

Place of Death from Cancer in Scotland (2015)

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Introduction

The Scottish Government's [*Strategic Framework for Action on Palliative and End of Life Care*](#) together with [*Beating Cancer: Ambition and Action*](#) address palliative and end of life care for patients with life limiting conditions.

The Strategic Framework for Action on Palliative and End of Life Care states that “the focus must be on how health and social care integration will improve the organisation and delivery of palliative and end of life care within hospitals and communities, including hospices, care at home, in care homes and other relevant social care services.” It further specifies as one of the National Health and Wellbeing Outcomes, that “people, including those with disabilities or long term conditions, or who are frail, are able to live, as far as reasonably practicable, independently and at home or in a homely setting in their community.”

This report examines the setting in which deaths from cancer occur in Scotland, for 2006-2015, taking into account demographic characteristics. Information in this report could assist the NHS and social care partners in Scotland in assessing the palliative and end of life care needs in all care settings

Information is presented for deaths in Scotland from all cancers combined and for the four most common causes of death from cancer (lung, colorectal, breast and prostate cancers).

Main points

- Over the last ten years, the percentage of people who died from cancer in an NHS hospital has reduced from 51% in 2006 to 43% in 2015. The percentage of people who died at home has increased from 24% to 30% over the same time period.
- In the latest five year time period, 2011-2015, for people who lived in urban areas, 28% died at home and 20% died in a hospice. For residents of rural areas, 33% died at home and 14% died in a hospice. This may reflect differences in hospice availability between urban and rural areas, as well as patient preference.

Results and Commentary

Tables 1 to 5 of this report present information on place of death from cancer. Information is provided by age group, gender, deprivation, urban/ rural classification and marital status for all cancers combined. Additional information, including information for the four most common cancers, is available in the Excel workbook [Table 1](#).

There were 79,112 deaths from cancer, including non-melanoma skin cancer, in Scotland in the five year period 2011-2015. Of these, 45.2% occurred in NHS hospitals, 28.6% were at home/private address and 19.2% were in hospices. The remainder were in other institutions such as care homes. This pattern is likely to reflect that people in the terminal stages of illness may be admitted to hospital for medical reasons such as investigations, treatment or symptom control and for social reasons, such as providing respite to a carer.

Age at Death

Table 1. Place of death from cancer by age group, 2011-2015.

Age at Death	Number of deaths	NHS Hospital (%)	Home / Private Address (%)	Hospice (%)	Other Institution (%)
All ages	79,112	45.2	28.6	19.2	7.0
Under 15	88	42.0	44.3	13.6	0.0
15-44	1,575	39.3	30.5	29.5	0.6
45-64	15,766	40.6	31.8	26.4	1.3
65+	61,683	46.5	27.8	17.1	8.6

Source: Death data from National Records of Scotland (NRS); data from ISD SMR01 (hospital inpatient and day case) records were used to obtain further details of place of death.

Some age groups show variation from the all ages pattern described above. In the five year period, 2011-2015, 44.3% of people aged under 15 died at home. This percentage of people who died at home is higher than the percentages within the other broad age groups, where between 28-32% of people died at home.

The oldest age group, 65 and over, is the age group most likely to die in other types of institutions (8.6% of deaths within that age group). Other types of institutions include private care homes and care homes for the elderly, among others.

Gender

Table 2. Place of death from cancer by gender, 2011-2015.

Gender	Number of deaths	NHS Hospital (%)	Home / Private Address (%)	Hospice (%)	Other Institution (%)
All Persons	79,112	45.2	28.6	19.2	7.0
Males	40,617	45.7	30.0	18.6	5.8
Females	38,495	44.7	27.2	19.8	8.3

Source: Death data from National Records of Scotland (NRS); data from ISD SMR01 (hospital inpatient and day case) records were used to obtain further details of place of death.

There is a higher percentage of females dying of cancer in the 'other institutions' category. While 8.3% of females died in these institutions, only 5.8% of males did so.

Deprivation

Table 3. Place of death from cancer by deprivation area, 2011-2015.

Deprivation Area	Number of deaths	NHS Hospital (%)	Home / Private Address (%)	Hospice (%)	Other Institution (%)
Any deprivation status	79,112	45.2	28.6	19.2	7.0
5 = Least deprived	12,341	42.2	26.0	24.2	7.6
4	14,406	44.0	28.9	19.1	8.0
3	15,643	46.3	29.7	17.0	7.1
2	17,849	47.1	28.5	18.0	6.4
1 = Most deprived	18,572	45.3	29.6	18.8	6.3

Source: Death data from National Records of Scotland (NRS); data from ISD SMR01 (hospital inpatient and day case) records were used to obtain further details of place of death.

