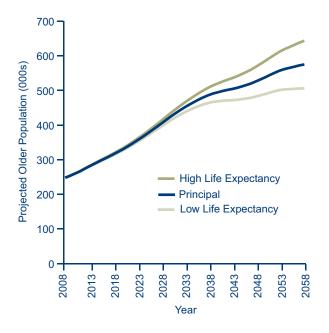
- 2.9.5. The population projections show that the Northern Ireland population will continue to age and the older population will continue to rise. However the projections are dependent upon assumptions of fertility, mortality and migration. In addition to the principal projection, variant projections are produced based on alternative assumptions of future fertility, mortality and migration. The main variant projections discussed here are those where only one component of population change (fertility, mortality or net migration) is varied from those in the principal assumptions.
- 2.9.6. Changing the assumptions on fertility will have no impact on the numbers in the older population (aged 65 and over) in the period up to 2058 as it will take 65 years before babies born today reach that age. So by 2058, using different fertility assumptions will result in the same number of older people as using the principal projection.
- 2.9.7. However changing the migration assumptions will have an effect on the older population. By 2058 the number of older people could vary between 526,500 and 623,000 if the low or high migration assumptions are used instead of the current principal projection which would result in 574,800 older people in 2058.
- 2.9.8. Finally changing the mortality assumptions will have the greatest impact on the future older population. Table 2.3 shows the different life expectancies projected by 2058 for males and females at birth and 65 years using the principal, high and low mortality assumptions. Figure 2.23 shows the effect of varying the mortality assumptions for the projection period. Changing the mortality assumption will vary the projected population of older people between 505,900 and 642,800 if the low or high mortality assumptions are used instead of the current principal projection which would result in 574,800 older people in 2058.

Table 2.3: Life expectancy assumptions for males and females for principal, high and low mortality assumptions at 2058

Life Expectancy at 2058	Principal	High Life Expectancy	Low Life Expectancy
Male Life Expectancy at birth Life Expectancy at 65	85.4	90.3	80.3
	24.0	27.9	20.3
Female Life Expectancy at birth Life Expectancy at 65	89.3	93.2	85.4
	26.5	29.8	23.4

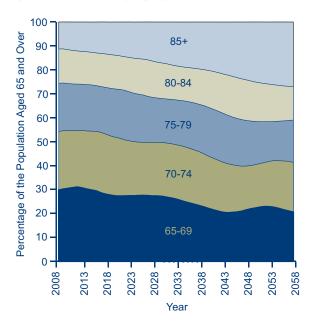
2.9.9. All these figures should be compared with the 250,000 older people in 2008. Taken together the 2008-based projections show that the older population in Northern Ireland is projected to at least double over the next fifty years under any reasonable set of future demographic assumptions and there is projected by 2058 to be at least 500,000 people aged 65 and over.

Figure 2.23: Projected older population (aged 65 and over) under high and low mortality assumptions (2008 to 2058)



2.9.10. Looking within the older population, it is the oldest old group (85 years and over) that is projected to have the largest growth. In 2008, the oldest old population made up 11 per cent of the older population (aged 65 and over) but is projected to make up 27 per cent of the older population by 2058. Meanwhile those aged 65 to 69 are projected to have the largest decline. In 2008, 65 to 69 year olds made up 30 per cent of the older population but are projected to make up just 20 per cent by 2058. Figure 2.24 shows the projected changes in the share of all the age groups in the older population from 2008 to 2058. Between 2008 and 2058 the proportion of all age groups in the older population are projected to decline over the period with the exception of the oldest old age-group which will increase its share.

Figure 2.24: Percentage share of the older population (aged 65 and over) by age group (2008 to 2058)

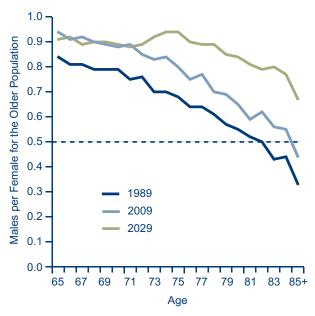


# 2.10 Living Arrangements of Older People (Current and Future)

2.10.1. Section 2.8 highlighted that, although life expectancy has improved, roughly only half of the life expectancy from age 65 will be in good health. Together with the increasing older population, this will have implications for the provision of care and other services. Some of the provision of care can be provided by other household members, reducing the need for institutional care. This section will look at living arrangements of older people.

2.10.2. Life expectancy has improved over the last century and is projected to improve steadily in future years. This improvement applies to both males and females, although female life expectancy is consistently higher than that of males. One of the implications is that a married couple of the same age would be expected to live longer together than in the past. This point is illustrated by Figure 2.25, showing the sex ratio (males per female) in Northern Ireland for 1989, 2009 and the projected figures for 2029.

Figure 2.25: Sex ratios (males per female) by age for the older population (aged 65 and over) in Northern Ireland (1989, 2009 and 2029)



2.10.3. In 1989, there were at least two females for every male from 82 years of age onwards; in the oldest old age group, there are even three females for every male. As the life expectancies for males and females have

improved in parallel, so have the sex ratios between 1989 and 2009. For the projected populations in 2029, the sex ratio starts to drop much later. For the oldest old population, there are projected to be three females for every two males. This will have an impact on the living arrangements of the older population, which will be described later in this section.

2.10.4. Before looking at the living arrangements of the older population, figures on their marital status can provide some useful background. Figure 2.26 shows the percentage of the male older population who are married (or re-married), according to the Censuses of 1981, 1991 and 2001. There appears to be very little difference with similar patterns of declining percentages of married men as they get older. In contrast, the percentage of females who are married has increased for age bands 65 to 69 to 80 to 84 years in the period 1981 to 2001, see Figure 2.27. This can be directly linked to increases in life expectancy of their husbands.

Figure 2.26: Percentage of the older male population (aged 65 and over) who are married, by age group, (1981, 1991 and 2001 Censuses)

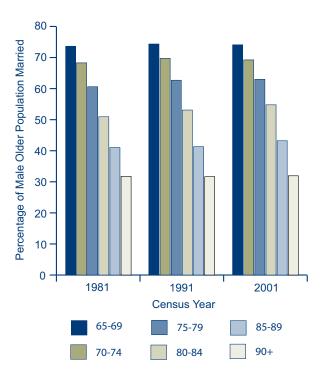
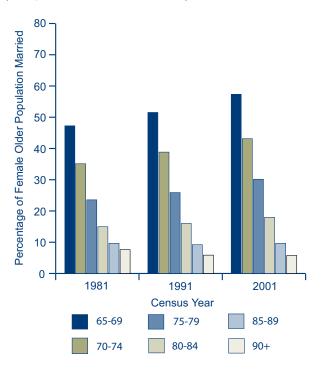
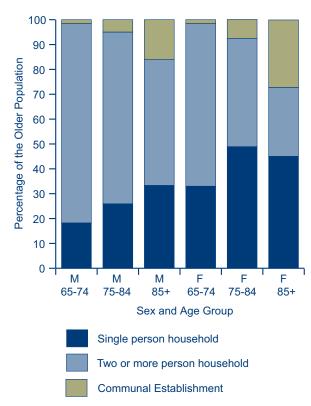


Figure 2.27: Percentage of the older female population (aged 65 and over) who are married, by age group (1981, 1991 and 2001 Censuses)



2.10.5. The 2001 Census provides a picture of the living arrangements of the older population. Firstly, it can identify the population in communal establishments, mainly nursing and residential homes, and those in households. In turn, households can be categorized by the number and composition of its household members. Figure 2.28 shows the distribution of males and females in older age groups with different types of living arrangements.

