

Percentage of End of Life Spent at Home or in a Community Setting

Financial years ending 31st March 2010 to 2015

30th August 2016

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Introduction

The [NHS Healthcare Quality Strategy](#) was launched in May 2010 by the Scottish Government with the aim of delivering high quality healthcare service to the people of Scotland. A direct action identified by the Quality Strategy was to develop a [Quality Measurement Framework](#) supporting a number of Quality Outcome Measures (QOMs). These measures cover a range of healthcare topics including; care experience, healthcare acquired infections, hospital mortality rates and end of life care.

This Information Services Division publication presents analysis and findings in support of the action plan "[Living and Dying Well: A National Action Plan for Palliative and End of Life Care in Scotland](#)" which has as one of its objectives to "produce achievable and measurable changes which will ensure quality improvement and enhance patient and carer experience".

Ideally, the measure would relate directly to the patient's preferred place of care at the end of their life. However, there is no national and systematic data recorded on a person's preferred place of care at end of life and so this publication uses instead the following surrogate measure: "*Percentage of last six months spent at home or in a community setting*". Although this is not a direct measure of compliance with people's preferred place of death, it can serve to provide a broad indication of progress in implementing the national action plan.

More recently in December 2015 the "[Strategic Framework for Action on Palliative and End of Life Care](#)" was launched, which outlines the key actions to be taken to ensure that everyone in Scotland receives services that respond to their individual palliative and end of life care needs.

Methodology

This publication includes data from financial years 2010/11 to 2014/15 at Scotland, NHS Board and Health and Social Care Partnership level.

This year we have revised the methodology on how the measure: '*percentage of the last six months of life spent at home or in a community setting*' is calculated compared to previous years' publications. Therefore results presented in this publication will not be comparable to previously published figures. However trend data from 2010/11 to 2014/15 is available using the revised methodology in this publication.

The *percentage of last six months spent at home or in a community setting* is calculated by determining the number of days a person has not spent in a hospital setting. Previously only time spent in major acute hospitals was counted as time spent in hospital. Under the revised methodology we have calculated the 'time spent in hospital' as all hospital inpatient bed days in acute and community hospitals, psychiatric hospitals and geriatric long stay facilities.

Please note that this measure is affected by data completeness issues and figures may need to be revised at a later date. Information on data completeness can be found on the [ISD Data Monitoring Service webpage](#).

The measure currently includes people of all ages, however it is recognised that older people are more likely to require palliative care services.

The measure excludes deaths due to external causes (e.g. unintentional injuries) as these are unlikely to be related to the palliative care agenda. It should be noted however, that deaths where a fall is recorded on the death record are included as national falls prevention strategies specifically target elderly people with the aim of reducing the need for stays in hospital and thereby improving patient outcomes.

A more detailed description of the methodology is provided in [Appendix 3](#).