Note: Some records cannot be assigned to a deprivation area so the sum of deprivation areas 1-5 will not add up to the 'any deprivation status' total.

Deprivation area is calculated using the Scottish Index of Multiple Deprivation (SIMD). This is an area-based measurement of multiple deprivation which combines information on income, employment, education, housing, health, crime and geographical access (see the glossary for further information). For this publication areas in Scotland were divided into five groups with decreasing levels of deprivation.

When comparing the most and least deprived areas by place of death, there appear to be mostly small differences. In the most deprived area, 45.3% of deaths from cancer occurred in NHS hospitals compared to 42.2% in the least deprived area. The largest difference was in hospices where 18.8% of deaths from cancer in the most deprived area occurred compared to 24.2% in the least deprived area.

Urban / Rural Classification

Table 4. Place of death from cancer split by urban and rural classification, 2011-2015.

Urban / Rural Category	Number of deaths	NHS Hospital (%)	Home / Private Address (%)	Hospice (%)	Other Institution (%)
Any urban/ rural status	79,112	45.2	28.6	19.2	7.0
All Urban Areas	64,700	45.0	27.8	20.3	7.0
All Rural Areas	14,111	46.1	32.8	14.1	7.0

Source: Death data from National Records of Scotland (NRS); data from ISD SMR01 (hospital inpatient and day case) records were used to obtain further details of place of death.

Note: Some records cannot be assigned to an urban/rural area so the sum of urban and rural areas will not add up to the 'any urban/rural status' total.

The percentage of people who died in hospital was similar for people who lived in urban and rural areas (45.0% and 46.1% respectively). For those resident in an urban area, 20.3% of people died in a hospice and 27.8% at home or a private address, compared to 14.1% and 32.8%, respectively for people who were resident in rural areas. This may reflect differences in hospice availability between urban and rural areas as well as patient preferences.

Marital Status

Table 5. Place of death from cancer by marital status, 2011-2015.

Marital Status	Number of deaths	NHS Hospital (%)	Home / Private Address (%)	Hospice (%)	Other Institution (%)
All	79,112	45.2	28.6	19.2	7.0
Married	38,555	42.7	34.3	20.0	3.0
Not Married	40,464	47.6	23.3	18.4	10.7
- Single	7,762	47.6	20.6	21.4	10.3
- Widowed	24,426	47.9	23.7	15.8	12.6
- Divorced	8276	46.5	24.4	23.4	5.7

Source: Death data from National Records of Scotland (NRS); data from ISD SMR01 (hospital inpatient and day case) records were used to obtain further details of place of death.