Figure 2.28: Living arrangements for the male and female older populations (aged 65 and over), by age (2001 Census)

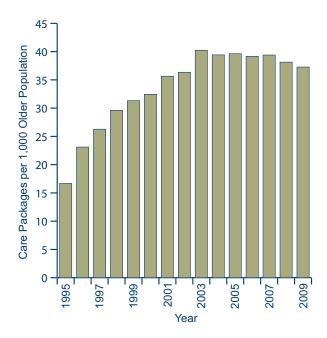


2.10.6. The graphs on marital status have already shown a decreasing percentage of married couples as the population ages. This is reflected in the declining proportion of persons in households with two or more persons as the population ages. On the other hand, a larger proportion of the older population live in communal establishments (e.g. nursing homes) and single person households.

2.10.7. Bearing in mind that there is an excess of females over males in the older population (see Figure 2.25), when comparing males and females in the same age band, a larger proportion of females are living in single households or communal establishments. Again, this can be explained by the difference in life expectancy, as females outlive their spouses. Indeed, of the unmarried female older population in 2001, 75 per cent were widows, and thus can be expected to have lived as a couple previously. Clearly it is important to understand the trends in living arrangements as the population ages, especially with regards to communal establishments.

2.10.8. The Department for Health, Social Services and Public Safety Northern Ireland (DHSSPSNI) publishes community statistics, which includes the number of care packages provided to the older population in nursing and residential homes [17]. These figures do not include private treatment in nursing and residential care homes, but could give some indication on the trend in providing this care to the older population. Figure 2.29 shows the number of these care packages, as measured by DHSSPSNI, expressed as a rate per 1,000 older population for the period 1995 to 2009.

Figure 2.29: Provision of residential/nursing home care packages for the older population (aged 65 and over), per 1,000 older population (1995 to 2009)

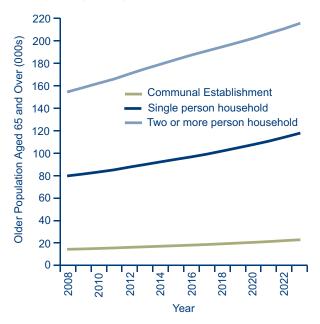


2.10.9. From the DHSSPSNI statistics there would seem to be a period of expansion in the provision of care packages in the period 1995 to 2003, before stabilising at a fairly constant rate at around 40 packages per 1,000 older population. The rising number of the oldest old population as a proportion of the older population, who could be expected to require more care, is not reflected in a rising number of residential/nursing home care packages since 2002. This could be the result of improving general health of the older population, or the provision of care by other household members. Added to this DHSSPSNI has a policy of promoting independent living especially in the older population.

2.10.10. It is also important to look at the future numbers of older people and their potential living arrangements and this can be done by examining the household projections for the older population. The 2008-based household projections are created by applying trends in household formation to the population projections [18]. In the first step, it removes the population in communal establishments by applying the 2001 Census age-sex specific proportion of persons in communal establishments. This assumption is supported by the DHSSPSNI figures on the provision of residential and nursing home care packages.

2.10.11. The allocation of the projected household population to different household types is based on the trends in household formation between the 1991 and 2001 Censuses, whilst ensuring that the household projections are coherent with the population projections. Figure 2.30 shows how the projected older population is distributed over three different types of living arrangements.

Figure 2.30: 2008-based household population projections for the older population (aged 65 and over) by living arrangement, (2008 to 2023)



2.10.12. The older population (aged 65 and over) in communal establishments is projected to remain relatively small (six per cent); its increase is driven by the size of the older population and particularly the proportion aged 85 and over. Nearly one in three of the older population is projected to live in a single person household throughout

the period 2008 to 2023, with the remainder living in households with two or more persons.

2.10.13. The improvement in life expectancy for both males and females has led to couples staying together longer. There will be relatively fewer surviving partners who either live alone or rely on care provided by other family members or in a communal establishment. This will have implications for the delivery of care services in Northern Ireland, but also for the provision of accessible housing, public transport and state benefits.

#### 2.11 Conclusion

- 2.11.1. The population of Northern Ireland continues to increase in size and is also becoming increasingly older in structure. This report has shown that these demographic trends will continue for the foreseeable future. Indeed the latest population projections indicate that over the next thirty years the population in Northern Ireland is set to age faster than all the other United Kingdom countries.
- 2.11.2. This report outlines some of the causes of the population ageing. As in the rest of the developed world, the twentieth century has seen some remarkable reductions in the mortality rates of the Northern Ireland population. This has led to people living longer. Coupled with this, marked falls in fertility levels have been witnessed in Northern Ireland. Today each woman of childbearing age has on average two children this compares with average fertility rates of four children per woman of childbearing age a few generations ago. These are the dominant causes of population ageing in Northern Ireland.
- 2.11.3. This report sets out some of the challenges of measuring and understanding population ageing. Whilst we know that the population is living longer and advances mean more people will reach older ages in the future, what is not fully clear is the scale of the impact this will have on public policy.
- 2.11.4. As an example the Department for Health Social Services and Public Safety (DHSSPSNI) estimate that on average a person aged 85 will cost ten times more to deliver health services to than a person aged 40. Fixing these health costs at today's prices, demography alone would be projected to add around 15 per cent to the cost of health services in the next decade. Clearly if the future older population is healthier than the older population of today, then the financial impact on the health service should be less than this, but under more pessimistic scenarios the costs could also increase.
- 2.11.5. From a planning and public health perspective, better measurement and understanding of the health needs of an ageing population is required. Whilst mortality data has formed the basis of health information systems over the last one hundred and fifty years, there is an increased need to measure morbidity across the lifespan. To help meet this challenge the 2011 Census will include more detailed questions on health than ever before. Added to this NISRA in partnership with the Public Health Agency have started the Northern Ireland Longitudinal Study to look at temporal changes in levels of morbidity

and mortality. However more needs to be done to inform policy in this important area.

- 2.11.6. Looking to pensions there will clearly be a period of significant change ahead. The United Kingdom Government has indicated that the state retirement age will rise to 65 years for women by 2020 and to higher ages for both women and men beyond that. Even with this change the old-age dependency ratio (the ratio of the number of people of pensionable age to people of working age), will still rise. Indeed Lord Turner has indicated that he should have been more ambitious with the rising age timetable laid out in his original report on state pension provision. As indicated in section 2.2 it is likely there will be further changes to state retirement age in the future added to this the United Kingdom is currently consulting upon phasing out the default retirement age.
- 2.11.7. Mirroring the debate in health services, the oldage dependency ratio was considered to reflect the impact of the ageing population on pensions. However this measure may now be out of date, as more people will live and work beyond state retirement age. Thus we need new ways of measuring the impact of the older population on economic policy; both directly in terms of work and indirectly in terms of the provision of care of, for example, grandchildren thus enabling economic benefits for wider family circles.
- 2.11.8. From a demographic perspective the impact of an ageing population on family demography is often overlooked. This report outlines changes witnessed over the last 30 years in family demography and gives an indication of likely future changes. As survival improves, older couples will stay together longer. However the number of single older person households will also increase. Amongst other things these changes will have implications for the provision of accessible housing and public transport.

2.11.9. Finally and perhaps most importantly, it is vital that those who provide social and economic research to help frame policy, work harder to provide a richer tapestry of information on the older population. There is remarkable heterogeneity amongst this group. It is no longer sensible to treat everyone aged 65 or more as a single category as has been done in the past. Indeed Shakespeare himself noted that two of the "seven ages of man" were allocated to old age and the differences within it. To help spark this debate NISRA have for the first time adopted in Northern Ireland more detailed internationally accepted age-related classifications outlined in this report. It is for others in the future to reflect on this and to change these definitions when the appropriate time comes.