Main points

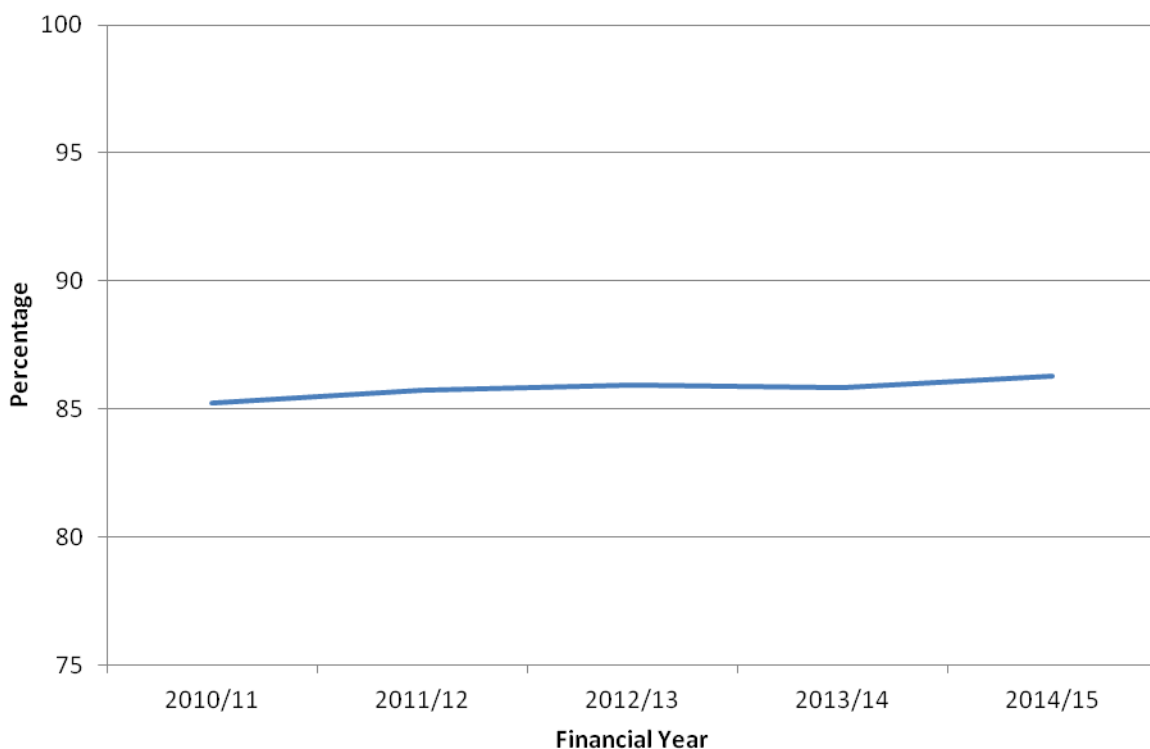
- There were 53,644 deaths in Scotland during 2014/15, excluding those where an external cause such as unintentional injury was recorded.
- Of these people, 86% of their last six months of life was spent at home or in a community setting with the remaining 14% of time spent in hospital. This has remained largely unchanged over the five years from 2010/11 to 2014/15.
- There is some variation between areas in the time spent at home or in the community with the percentage ranging from 83% to 92%. Those in rural areas tend to spend a higher percentage of their last six months of life at home or in the community.
- Those in the youngest age group spent a greater percentage of their last six months at home or in the community compared to those in the older age groups; 90% in the 0-54 age group compared to 86% for those aged 85+. This may reflect the different causes of death in these age groups.
- There is very little difference in the percentage between those living in the most deprived areas compared with those living in the least deprived areas (86% compared to 87%).

Results and Commentary

For the 53,644 residents of Scotland who died in 2014/15, more than 86% of their last six months were spent either at home or in the community (Table 1). This is equivalent to each resident spending an average of 25 days in hospital in the 6 months prior to their death (Table 1 in the [data tables](#)).

Over the five financial years from 2010/11 to 2014/15 the percentage of time spent at home or in a community setting has remained largely unchanged (see Figure 1 below).

Figure 1: Percentage of last six months of life spent at home or in a community setting; financial years 2010/11 – 2014/15



1. Please note that the y-axis does not start at zero.

Health and Social Care Partnership

Table 1 shows the percentage of the last six months of life spent at home or in a community setting for each of the Health and Social Care Partnerships. There is some variation between partnerships with the figures ranging from 83% (Scottish Borders) through to 92% (Shetland Islands). This could be due to differences in the age profile and rurality of each of the local areas.

Table 1: Percentage of last six months of life spent at home or in a community setting in 2014/15; by Health and Social Care Partnership

Health and Social Care Partnership	No. Deaths	% of time spent at home/in the community
Aberdeen City	2,068	87.6
Aberdeenshire	2,278	88.8
Angus	1,339	89.1
Argyll & Bute	1,062	88.3
Clackmannanshire and Stirling	1,361	86.3
Dumfries and Galloway	1,844	88.9
Dundee City	1,615	86.7
East Ayrshire	1,365	87.0
East Dunbartonshire	1,063	85.3
East Lothian	1,001	85.6
East Renfrewshire	902	84.2
Edinburgh	4,018	84.6
Falkirk	1,487	84.6
Fife	3,646	86.8
Glasgow City	6,044	83.8
Highland	2,243	89.8
Inverclyde	952	84.6
Midlothian	826	85.8
Moray	931	89.5
North Ayrshire	1,589	86.8
North Lanarkshire	3,391	87.2
Orkney Islands	188	89.4
Perth and Kinross	1,540	87.8
Renfrewshire	1,901	86.6
Scottish Borders	1,328	83.1
Shetland Islands	214	92.3
South Ayrshire	1,352	85.7
South Lanarkshire	3,286	84.2
West Dunbartonshire	1,067	86.6
West Lothian	1,387	85.7
Western Isles	356	87.7
Scotland	53,644	86.3