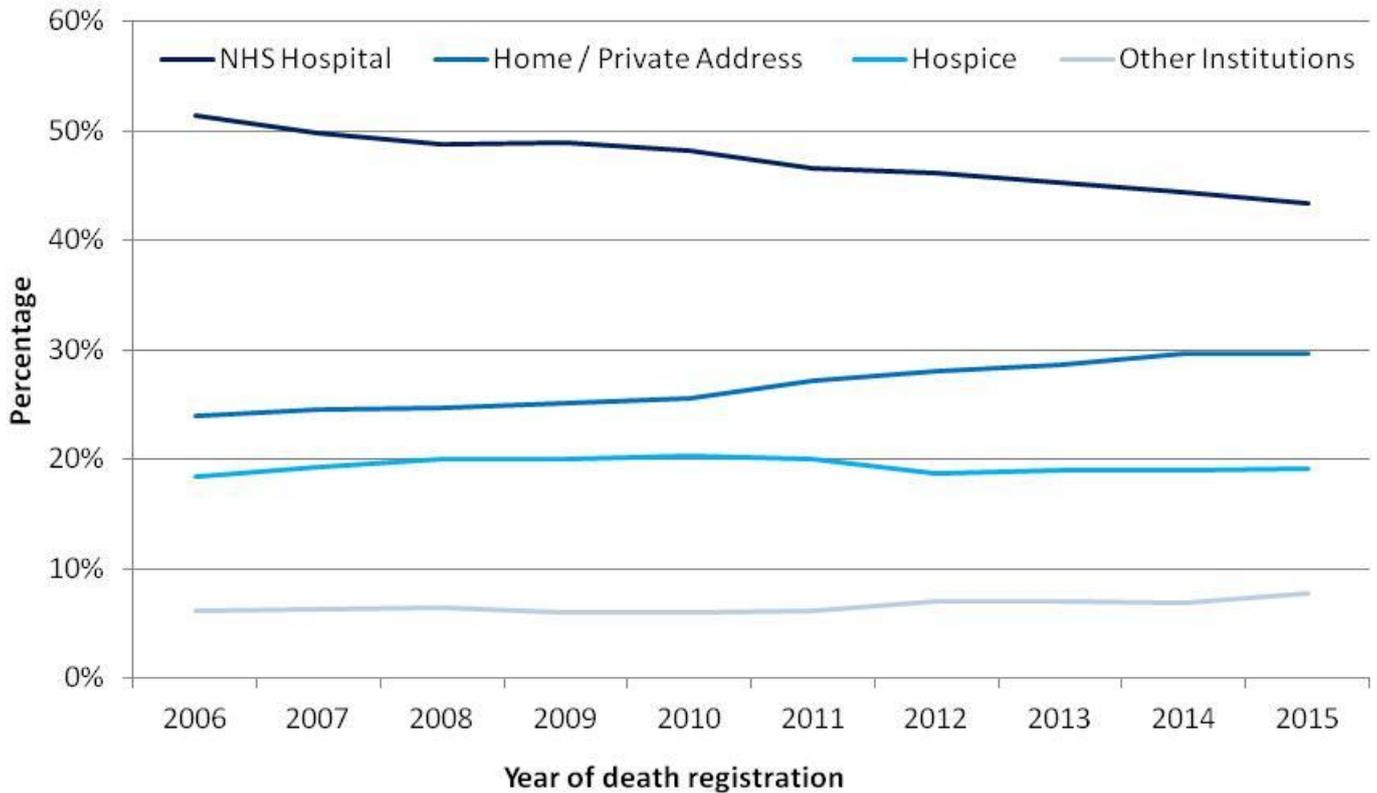
Note: Marital status not available for all records so sum of married and not married will not add up to the total figure.

The place of death for over one third of married people (34.3%) was at home. This compares to 23.3% for people who were not married. A larger percentage of people who were not married died in the 'other institution' category compared to married people (10.7% compared to 3.0%). Please note that the term 'married' indicates a legal partnership. As a result, there are likely to be a large number of long-term partnerships included within the 'not married' category.

Ten Year Trends, 2006-2015

Figure 1 shows that over the last ten years, the percentage of people who died from cancer in an NHS hospital has reduced from 51.5% to 43.4%. The percentage of people who died at home has increased from 24.0% to 29.6%.

Figure 1. Trends in place of death from cancer by year of death registration, Scotland, 2006-2015



Source: Death data from National Records of Scotland (NRS); data from ISD SMR01 (hospital inpatient and day case) records were used to obtain further details of place of death.

Further information on trends for the ten year period 2006-2015 by place of death, cancer type, age, gender, marital status, urban-rural classification and deprivation quintile are available in the excel workbook [Table 2](#).

Glossary

Deprivation areas	Each deprivation area contains 20% of the population in Scotland. Deprivation area 1 contains the most deprived 20% of the population, while deprivation area 5 contains the least deprived 20%.
Other institution	Places of death other than NHS hospital, home/private address or hospice. This category includes places of death such as care homes, private care homes, homes for the elderly and private hospitals.
SIMD	Scottish Index of Multiple Deprivation. Deprivation for individuals is estimated from data derived from the census and other routine sources. These are used to estimate the deprivation of individuals in small geographical areas. The SIMD has seven domains (income, employment, education, housing, health, crime and geographical access). These are combined into an overall index to pick out areas with concentrations of multiple deprivation. SIMD 2012 is the version that was published in 2012.
Urban-rural classification	Classification system maintained by the Scottish Government that defines areas as being urban (settlements of over 3,000 people) or rural (settlements of under 3,000 people).

List of Tables

Table No.	Name	Time period	File & size
1	Place of death by cancer type and demographics, 2011-2015	2011-2015	Excel [251kb]
2	Ten year trends in place of death by cancer type and demographics, 2006-2015	2006-2015	Excel [572kb]

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Further Information

The Information Services Division publish a wide range of cancer statistics. [You can find all our cancer information on our website](#) including cancer [incidence](#), [mortality](#) and [survival](#) statistics.

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Appendices

A1 – Background Information

Source of data

The Place of Death from Cancer report uses death registration data from the National Records of Scotland (NRS). The Information Services Division SMR01 (hospital inpatient and daycase) database was also used to obtain further details on place of death information.