#### References

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# Appendices



Appendix 1: Population and vital events, 1926-2009

	Estimated population			Resident live births							Multiple births		
Year	Persons	Males	Females	All resident births1	Rate <sup>2</sup>	Males	Females	Males per 1,000 females	Outside m	arriage	Twins	Triplets etc	% of maternities
1926-30 1931-35 1936-40 1941-45 1946-50 1951-55 1956-60 1961-65 1966-70 1971-75 1976-80 1981-85 1986-90 1991-95 1996-2000 2001-2005	1,249,000 1,270,000 1,286,800 1,304,400 1,350,400 1,382,500 1,405,000 1,501,500 1,532,000 1,526,200 1,552,100 1,585,400 1,631,800 1,674,500 1,704,700	604,000 617,000 626,100 674,000 695,800 673,700 684,700 705,500 732,500 754,300 759,700 773,800 795,900 816,700 833,400	645,000 653,000 660,700 630,400 654,600 708,800 720,300 741,700 769,000 776,700 771,900 792,400 835,900 857,800 871,300	26,418 25,098 25,533 29,592 29,764 28,798 30,539 33,226 32,866 28,850 26,959 27,194 27,045 24,779 23,321 21,928	21.2 19.8 19.8 22.7 22.0 20.8 21.9 18.8 17.7 17.5 17.1 15.2 13.9 12.9	13,587 12,926 13,110 15,287 15,386 14,885 15,755 17,171 16,958 14,938 14,936 13,907 13,965 13,914 12,704 11,966 11,245	12,831 12,172 12,423 14,305 14,428 13,913 14,784 16,055 15,908 13,914 13,152 13,229 13,130 12,075 11,356 10,683	1,059 1,062 1,055 1,069 1,063 1,070 1,066 1,069 1,066 1,073 1,050 1,056 1,060 1,052 1,054 1,053	1,249 1,259 1,178 1,560 1,124 838 758 890 1,180 1,260 1,531 2,469 4,266 5,427 6,661 7,511	4.7 5.0 4.6 5.3 3.8 2.9 2.5 2.7 3.6 4.4 5.7 9.1 15.8 21.9 28.6 34.3	308 286 300 332 367 391 414 407 355 308 271 289 286 292 319 314	4 2 4 4 5 4 3 3 3 2 4 3 4 8 8 8	1.2 1.2 1.2 1.3 1.4 1.4 1.3 1.1 1.0 1.1 1.1 1.2 1.4 1.5
1971 1972 1973 1974 1975	1,540,400 1,539,000 1,530,000 1,526,900 1,523,500	754,600 757,500 755,700 755,000 753,300	785,800 781,500 774,200 771,900 770,200	31,765 29,994 29,200 27,160 26,130	20.6 19.5 19.1 17.8 17.2	16,504 15,559 15,152 13,987 13,475	15,261 14,435 14,048 13,173 12,655	1,081 1,078 1,079 1,062 1,065	1,207 1,263 1,195 1,296 1,338	3.8 4.2 4.1 4.8 5.1	342 325 290 291 294	4 3 1 3	1.1 1.1 1.0 1.1
1976	1,523,500	754,000	769,500	26,361	17.3	13,542	12,819	1,056	1,330	5.0	264	5	1.0
1977	1,523,300	753,900	769,400	25,437	16.7	13,154	12,283	1,071	1,383	5.4	266	3	1.1
1978	1,523,200	753,600	769,700	26,239	17.2	13,168	13,071	1,007	1,523	5.8	249	2	1.0
1979	1,528,300	755,200	773,100	28,178	18.4	14,485	13,693	1,058	1,668	5.9	276	5	1.0
1980	1,532,800	754,800	778,000	28,582	18.6	14,686	13,896	1,057	1,751	6.1	298	4	1.1
1981	1,543,000	756,600	786,300	27,166	17.6	13,847	13,319	1,040	1,894	7.0	304	4	1.1
1982	1,544,500	756,700	787,800	26,872	17.4	13,732	13,140	1,045	2,106	7.8	305	2	1.2
1983	1,550,600	759,000	791,500	27,026	17.4	13,972	13,054	1,070	2,370	8.8	263	4	1.0
1984	1,557,300	761,300	796,000	27,477	17.6	14,196	13,281	1,069	2,790	10.2	303	3	1.1
1985	1,565,400	764,900	800,400	27,427	17.5	14,076	13,351	1,054	3,185	11.6	269	3	1.0
1986 1987 1988 1989	1,573,500 1,582,000 1,585,400 1,590,400 1,595,600	768,400 772,900 773,800 775,900 777,900	805,100 809,100 811,700 814,500 817,700	27,975 27,653 27,514 25,831 26,251	17.8 17.5 17.4 16.2 16.5	14,501 14,196 14,131 13,307 13,437	13,474 13,457 13,383 12,524 12,814	1,076 1,055 1,056 1,063 1,049	3,575 3,967 4,446 4,394 4,946	12.8 14.3 16.2 17.0 18.8	280 320 283 281 267	3 7 2 2 5	1.0 1.2 1.0 1.1 1.0
1991	1,607,300	783,200	824,100	26,028	16.2	13,427	12,601	1,066	5,288	20.3	311	7	1.2
1992	1,623,300	792,100	831,100	25,354	15.6	12,924	12,430	1,040	5,579	22.0	256	8	1.1
1993	1,635,600	798,200	837,300	24,722	15.1	12,515	12,207	1,025	5,445	22.0	283	9	1.2
1994	1,643,700	801,900	841,800	24,098	14.7	12,361	11,737	1,053	5,337	22.1	288	6	1.2
1995	1,649,100	804,000	845,100	23,693	14.4	12,293	11,400	1,078	5,487	23.2	324	9	1.4
1996	1,661,800	810,300	851,400	24,382	14.7	12,382	12,000	1,032	6,346	26.0	310	13	1.3
1997	1,671,300	815,500	855,700	24,087	14.4	12,325	11,762	1,048	6,427	26.7	330	7	1.4
1998	1,677,800	818,700	859,100	23,668	14.1	12,058	11,610	1,039	6,743	28.5	305	7	1.3
1999	1,679,000	818,500	860,500	22,957	13.7	11,943	11,014	1,084	6,957	30.3	334	6	1.5
2000	1,682,900	820,500	862,500	21,512	12.8	11,120	10,392	1,070	6,833	31.8	314	5	1.5
2001	1,689,300	824,400	864,900	21,962	13.0	11,288	10,674	1,058	7,144	32.5	330	10	1.6
2002	1,696,600	828,900	867,800	21,385	12.6	10,874	10,511	1,035	7,161	33.5	313	13	1.5
2003	1,702,600	832,800	869,800	21,648	12.7	11,244	10,404	1,081	7,439	34.4	304	5	1.4
2004	1,710,300	836,500	873,800	22,318	13.0	11,477	10,841	1,059	7,703	34.5	330	7	1.5
2005	1,724,400	844,300	880,100	22,328	12.9	11,341	10,987	1,032	8,108	36.3	294	6	1.4
2006	1,741,600	853,400	888,200	23,272	13.4	12,010	11,262	1,066	8,832	38.0	315	1	1.4
2007	1,759,100	862,000	897,100	24,451	13.9	12,516	11,935	1,049	9,261	37.9	357	5	1.5
2008	1,775,000	870,900	904,100	25,631	14.4	13,204	12,427	1,063	9,966	38.9	356	6	1.4
2009	1,788,900	878,600	910,300	24,910	13.9	12,799	12,111	1,057	9,902	39.8	372	5	1.5

Note: See Appendix 3 - for notes on change in definition of stillbirths that took place in 1992

<sup>&</sup>lt;sup>1</sup> All births prior to 1981

<sup>&</sup>lt;sup>2</sup> Rate per 1,000 population

<sup>&</sup>lt;sup>3</sup> Percentage of all live births

<sup>&</sup>lt;sup>4</sup> Rate per 1,000 resident live and still births

<sup>&</sup>lt;sup>5</sup> Rate per 1,000 live births (resident and non-resident)