1. The Health and Social Care Partnership is the usual place of residence prior to death.

The trend over the past 5 years is presented in graphical format in Figure A1.1 (see [List of Figures](#) or [Appendix A1](#)) and the corresponding data can be found in Table 1 in the [data tables](#). Many of the partnerships show a broadly consistent pattern over the 5 year period from 2010/11 to 2014/15. Scottish Borders and Falkirk have seen this measure decrease by 1 percentage point over the five years, however the Shetland Islands and Western Isles have both seen this measure increase by 3 percentage points over this period.

Health Board of Residence

Information is also provided for each of the Health Boards in Scotland in Table 2. Again the variation in values will be influenced by rurality and age profile of the different areas. The trend over the past 5 years is presented in graphical format in Figure A1.2 (see [List of Figures](#) or [Appendix A1](#)).

Table 2: Percentage of last six months of life spent at home or in a community setting in 2014/15; by Health Board of Residence

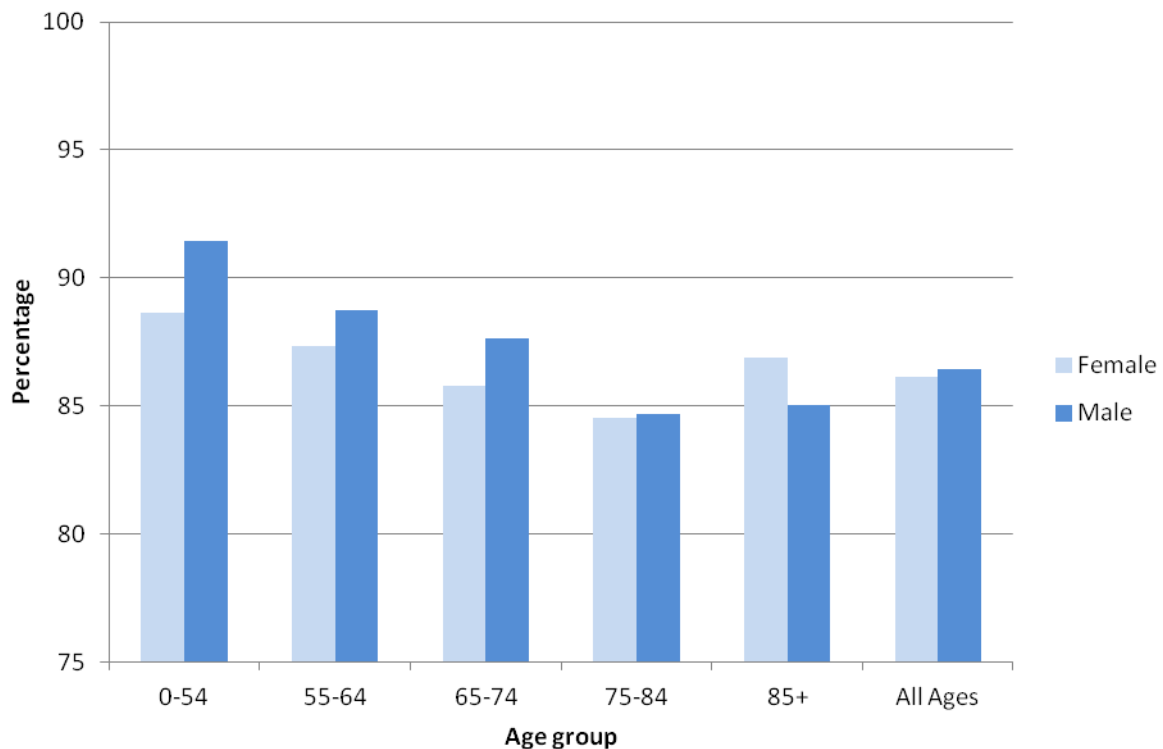
Health Board of Residence	No. Deaths	% of time spent at home/in the community
Ayrshire & Arran	4,306	86.5
Borders	1,328	83.1
Dumfries & Galloway	1,844	88.9
Fife	3,646	86.8
Forth Valley	2,848	85.4
Grampian	5,277	88.4
Greater Glasgow & Clyde	11,929	84.7
Highland	3,305	89.3
Lanarkshire	6,677	85.8
Lothian	7,232	85.1
Orkney	188	89.4
Shetland	214	92.3
Tayside	4,494	87.8
Western Isles	356	87.7
Scotland	53,644	86.3