The cancer mortality statistics within this publication are based on the date of registration of the death rather than the date on which the death occurred. This is in order to be consistent with the information published by [National Records of Scotland](#). By law, a death should be registered within 8 days of the date of death.

Place of death location types

NHS Hospitals includes acute hospitals (location codes ending in H), contractual hospitals pre-1990 (J) and joint-user hospitals (K). This category excludes locations defined as hospices (see below). Specialist palliative care units within hospitals are included in the hospice category.

Home/private address is defined as location code D201N, and may not necessarily be the patient's own home.

Hospice is defined as those organisations recognised by the Scottish Partnership for Palliative Care, including NHS specialist palliative care units provided within, for example, NHS Hospitals.

Care home service/other institutions include locations such as care homes, private care homes, homes for the elderly and private hospitals.

Ethnicity

Information on place of death by self-assessed ethnicity is not included in this publication but more information can be found in the following paper:

Sharpe KH, Cezard G, Bansal N, Bhopal RS, Brewster DH. Policy for home or hospice as the preferred place of death from cancer: Scottish Health and Ethnicity Linkage Study population cohort shows challenges across all ethnic groups in Scotland. *BMJ Support Palliat Care* 2015 Dec;5(4):443-51. doi: 10.1136/bmjspcare-2013-000485.

<http://spcare.bmj.com/content/5/4/443.abstract>

A2 – Publication Metadata (including revisions details)

Metadata Indicator	Description
Publication title	Place of Death from Cancer in Scotland (2015)
Description	Distribution of the places of death among patients dying from cancer in Scotland, from all malignancies combined and from the four major cancers (breast, colorectal, prostate and lung), broken down by demographic characteristics of the patients.
Theme	Health and Social Care
Topic	Conditions and Diseases
Format	Excel workbooks
Data source(s)	National Records of Scotland (NRS) for deaths, linked to SMR01 to identify ambiguous location codes.
Date that data are acquired	August 2016
Release date	22 November 2016
Frequency	Triennial
Timeframe of data and timeliness	Data up to 31 December 2015. Produced within a few months of cancer mortality statistics, to allow for processing time including linkage to SMR01.
Continuity of data	Trends report data since 2006. National Records of Scotland coded deaths using ICD-10 from 2000 onward.
Revisions statement	Deaths data tend to be static over time. The SMR01 data is dynamic; the numbers within each place of death category may vary slightly when refreshed at a later date.
Revisions relevant to this publication	None.
Concepts and definitions	Cancer Information FAQs
Relevance and key uses of the statistics	Understanding the distribution of cancer deaths allows planning for provision of cancer treatment and palliative care services. Examination of underlying demographic differences may help to highlight inequalities.
Accuracy	For coding of deaths see the website of the National Records of Scotland . Data are cross-checked where possible with Cancer Mortality publication, and Deaths statistics published by National Records of Scotland.
Completeness	At time of extraction, data for the most recent year are estimated to be complete. See above note on Revisions.
Comparability	We are unaware of equivalent statistics routinely produced elsewhere for comparison.
Accessibility	It is the policy of ISD Scotland to make its web sites and

	products accessible according to published guidelines .
Coherence and clarity	All Cancer tables are accessible via the Cancer section of the ISD website . Selections for type of cancer are presented using drop down menus.
Value type and unit of measurement	Number of deaths from cancer as count; rates of deaths from cancer as percentages. Number, eg 1.1
Disclosure	The ISD protocol on Statistical Disclosure Protocol is followed.
Official Statistics designation	National Statistics
UK Statistics Authority Assessment	May 2010.
Last published	30 April 2013
Next published	19 November 2019
Date of first publication	April 2009
Help email	nss.isdcancerstats@nhs.net
Date form completed	01 November 2016

A3 – Early Access details (including Pre-Release Access)

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD are obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access and, separately, those receiving extended Pre-Release Access.

Standard Pre-Release Access:

Scottish Government Health Department
NHS Board Chief Executives
NHS Board Communication leads

A4 – ISD and Official Statistics

About ISD

Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

Purpose: To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.

Mission: Better Information, Better Decisions, Better Health

Vision: To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

Official Statistics

Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of 'Official Statistics'. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

ISD's statistical publications are currently classified as one of the following:

- National Statistics (ie assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (ie legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (ie still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD's statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the [ISD website](#).

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics. Designation can be broadly interpreted to mean that the statistics:

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

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