## Appendix 1: Population and vital events, 1926-2009

Stillbi	inth o	Infant d	la ath a			Deat	.b.a			Monnie		Divorces	Civil	
Stillo	11 (115	IIIIaiii 0	leatris	Perso	nne	Mal		Fema	ales	Marria	ages	Divoices	Partnerships	
Number	Rate <sup>4</sup>	Number	Rate <sup>5</sup>	Number	Rate <sup>2</sup>	Number		Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Number	Year
	20.5 15.9 13.9 9.9 7.1 5.0 5.4	2,083 1,966 1,970 2,169 1,423 1,054 863 879 791 610 427 323 231 168	78.8 78.4 77.2 73.3 47.8 36.6 28.3 26.5 24.1 21.1 15.9 11.8 8.5 6.7	18,403 18,026 18,369 17,478 16,039 15,557 15,175 15,628 15,987 16,948 16,750 15,972 15,696 15,228	14.7 14.2 14.3 13.4 11.9 10.8 10.6 11.1 11.0 9.9 9.3	8,888 8,869 9,097 8,778 8,134 7,966 7,872 8,185 8,399 8,954 8,770 8,146 7,879 7,515	14.7 14.4 14.5 13.0 11.7 11.8 11.5 11.6 11.5 11.9 11.6 10.7	9,515 9,157 9,271 8,700 7,905 7,590 7,303 7,443 7,588 7,994 7,980 7,826 7,818 7,713	14.8 14.0 14.0 13.8 12.1 10.7 10.0 9.9 10.3 10.3 9.9 9.6 9.2	7,328 7,806 9,073 10,751 9,396 9,359 9,500 10,185 11,387 11,384 10,010 10,049 10,031 8,983	5.9 6.1 7.1 8.2 7.0 6.8 7.0 7.6 7.4 6.6 6.5 6.3 5.5			1926-30 1931-35 1936-40 1941-45 1946-50 1951-55 1956-60 1961-65 1966-70 1971-75 1976-80 1981-85 1986-90
126 109 462 434 389 374 375	5.4 4.9 14.3 14.3 13.1 13.6 14.1	134 122 722 616 610 567 534	5.7 5.5 22.7 20.5 20.9 20.9 20.4	15,150 14,428 16,202 17,032 17,669 17,327 16,511	9.0 8.5 10.5 11.1 11.5 11.3 10.8	7,315 6,953 8,593 9,001 9,288 9,226 8,664	9.0 8.3 11.4 11.9 12.3 12.2 11.5	7,835 7,474 7,609 8,031 8,381 8,101 7,847	9.1 8.6 9.7 10.3 10.8 10.5 10.2	7,881 7,821 12,152 11,905 11,212 10,783 10,867	4.7 4.6 7.9 7.7 7.3 7.1 7.1	2,325 2,345 339 355 393 382 437		1996-2000 2001-2005 1971 1972 1973 1974 1975
278 310 243 246 266	10.4 12.0 9.2 8.7 9.2	483 438 417 417 382	18.3 17.2 15.9 14.8 13.4	17,030 16,921 16,153 16,811 16,835	11.2 11.1 10.6 11.0	8,869 8,871 8,458 8,822 8,832	11.8 11.8 11.2 11.7 11.7	8,161 8,050 7,695 7,989 8,003	10.6 10.5 10.0 10.3 10.3	9,914 9,696 10,304 10,214 9,923	6.5 6.4 6.8 6.7 6.5	574 569 599 601 896		1976 1977 1978 1979 1980
240 187 204 161 178	8.8 6.9 7.5 5.8 6.4	360 369 329 291 265	13.2 13.7 12.1 10.5 9.6	16,256 15,918 16,039 15,692 15,955	10.5 10.3 10.3 10.1 10.2	8,423 8,004 8,209 8,007 8,088	11.1 10.6 10.8 10.5 10.6	7,833 7,914 7,830 7,685 7,867	10.0 10.0 9.9 9.7 9.8	9,636 9,913 9,990 10,361 10,343	6.2 6.4 6.4 6.7 6.6	1,355 1,383 1,657 1,552 1,669	  	1981 1982 1983 1984 1985
125 170 137 133 115	4.4 6.1 5.0 5.1 4.4	286 242 248 180 198	10.2 8.7 8.9 6.9 7.5	16,065 15,334 15,813 15,844 15,426	10.2 9.7 10.0 10.0 9.7	8,154 7,721 7,993 7,878 7,648	10.6 10.0 10.3 10.2 9.8	7,911 7,613 7,820 7,966 7,778	9.8 9.4 9.6 9.8 9.5	10,225 10,363 9,960 10,019 9,588	6.5 6.6 6.3 6.3 6.0	1,539 1,514 1,550 1,818 1,897	  	1986 1987 1988 1989 1990
123 124 128 153 145	4.7 4.9 5.2 6.3 6.1	194 153 176 147 169	7.4 6.0 7.1 6.1 7.1	15,096 14,988 15,633 15,114 15,310	9.4 9.2 9.6 9.2 9.3	7,533 7,469 7,731 7,362 7,482	9.6 9.4 9.7 9.2 9.3	7,563 7,519 7,902 7,752 7,828	9.2 9.0 9.4 9.2 9.3	9,221 9,392 9,045 8,683 8,576	5.7 5.8 5.5 5.3 5.2	2,310 2,280 2,213 2,303 2,302	  	1991 1992 1993 1994 1995
153 131 122 132 93	6.2 5.4 5.1 5.7 4.3	142 137 134 148 109	5.8 5.6 5.6 6.4 5.0	15,218 14,971 14,993 15,663 14,903	9.2 9.0 8.9 9.3 8.9	7,418 7,244 7,321 7,464 7,128	9.2 8.9 8.9 9.1 8.7	7,800 7,727 7,672 8,199 7,775	9.2 9.0 8.9 9.5 9.0	8,297 8,071 7,826 7,628 7,584	5.0 4.8 4.7 4.5 4.5	2,314 2,176 2,459 2,326 2,350	  	1996 1997 1998 1999 2000
112 122 108 113 89	5.1 5.7 5.0 5.0 4.0	134 100 115 122 140	6.0 4.6 5.2 5.3 6.1	14,513 14,586 14,462 14,354 14,224	8.6 8.6 8.5 8.4 8.2	7,007 6,948 6,920 6,935 6,957	8.5 8.4 8.3 8.3 8.2	7,506 7,638 7,542 7,419 7,267	8.7 8.8 8.7 8.5 8.3	7,281 7,599 7,757 8,328 8,140	4.3 4.5 4.6 4.9 4.7	2,365 2,165 2,319 2,512 2,362	   12	2001 2002 2003 2004 2005
89 102 115 119	3.8 4.2 4.5 4.8	121 123 123 130	5.1 4.9 4.7 5.1	14,532 14,649 14,907 14,413	8.3 8.3 8.4 8.1	7,062 7,208 7,227 6,914	8.3 8.4 8.3 7.9	7,470 7,441 7,680 7,499	8.4 8.3 8.5 8.2	8,259 8,687 8,510 7,931	4.7 4.9 4.8 4.4	2,565 2,913 2,773 2,176	116 111 86 96	2006 2007 2008 2009