1. The Health Board of Residence is the usual place of residence prior to death.
2. Health Boards are based on the new NHS Board boundaries which came into effect 1st April 2014.

Age and Gender

Figure 2 below shows the percentage of time spent at home or in the community in the last six months by different age groups and gender (Table 3 in the [data tables](#)).

Figure 2: Percentage of last six months of life spent at home or in a community setting in 2014/15; by age and gender.



1. Please note that the y-axis does not start at zero.

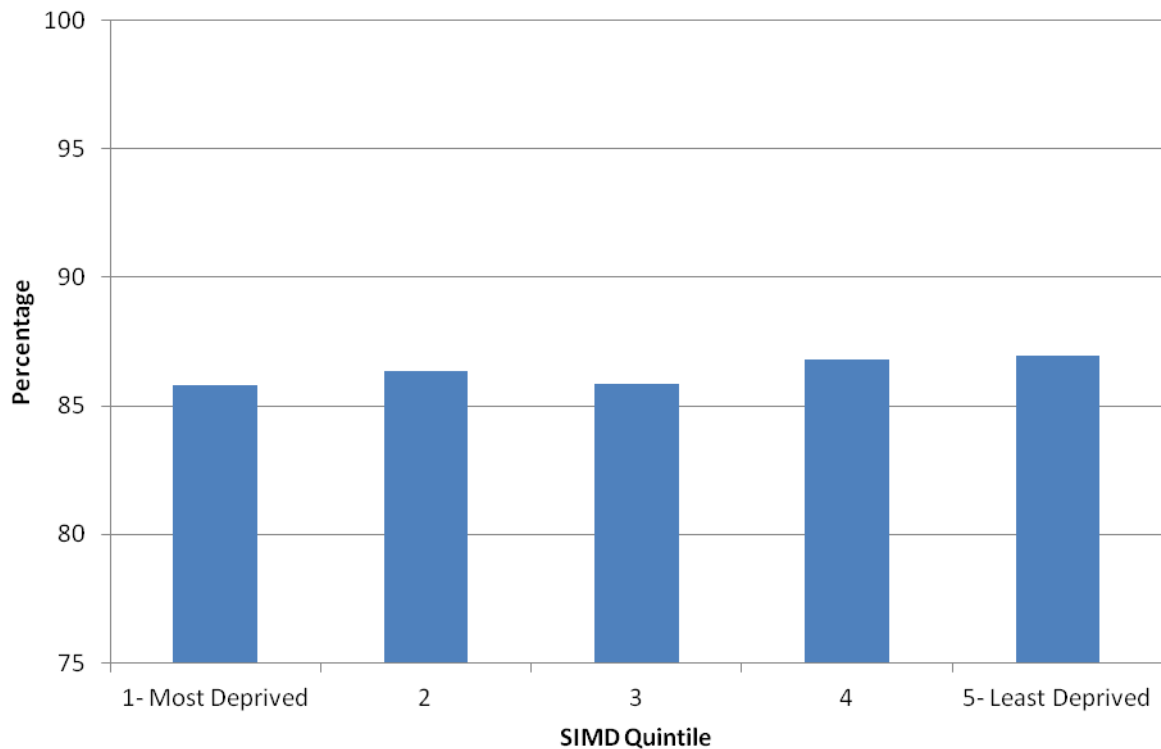
Overall there is little difference between males and females in the amount of time spent at home or in a community setting in the last six months of life. However, this masks bigger differences in younger age groups where 0-54 year old males spent an average of 2.8% (91.5% for males compared to 88.6% for females) more of their last six months at home or in a community setting compared to the oldest age group (85+) where females spent an average of 1.9% (85.0% for males compared to 86.9% for females) more of their last six months at home or in a community setting.