Appendix 2: Population and Vital Events by Administrative Area, 2009

	Estimated	Resident li	ve births	Stillbi	rths	Infant o	deaths	Deat	hs	Marria	ges
Area	population at 30 June 2009	Number	Rate <sup>1</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>3</sup>	Number	Rate <sup>1</sup>	Number	Rate <sup>1</sup>
NORTHERN IRELAND	1,788,900	24,910	13.9	119	4.8	130	5.1	14,413	8.1	7,931	4.4
Belfast HSC Trust	335,200	4,690	14.0	25	5.3	24	5.1	3,354	10.0	1,420	4.2
Belfast	268,400	3,860	14.4	20	5.2	20	5.2	2,739	10.2	1,246	4.6
Castlereagh	66,800	830	12.4	5	6.0	4	4.8	615	9.2	174	2.6
Northern HSC Trust	457,100	5,947	13.0	32	5.4	36	6.0	3,509	7.7	1,976	4.3
Antrim	54,000	813	15.0	6	7.3	6	7.3	344	6.4	221	4.1
Ballymena	63,200	805	12.7	4	4.9	4	5.0	499	7.9	352	5.6
Ballymoney	30,400	409	13.4	2	4.9	3	7.3	243	8.0	127	4.2
Carrickfergus	40,100	424	10.6	1	2.4	3	7.1	311	7.8	118	2.9
Coleraine	57,100	620	10.9	4	6.4	4	6.4	486	8.5	292	5.1
Cookstown	36,300	532	14.7	1	1.9	3	5.6	251	6.9	204	5.6
Larne	31,400	344	10.9	1	2.9	-	-	289	9.2	154	4.9
Magherafelt	44,200	690	15.6	5	7.2	6	8.7	262	5.9	194	4.4
Moyle	16,900	203	12.0	2	9.8	3	14.8	148	8.7	101	6.0
Newtownabbey	83,400	1,107	13.3	6	5.4	4	3.6	676	8.1	213	2.6
South Eastern HSC Trust	344,400	4,532	13.2	22	4.8	24	5.3	2,782	8.1	1,495	4.3
Ards	78,100	863	11.0	5	5.8	4	4.6	642	8.2	256	3.3
Down	70,300	979	13.9	2	2.0	3	3.1	519	7.4	342	4.9
Lisburn	116,500	1,767	15.2	9	5.1	12	6.8	848	7.3	446	3.8
North Down	79,600	923	11.6	6	6.5	5	5.4	773	9.7	451	5.7
Southern HSC Trust	353,900	5,532	15.6	26	4.7	22	3.7	2,530	7.1	1,569	4.4
Armagh	58,800	893	15.2	2	2.2	4	4.5	475	8.1	301	5.1
Banbridge	47,600	699	14.7	4	5.7	4	5.7	330	6.9	152	3.2
Craigavon	92,400	1,456	15.8	6	4.1	3	2.0	688	7.4	309	3.3
Dungannon	56,400	907	16.1	4	4.4	3	3.3	405	7.2	275	4.9
Newry & Mourne	98,700	1,577	16.0	10	6.3	8	4.2	632	6.4	532	5.4
Western HSC Trust	298,300	4,209	14.1	14	3.3	24	5.5	2,238	7.5	1,471	4.9
Fermanagh	62,400	811	13.0	3	3.7	3	3.6	551	8.8	436	7.0
Limavady	34,000	424	12.5	2	4.7	1	2.4	210	6.2	173	5.1
Derry	109,600	1,670	15.2	5	3.0	12	6.6	794	7.2	445	4.1
Omagh	52,400	722	13.8	3	4.1	3	4.1	390	7.4	270	5.2
Strabane	39,900	582	14.6	1	1.7	5	8.6	293	7.3	147	3.7

See Appendix 3 - for notes on change in definition of stillbirths that took place in 1992

<sup>&</sup>lt;sup>1</sup> Rate per 1,000 population

<sup>&</sup>lt;sup>2</sup> Rate per 1,000 resident live and still births

<sup>&</sup>lt;sup>3</sup> Rate per 1,000 live births (resident and non-resident)

## Appendix 3: Notes and Definitions

#### **Population Data**

All population figures refer to estimates or projections as at the 30 of June of the year in question. Ages relate to age last birthday at the date shown.

#### **Natural Increase**

Natural increase is equal to total births minus total deaths.

#### **Marriages**

Marriage rates relate to the number of marriages solemnised and not to the number of persons married. The number of marriages relates to those registered in Northern Ireland, thus it does not include Northern Ireland residents who get married outside Northern Ireland, but does include non Northern Ireland residents getting married in Northern Ireland.

#### **Divorces**

Divorce statistics have been compiled from returns of 'Decrees made Absolute' supplied by the Northern Ireland Courts and Tribunals Service and include nullities of marriage.

Information on the number of 'Decree Nisis' is published by the Northern Ireland Courts and Tribunals Service. A Decree Nisi does not terminate the marriage; a couple are still married until the Decree Absolute has been granted.

## **Date of Registration and Date of Occurrence**

All the data presented on births, stillbirths, marriages, civil partnerships and deaths relate to the date of registration of the event and not to the date of occurrence. For events such as infant death or suicide, which are likely to be referred to the coroner, it can take some time for the event to be registered.

## **Place of Occurrence**

Births, stillbirths and deaths have been allocated to the area of usual residence if it is in Northern Ireland, otherwise they have been allocated to the area of occurrence. Marriage and civil partnership figures relate to the area of occurrence.

#### **Marital Status of Parents**

The following terms are used throughout the report:

**Married parents:** refers to parents who are married to each other at time of registration of birth.

**Unmarried parents:** refers to parents who are unmarried or married but not to each other at time of registration of birth.

#### **Births**

The births presented in this report (since 1981) do not include births to non Northern Ireland resident mothers unless otherwise stated.

#### **Stillbirths**

The **Stillbirth (Definition) Act 1992** redefined a stillbirth, from 1 October 1992, as a child which had issued forth from its mother after the 24th week of pregnancy and which did not breath or show any other sign of life. Prior to 1 October 1992 the statistics related to events occurring after the 28th week of pregnancy.

A stillbirth rate refers to the number of stillbirths per 1,000 live and still births.

The stillbirths presented in this report (since 1981) do not include stillbirths to non Northern Ireland resident mothers.

#### **Perinatal Deaths**

Perinatal deaths refer to stillbirths and deaths in the first week of life.

A **perinatal death rate** refers to the number of perinatal deaths per 1,000 live and still births (including non Northern Ireland residents).

Perinatal deaths presented in this report include stillbirths and infant deaths to non Northern Ireland residents.

#### **Neonatal Deaths**

Neonatal deaths refer to deaths in the first four weeks of life.

A **neonatal death rate** refers to the number of neonatal deaths per 1,000 live births (including non Northern Ireland residents).

#### **Postneonatal Deaths**

Postneonatal deaths refer to deaths after the first four weeks but before the end of the first year.

A **postneonatal death rate** refers to the number of postneonatal deaths per 1,000 live births (including non Northern Ireland residents).

#### **Infant Deaths**

Infant deaths refer to all deaths in the first year of life.

An **infant death rate** refers to the number of infant deaths per 1,000 live births (including non Northern Ireland residents).

#### **Deaths**

The deaths represented in this report refer to all deaths which occurred in Northern Ireland. They include those which occurred in Northern Ireland to non Northern Ireland residents, but exclude those occurring to Northern Ireland residents outside Northern Ireland.

# Suicide, Self-Inflicted Injury and Events of Undetermined Intent

In the UK, in considering suicide events it is conventional to include cases where the cause of death is classified as either 'Suicide and self-inflicted injury' or 'Undetermined injury'. The ICD10 codes used for 'Suicide and self-inflicted injury' are X60-X84 and Y87.0, and the ICD10 codes used for 'Undetermined injury' are Y10-Y34 and Y87.2. (Also see note on registration and occurrence).

Prior to 2004 there were seven coroner's districts in Northern Ireland, following a review of the coroner's service the separate districts were amalgamated into one centralised coroner's service. This change may affect the timing of registration of deaths with statistics from 2004 onwards being more timely and consistent.

## **Smoking Related Deaths**

Information is not recorded on the death certificate on whether the deceased was a smoker. Estimates can however be made of the number of deaths attributable to smoking, by using information on the contribution of smoking to specific conditions for example lung cancer which are recorded at death.

Research has been undertaken by the Health Development Agency to derive attributable proportions of smoking related deaths based on published relative risk factors for mortality of current and ex-smokers from various diseases, counts of death by cause, and estimates of current and ex-smoking behaviour.

For further information on the causes of death and attributable proportions used to define smoking related deaths see:

## http://www.nice.org.uk/niceMedia/documents/ smoking\_epidemic.pdf

#### **Alcohol Related Deaths**

The figures in this report are based on the UK-wide harmonised definition of alcohol related deaths. The definition of alcohol related deaths includes those causes of death regarded as most directly due to alcohol consumption. It does not include other diseases where alcohol has been shown to have some causal relationship, such as cancers of the mouth, oesophagus and liver. The definition includes all deaths from chronic liver disease and cirrhosis (excluding biliary cirrhosis), even when alcohol is not specifically mentioned on the death certificate.

Apart from deaths due to poisoning with alcohol (accidental, intentional or undetermined), this definition excludes any other external causes of death, such as road traffic deaths and other accidents.

Further details on the UK definition and a list of the ICD9 and ICD10 codes used to code alcohol related deaths can be found at:

http://www.statistics.gov.uk/statbase/Product.asp?vlnk=14496

#### **Drug Related Deaths**

A death is considered to be a drug related death if the underlying cause of death recorded on the death certificate is drug poisoning, drug abuse or drug dependence. These deaths can be identified solely through the International Classification of Diseases (ICD). The ICD9 and ICD10 codes used to define these deaths are listed in the table below.

ICD10 Underlying Cause Code	ICD9 Underlying Cause Code	Description
F11–F16, F18–F19	292, 304, 305.2–305.9	Mental and behavioural disorders due to drug use (excluding alcohol and tobacco)
X40-X44	E850-E858	Accidental poisoning by drugs, medicaments and biological substances
X60-X64	E950.0- E950.5	Intentional self- poisoning by drugs, medicaments and biological substances
X85	E962.0	Assault by drugs, medicaments and biological substances
Y10-Y14	E980.0- E980.5	Poisoning by drugs, medicaments and biological substances, undetermined intent

#### **Asbestos Related Deaths**

Asbestos exposure can result in a number of life threatening illnesses including asbestosis, a lung disease which restricts breathing, and also mesothelioma which is a cancer of the lung.

In this report, asbestos related deaths have been defined as those deaths where asbestosis and/or mesothelioma have been mentioned on the death certificate either as a primary or secondary cause.

Further details on the definition used for asbestos related deaths can be found on the Health and Safety Executive website at:

http://www.hseni.gov.uk/index/information\_and\_guidance/general\_hseniinfo/statistics.htm

#### **Healthcare Associated Infections**

In this report deaths related to healthcare associated infection solely relate to Methicillin resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile*. It is not possible to identify directly from the ICD codes all deaths where MRSA or *Clostridium difficile* contributed to a death. Data within this report has been collated by looking for all mentions of either MRSA or *Clostridium difficile* on the death certificate.

#### **Crude Birth and Death Rates**

A **crude rate** refers to the number of occurrences of the event per 1,000 population.

#### **Age Standardisation**

A straight comparison of crude death rates between areas may present a misleading picture because of differences in the sex and age structure of the respective populations. The technique of standardisation is used to remedy this. In general, standardisation involves a comparison of the actual number of events occurring in an area with the aggregate number expected if the age/sex specific rates in the standard population were applied to the age/sex groups of the observed population. The results are expressed either as standardised rates or as standardised mortality ratios (SMRs) where the standard ratio (for Northern Ireland) equals 100.

In some areas the presentation of standardised rates for only one year's deaths may not provide a full picture of the underlying standardised death rates. It is therefore advisable to use the 3 years rates provided (**Figure 1.28**).

### Significance of SMRs

The estimation of SMRs by LGD and Health and Social Care Trust invites the question of whether such SMRs are different from the Northern Ireland average (100). The statistical significance of the SMRs has been examined by estimating the probability that the difference between an observed SMR and 100 might have resulted from chance variation; where this probability is less than 0.05 (one in 20) the particular SMR has been classified as statistically significantly (p<0.05) different from 100. More details on the method can be obtained from Demography and Methodology Branch.

### **Total Period Fertility Rate (TPFR)**

The TPFR is the average number of children that would be born to a cohort of women who experienced, throughout their childbearing years, the fertility rates of the calendar year in question.

#### **TPFR Replacement Level**

In western countries a TPFR of about 2.1 is required to maintain long-term population levels, assuming no migration.

#### **General Fertility Rate**

The general fertility rate is the number of live births per 1,000 women aged 15-44.

#### The Gross Reproduction Rate

The gross reproduction rate is the average number of live daughters that would be born to a cohort of women who experienced, throughout their childbearing years, the fertility rates of the calendar year in question.

#### The Net Reproduction Rate

With reference to the gross reproduction rate, the net reproduction rate is the average number of these live daughters that, subject to the mortality rates of the calendar year in question, would survive to their mother's age at the time of birth.

## **Completed Family Size**

Average completed family size is calculated by summing over time the succeeding age specific fertility rates of women born in a particular year. (Such an approximation assumes that the effects of mortality and migration are negligible). However this measure can only calculate a value for women who have reached the end of the main childbearing ages conventional 45 years of age, but there is some value in considering the historical data for cohorts that have reached this age and the partial series for those not yet 45.

### **Maternities**

Maternities refer to the number of pregnancies ending in stillbirths or live births with multiple births counting only once. The number of maternities presented in this report (since 1981) does not include births or stillbirths to non Northern Ireland residents.

## National Statistics Socio-economic Classification (NS-SeC)

This new social classification has replaced the previously published Registrar General's Social Class. It is principally based on the individual's occupation and employment status and has been introduced in order to reflect a modern view of social classification. It was introduced from 2001 onwards. Further information can be obtained from the Office for National Statistics at:

## http://www.statistics.gov.uk/methods\_quality/ns\_sec/default.asp.

NS-SeC is determined according to a person's occupation; for children of parents who are married to each other, according to the occupation of the father as stated at birth registration; for children of parents who are not married to each other but who jointly registered the birth, according to the occupation of the father; and for sole registrations, according to the occupation of the mother. The occupations are grouped into the following classes:

NS-SeC I	Higher managerial & professional occupations
NS-SeC II	Lower managerial & professional occupations
NS-SeC III	Intermediate occupations
NS-SeC IV	Small employers & own account workers
NS-SeC V	Lower supervisory & technical occupations
NS-SeC VI	Semi-routine occupations
NS-SeC VII	Routine occupations
NS-SeC VIII	Never worked & long-term unemployed

### Cause of Death Coding - ICD10

All deaths and stillbirths registered from the 1 January 2001 have been coded in accordance with the International Statistical Classification of Diseases, Injuries and Causes of Death, (ICD) (Tenth Revision), which has been in operation by international agreement from 1 January 1999.

Classification of the underlying cause of death is done by reference to the death certificate and additional information from the certifying doctor.

#### **Expectation of Life**

Expectation of life statistics, previously produced by the Government Actuary's Department (GAD), are now produced by the Office for National Statistics (ONS). Expectations of life can be calculated in two ways: period life expectancy or cohort life expectancy.

**Period life expectancies** are worked out using the agespecific mortality rates for a given period (either a single year, or a run of years), with no allowance for any later actual or projected changes in mortality.

**Cohort life expectancies** are worked out using agespecific mortality rates which allow for known or projected changes in mortality in later years.

All statistics for expectation of life in Chapter 1 are based on the period methodology and are produced for single year of age based on three year's deaths and population data with the exception of the cohort figures given in Table 1.4.

## **Northern Ireland Population Projections**

Northern Ireland population projections based on the 2008 mid-year estimates were published in October 2009.

**Figure 1.1, 1.8** and **1.10** summarise the results of the latest population projections for Northern Ireland. The assumptions used in this projection are summarised below.

**Base population:** The projection was based on the Northern Ireland mid-2008 population estimate.

**Fertility:** The numbers of births for the projections are obtained by applying the appropriate fertility rate to the average number of women at each age during each year of the projection period. For Northern Ireland, long-term average completed family size is assumed to be 1.95 children per woman.

**Mortality:** The mortality rates for the first year of the projection, 2008-09, are based on the best estimates that could be made in September 2009 of the numbers of deaths at each age. Future improvements in mortality rates are based on the trend in mortality rates in the years up to 2008. In the long term rates of improvement in mortality rates are projected to be one per cent per annum

**Migration:** It has been assumed that for each year of the projection period in the long-term there was a net inward migration of 500 from Northern Ireland.