There is also a difference between age groups with a higher percentage of time spent at home or in the community in the last six months of life in the 0-54 age group (90%, for both sexes combined) compared to the 75-84 age group (85%) and the 85+ age group (86%). This may reflect the different causes of death experienced in these age groups.

Deprivation

The percentage of time spent at home or in a community setting in the last six months of life by deprivation is shown in Figure 3 (Table 4 in the [data tables](#)). The Scottish Index of Multiple Deprivation (SIMD) 2012 has been used in this publication. See the [Glossary](#) for further information on SIMD.

Figure 3: Percentage of last six months of life spent at home or in a community setting in 2014/15; by SIMD Quintile 2012.



1. Please note that the y-axis does not start at zero.

There is very little variation between the different deprivation categories in the amount of time spent at home or in the community in the last six months of life. This was 86% in the most deprived areas compared with 87% in the least deprived areas (Figure 3; Table 4 in [data tables](#)).

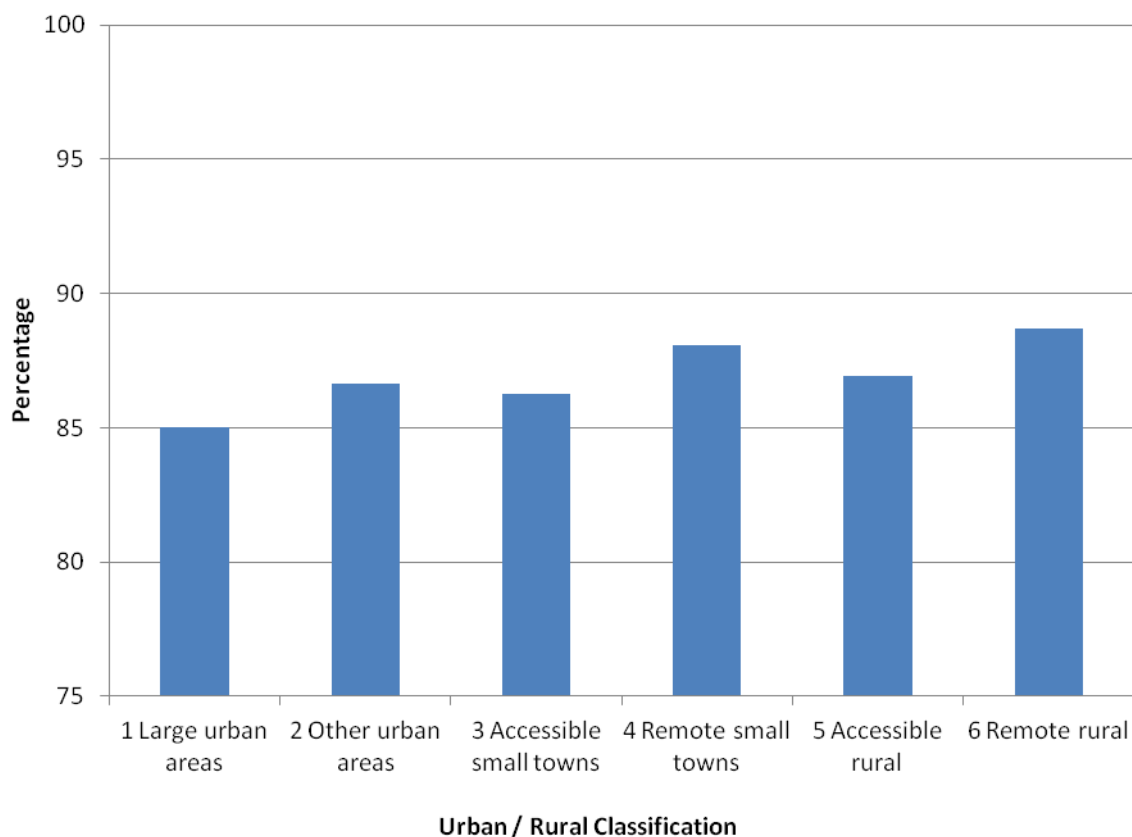
The trend over time by deprivation category is presented in Figure A1.3 (see [List of Figures](#) or [Appendix A1](#)). No significant change over time has been detected in any of the categories.