The Northern Ireland population projections are produced by the Office for National Statistics (ONS) at the request of the Registrar General for Northern Ireland. Further information on population projections can be obtained from:

National Population Projections and Life Tables Branch ONS Centre for Demography Office for National Statistics Room D3/05 1 Drummond Gate LONDON SW1V 2QQ

Tel: 020 7533 5222

Email: natpopproj@ons.gsi.gov.uk

lifetables@ons.gsi.gov.uk

Website: www.statistics.gov.uk

# **Population Projections for Areas within Northern Ireland**

NISRA has produced 2008-based population projections for areas within Northern Ireland – Local Government Districts, Health and Social Services Boards, Education and Library Boards and NUTS III areas. These figures are constrained to the 2008-based ONS Northern Ireland totals. The population projections for local areas within Northern Ireland were published in May 2010.

Further information on the population projections for areas within Northern Ireland can be obtained from:

Customer Services
Northern Ireland Statistics and Research Agency
McAuley House
2-14 Castle Street
BELFAST
BT1 1SA

Tel: 028 9034 8160 Fax: 028 9034 8161

Email: census.nisra@dfpni.gov.uk

Website: http://www.nisra.gov.uk/demography/

default.asp3.htm

### **Northern Ireland Household Projections**

Northern Ireland 2008-based household projections were published in June 2010; LGD-level projections were subsequently published in August 2010.

The latest household projections incorporate the results of the 2008-based population projections, and trends in household formation from the last two Censuses and the Central Health Index.

The projections provide an indication of what would happen if past trends continue. They do not take account of policy initiatives, or other factors that may affect future populations.

Further information about the methodology used can be found at the following link:

http://www.nisra.gov.uk/demography/default.asp21.

#### **Geography Used for Data**

Since the 2007 Registrar General Annual Report vital statistics by geography are defined using the Pointer address database. In Annual Reports prior to 2007 the geography for vital statistics was defined using the postcode from the address in conjunction with the Central Postcode Directory (CPD).

Pointer is an address database that has been developed by the Land and Property Services, Royal Mail and Local Councils. Pointer gives each address a unique property reference number and geo-spatial coordinates.

In the 2009 report, the address for each registration is linked using the grid-reference of the Pointer unique property reference number to higher geographies. Under the previous CPD method only the postcode of the address was used to define the higher geography. Thus the new method is a more accurate method for allocating births and deaths by geography.

Where it has not been possible to assign a unique property reference number to an address using the Pointer database, the previous CPD method has been used to assign the geography.

## **Change to Health Geographies**

As a result of changes to the Health Service in Northern Ireland which were introduced from the 1 April 2009, the four Health and Social Service Boards have been replaced by five new Health and Social Care Trusts. The Northern, Southern and Western Trusts mirror the

equivalent Boards in the old system while the former Eastern Board has been split into the Belfast Trust (Belfast and Castlereagh Local Government Districts) and the South Eastern Trust (Ards, Down, Lisburn and North Down Local Government Districts).

#### **UK Data**

The Office for National Statistics (ONS) is responsible for producing a wide range of economic and social statistics. It also, for England and Wales, registers life events and holds the Census of Population. Contact details are as follows:

Customer Contact Centre Room 1.015 Office for National Statistics Cardiff Road, NEWPORT NP10 8XG

Tel: 0845 601 3034 Fax: 0163 365 2747

Email: info@statistics.gsi.gov.uk
Website: www.statistics.gov.uk

The General Register Office for Scotland (GROS) is responsible for the registration of births, marriages, deaths, divorces and adoptions in Scotland. They are also responsible for the Census of Population in Scotland which, with other sources of information, is used to produce population statistics. Contact details are as follows:

Customer Services
Dissemination and Census Analysis Branch
General Register Office for Scotland
Ladywell House
Ladywell Road
EDINBURGH
EH12 7TF

Tel: 0131 314 4243 Fax: 0131 314 4696

Email: customer@gro-scotland.gsi.gov.uk

Website: www.gro-scotland.gov.uk

## Appendix 4: Further Information

#### **Vital Statistics**

A wide range of additional information at differing levels of geography (including postcode sector) and for years not included in this edition of the Registrar General's Annual Report is available on request from Customer Services.

## **Population Statistics**

Estimates of the resident population are available by sex and single year of age for each of the Local Government Districts, Health and Social Care Trusts, Education and Library Boards, Parliamentary Constituencies and NUTS III areas of Northern Ireland. Population projections are available for the Local Government Districts, Health and Social Services Boards, Education and Library Boards and NUTS III areas by age and sex for a 15 year period after the base year. This information can be obtained from:

Customer Services
Northern Ireland Statistics and Research Agency
McAuley House
2-14 Castle Street
BELFAST
BT1 1SA

Tel: 028 9034 8160 Fax: 028 9034 8161

Email: census.nisra@dfpni.gov.uk

Website: http://www.nisra.gov.uk/demography/

default.asp3.htm

## **Migration Statistics**

Since 2006 NISRA has published an annual paper outlining analysis undertaken to develop measures of long-term international migration. The paper looks at a number of administrative/statistical sources including the Worker Registration Scheme, the Work Permit Scheme and National Insurance Number registrations, to help estimate long-term international migration.

These publications can be found on the NISRA website at the following link:

http://www.nisra.gov.uk/demography/default.asp18.htm

#### **Historical Registrar General Annual Reports**

Electronic copies of all Registrar General Annual Reports from 1887 to the present day are now available from the NISRA website. They can be accessed at the following link:

http://www.nisra.gov.uk/demography/default.asp57.htm

#### **Census Office for Northern Ireland**

#### 2001 Census Data

Detailed results from the 2001 Census include a wide range of demographic information available for different levels of geography. The headline outputs include:

- Northern Ireland Census 2001 Population Report and Mid-Year Estimates
- · Northern Ireland Census 2001 Key Statistics
- Northern Ireland Census 2001 Standard Tables
- Northern Ireland Census 2001 Census Area Statistics
- Northern Ireland Census 2001 Theme Tables
- Northern Ireland Census 2001 Migration, Travel to Work and Workplace Population
- Northern Ireland Census 2001 Univariate Tables

More information on the 2001 Census and statistics available from it can be obtained from:

Census Customer Services
Northern Ireland Statistics and Research Agency
McAuley House
2-14 Castle Street
BELFAST
BT1 1SA

Tel: 028 9034 8160 Fax: 028 9034 8161

Email: census.nisra@dfpni.gov.uk

Website: http://www.nisranew.nisra.gov.uk/census/

start.html

#### 2011 Census

Preparations are underway for the next Census which will take place on Sunday 27 March 2011.

Major testing has formed part of the 2011 Census development cycle, namely a Census test which took place on 13 May 2007 and a dress rehearsal which took place on 11 October 2009. Similar tests took place across the rest of the UK.

The legislation needed to carry out the 2011 Census is now in place, specifically a Census Order and Census Regulations.

More information on the 2011 Census can be obtained from:

http://www.nisranew.nisra.gov.uk/census/2011\_census.html

## Northern Ireland Neighbourhood Information Service (NINIS)

The Northern Ireland Neighbourhood Information Service (NINIS) is a dedicated website providing statistics for small areas across Northern Ireland and is available at www.ninis.nisra.gov.uk. The NINIS website contains datasets on a range of socio-economic themes at small-area statistical geographies. This includes data from the 2001 Census and detailed aggregate statistical information from various administrative data systems held within Central Government and Non-Departmental Public Bodies.