Urban/Rural

To investigate whether living in a more urban or rural area may impact on the likelihood of spending more time either at home or in a community setting, the Scottish Government 6-fold [urban rural classification](#) has been used.

Figure 4 below shows the percentage of time spent at home or in the community in the last six months of life by urban rural classification.

Figure 4: Percentage of last six months of life spent at home or in a community setting by Urban/Rural classification in 2014/15.



1. Please note that the y-axis does not start at zero.

The percentage of the last six months of life spent at home or in the community ranged from 85% for residents in large urban areas to 89% for residents from remote rural areas (Figure 4; Table 5 in [data tables](#)). Those living in more remote rural areas spent more time at home or in a community setting in the last six months of life compared to those living in urban areas.

Trend data on the percentage of the last six months of life spent at home or in a community setting by Urban/Rural classification are presented in Figure A1.4 (see [List of Figures](#) or [Appendix A1](#)).

Glossary

Palliative Care	Palliative care is an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness. This is achieved through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other physical, psychosocial and spiritual problems.
Bed day	Unit of measurement relating to an overnight stay in an inpatient hospital bed.
Time spent in a hospital setting	Time spent in acute, community or psychiatric hospitals. Refers to all hospital bed days calculated from SMR01 records (acute and geriatric long stay specialties) and SMR04 records (mental health specialties).
SIMD	Scottish Index of Multiple Deprivation Data in this report are analysed by the 'Scotland level' SIMD population weighted quintiles. Each quintile consists of approximately 20% of the population living in Scotland, with deprivation quintile 1 indicating the population living in the most deprived areas.
Urban/Rural classification	The Scottish Government Urban/Rural classification can be used to classify geographies as urban, rural or remote. Each data zone is assigned to an urban rural category based upon the location of its population weighted centroid. Further information can be found on the SG website .

List of Tables

Table No.	Name	Time period	File & size
1	Percentage of last six months of life spent at home or in a community setting by: <ul style="list-style-type: none"> • Health and Social Care Partnership • Health Board • Age & Gender • Deprivation (SIMD) • Urban / Rural Classification 	2010/11-2014/15	Excel [156kb]

List of Figures

Figure No.	Name	Time period	File & size
1	Percentage of last six months of life spent at home or in a community setting; financial years 2010/11 – 2014/15.	2010/11-2014/15	Excel [36kb]
2	Percentage of last six months of life spent at home or in a community setting by age and gender.	2014/15	Excel [36kb]
3	Percentage of last six months of life spent at home or in a community setting by deprivation (SIMD).	2014/15	Excel [36kb]
4	Percentage of last six months of life spent at home or in a community setting by Urban/Rural classification.	2014/15	Excel [35kb]
A1.1	Percentage of end of life spent at home or in a community setting by financial year for each Health and Social Care Partnership.	2010/11-2014/15	Excel [199kb]
A1.2	Percentage of end of life spent at home or in a community setting by financial year for each NHS Health Board of residence.	2010/11-2014/15	Excel [108kb]
A1.3	Percentage of end of life spent at home or in a community setting by financial year for each SIMD quintile.	2010/11-2014/15	Excel [57kb]
A1.4	Percentage of end of life spent at home or in a community setting by financial year for each Urban/Rural classification.	2010/11-2014/15	Excel [60kb]
A3.1	Percentage of end of life spent at home or in a community setting by financial year: comparison to previous measure.	2010/11-2014/15	Excel [36kb]

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Further Information

Further information can be found on the [ISD website](#)

Rate this publication

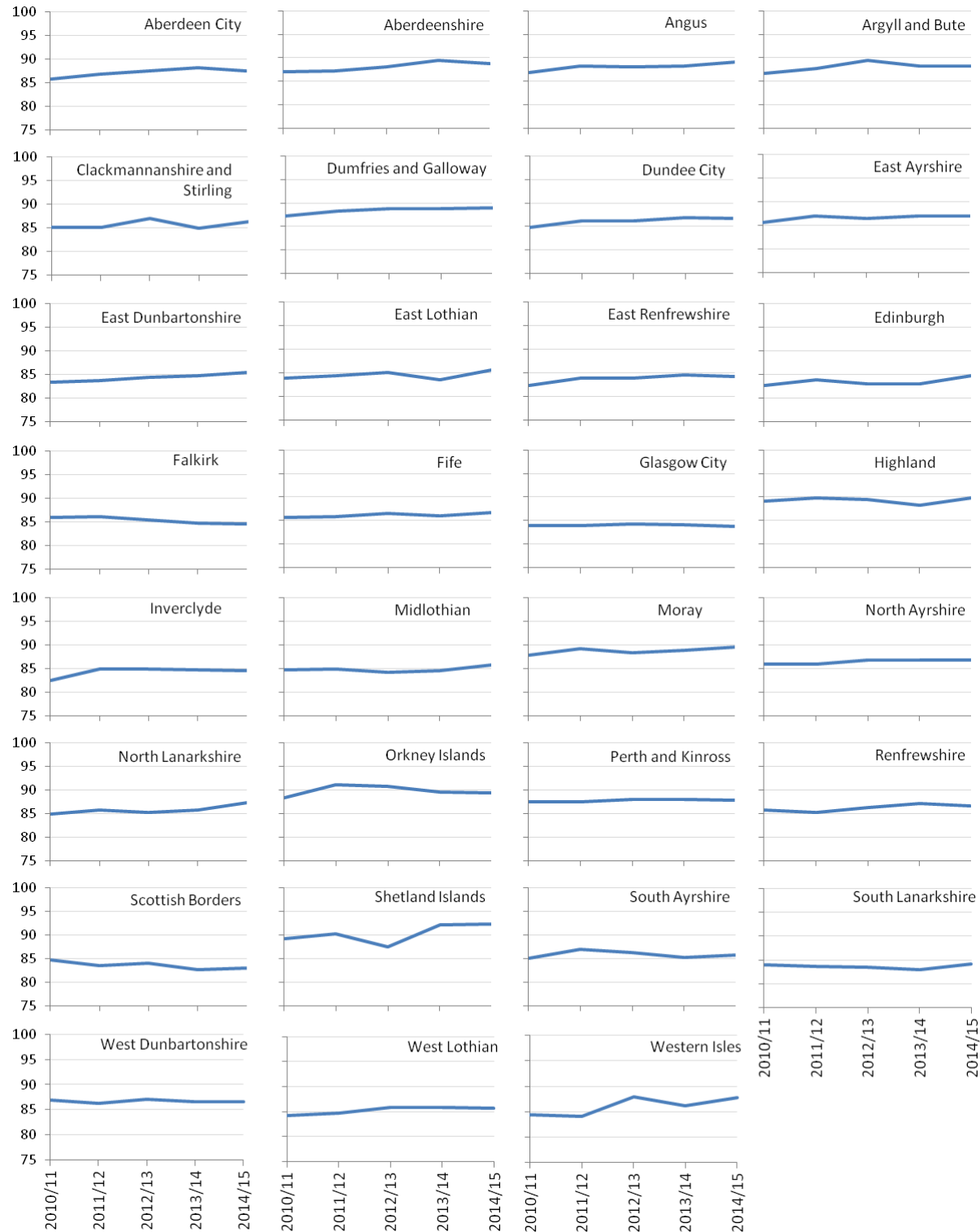
Please [provide feedback](#) on this publication to help us improve our services.

Appendices

A1 – Trend Data

Percentage of end of life spent at home or in a community setting by Health and Social Care Partnership.