The Northern Ireland Multiple Deprivation Measure 2010 results, showing the distribution of deprivation in NI at the small area level are also available on NINIS. Further information can be obtained from:

Neighbourhood Statistics
Northern Ireland Statistics and Research Agency
McAuley House
2-14 Castle Street
BELFAST
BT1 1SA

Tel: 028 9034 8111 Fax: 028 9034 8134

Email: ninis.nisra@dfpni.gov.uk
Website: http://www.ninis.nisra.gov.uk

## Northern Ireland Longitudinal Study (NILS)

The Northern Ireland Longitudinal Study (NILS) is a large-scale data linkage study which has been created by linking administrative and statistical data. The Study is designed for statistical and research uses only and is managed under Census legislation. Information is linked over time on people from Census, vital events and health registration datasets. Data sources include 2001 Census data, birth and death registrations and demographic data derived from health registrations.

#### **Northern Ireland Mortality Study (NIMS)**

The Northern Ireland Mortality Study (NIMS) is a large-scale data linkage study developed in 2006 that links mortality data from the General Register Office (GRO) to 2001 Census returns. Thus a companion dataset to the full NILS has been developed in which 100 per cent of the population as recorded in the 2001 Census is included. As with the NILS dataset, these anonymised data are held in a safe setting by the Northern Ireland Statistics and Research Agency (NISRA). Like the NILS dataset, the NIMS is designed and maintained for statistical and research uses only and is managed under various legislation including Census legislation.

Further information can be obtained from:

NILS Research Support Unit Northern Ireland Statistics and Research Agency McAuley House 2-14 Castle Street BELFAST BT1 1SA

Tel: 028 9082 8210
Fax: 028 9034 8134
Email: nils-rsu@qub.ac.uk

Website: http://www.nils-rsu.census.ac.uk

#### **Divorces - Decree Nisi Information**

The information on divorces in this report refers to Decree Absolutes. Information on Decree Nisi's can be obtained from:

Northern Ireland Courts and Tribunals Service Laganside House 23-27 Oxford Street Belfast

Tel: 028 9032 8594 Fax: 028 9072 8942

BT1 3LA

## Appendix 5: Report on the work of the General Register Office for Northern Ireland (2009)

#### Introduction

The General Register Office for Northern Ireland (GRONI) is the part of the Northern Ireland Statistics and Research Agency (NISRA) that administers civil registration. The Registrar General for Northern Ireland, who is also Chief Executive of NISRA, heads GRONI. The registration functions of GRONI stem mainly from the statutory responsibilities placed on the Registrar General and include:

- administration of the registration of births, deaths, marriages and civil partnerships through District Registration Offices;
- formalities relating to marriage and conduct of civil marriages;
- · formalities relating to civil partnership registration;
- maintenance of historic records of births, deaths, marriages, civil partnerships and adoptions and production of certified copies to applicants on request; and
- · registration of adoptions.

The Registrar General has additional statutory duties relating to the production and publication of vital statistics. Demography and Methodology Branch within NISRA manage these duties in partnership with GRONI.

#### **Aims**

The work of GRONI is wide ranging including policy development, oversight and regulation of registration work undertaken by the District Registration Offices, advice on marriage procedures, casework relating to change of name, procedures relating to legal adoptions, production of certified copies of vital events and maintenance and storage of archive records. This is reflected in the fundamental aims of GRONI, which are:

- to register all births, deaths, marriages, civil partnerships and adoptions;
- to ensure that all information collected is relevant, accurate, complete and updated in such a way as to maintain public confidence in the records;

- to support NISRA in the production of accurate vital statistics to assist policy development and research;
- to preserve birth, death, marriage, civil partnership and adoption records permanently and to store them securely; and
- to produce certified copies of records efficiently and promptly on demand.

The aims of GRONI staff are to carry out these statutory obligations, to give accurate and unbiased advice to the public, to act with integrity at all times and to respect the confidentiality of all information contained in registration records or given by the public in confidence. In carrying out these functions, GRONI seeks to act in a manner consistent with the National Statistics Code of Practice and the Citizen's Charter.

# Main Activities / Performance Against Key Targets during 2009

Just under 49,000 vital events (births, re-registered births, deaths, marriages and civil partnerships) were registered in District Registration Offices and a corresponding number of certificates were issued. In addition, during 2009, GRONI:

- produced 73,023 certificates and of those, 10,460 priority certificates;
- verified 284 births, deaths and marriages for government departments, this is a reduction compared to previous years due to revised procedures;
- provided all death notifications to the Business Services Organisation, Electoral Office for Northern Ireland and Department for Work and Pensions; and
- dealt with 3,846 registration related cases.

Each year the Registrar General sets a number of key targets for GRONI. During 2009 these included:

- (i) Process 98 per cent of priority personal certificate applications within 1 hour and 98 per cent of telephone, post and online applications on day of receipt if received before 2.30pm.
  - Achieved. 98 per cent of priority applications were processed within target.
- (ii) Process 97 per cent of birth, death, marriage, civil partnership and adoption registration casework within 15 working days.

Achieved. 97 per cent within 15 days.

### **Reform Developments in 2009**

Each year a number of further measures are taken to improve customer services and value for money. In 2009 the main developments included:

- further work on the review of the civil registration service;
- preparation for the digitisation of eight million paperbased records;
- the review of Death Certification processes in Northern Ireland:
- work on Influenza Planning in relation to the registration of excess deaths; and
- the review of fees charged by GRONI.

Each of these is described in turn below.

## (i) Review of Registration Service

The Civil Registration Bill (Northern Ireland) was introduced to the Northern Ireland Assembly on 24 June 2008 and received its second reading on 1 July 2008. The Bill completed the Committee Stage in early March 2009 with the Department of Finance and Personnel Committee report being published on the Assembly website.

A number of proposed amendments to the Bill, which are being considered by the Minister, have been necessitated as a result of the introduction of other legislation. On conclusion of the Minister's deliberations, the Bill will move forward in the normal manner.

## (ii) Digitisation of Civil Registration Records

The General Register Office for Northern Ireland has made significant progress in the digitising of paper based records. Upon completion, the project will facilitate the electronic production of certificates, leading to efficiency savings and preservation of the historical registration records and will pave the way for future data savings initiatives.

The first successful migration of the digitised records and enhancement of the registration system took place on 3 August 2009, enabling GRO staff to produce certificates directly from the system for all birth and death registrations from 1973 to date; equalling almost 50 per cent of the business demand for certificate production. By adopting this phased approach, efficiencies and benefits have been delivered early in the project. The project is on target for completion in early 2011.

#### (iii) Review of Death Certification

GRONI continued it's involvement in the Inter-Departmental Steering Group which was established in Northern Ireland to examine and review the existing death certification process in Northern Ireland in light of the Shipman Inquiry and the Luce Review. The Group, which consists of representatives from stakeholder organisations involved in the current death certification process, examined and reviewed the existing process of death certification in Northern Ireland in comparison with developments in England & Wales and Scotland. An options paper, which indentifies proposals for an improved system for death certification and which will provide assurance and independence in the process has been agreed by the relevant Ministers and will move forward with a formal public consultation document being issued for widespread consultation in Northern Ireland.

### (iv)Influenza Planning

Work on influenza planning continued to be taken forward by GRONI to ensure that the registration service, which by law the Registrar General is responsible for, was equipped to deal with an increased number of deaths in a pandemic situation. The pandemic outbreak placed greater emphasis and importance on this area of work.

Work was taken forward in conjunction with District Registrars and District Councils to ensure that continuity plans were in place for the continuation of the service if the death rates rose to the estimated levels. Emergency legislation was also drafted to enable changes to the registration service to be introduced promptly in reaction to an increase in the numbers of deaths.

GRONI continued to be represented on the Pandemic Fatalities Management Sub Group led by DHSSPSNI and NIO. This group, which is a sub group of the Civil Contingencies Group, Northern Ireland (CCGNI) liaised regularly throughout the pandemic and afterwards to ensure that any necessary processes were in place and to record lessons learnt throughout the event.

## (v) Annual review of civil registration fees

Each year GRONI review the statutory fees charged for registration services against costs. The review indicated that an increase in fees in relation to birth, death, marriage and civil partnership certificates was not necessary at present.

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