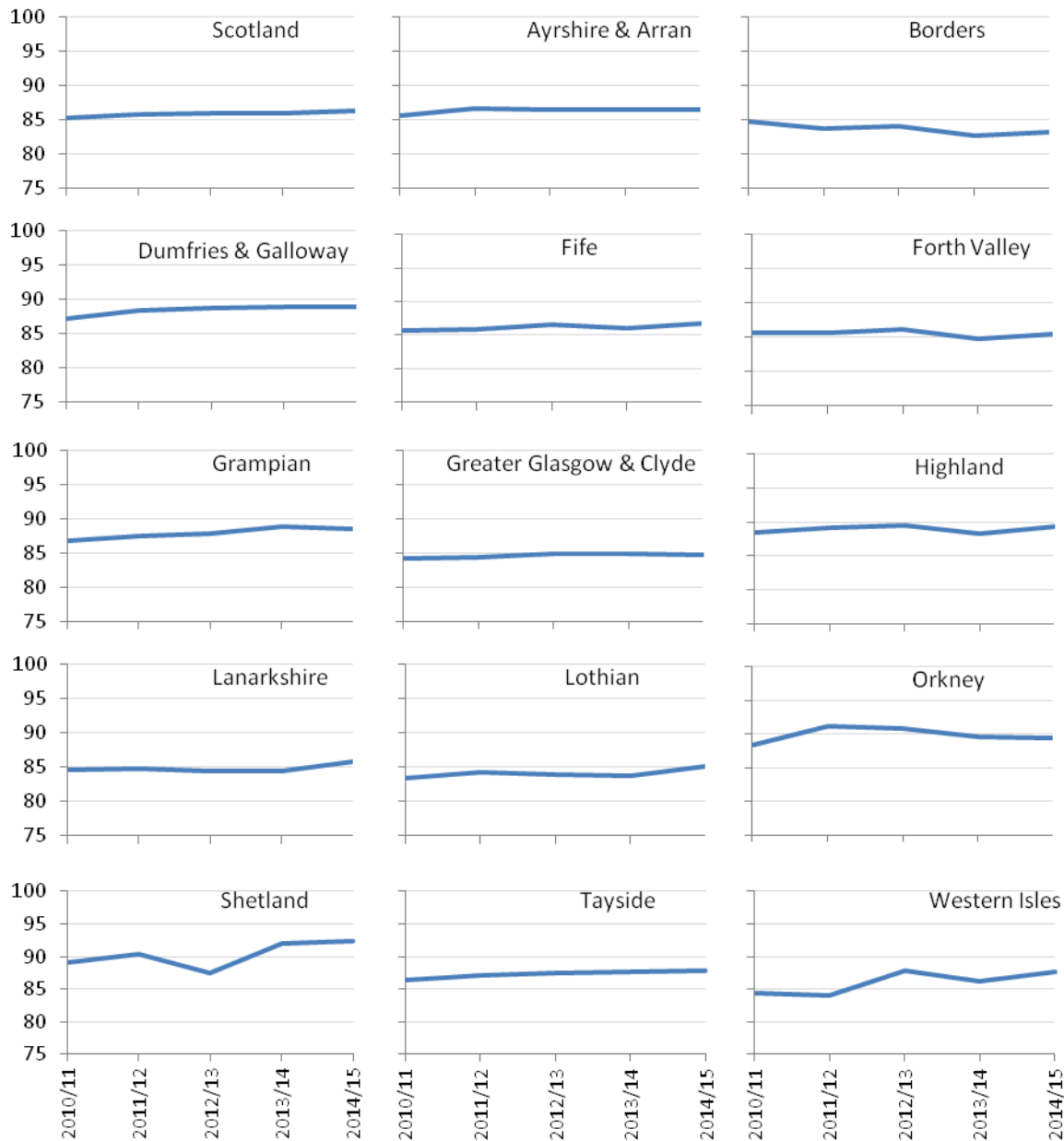
Figure A1.1: Percentage of end of life spent at home or in a community setting by financial year for each Health and Social Care Partnership.



1. Please note that the y-axis does not start at zero.

Percentage of end of life spent at home or in a community setting by NHS Health Board of Residence.

Figure A1.2: Percentage of end of life spent at home or in a community setting by financial year for each NHS Health Board of residence.

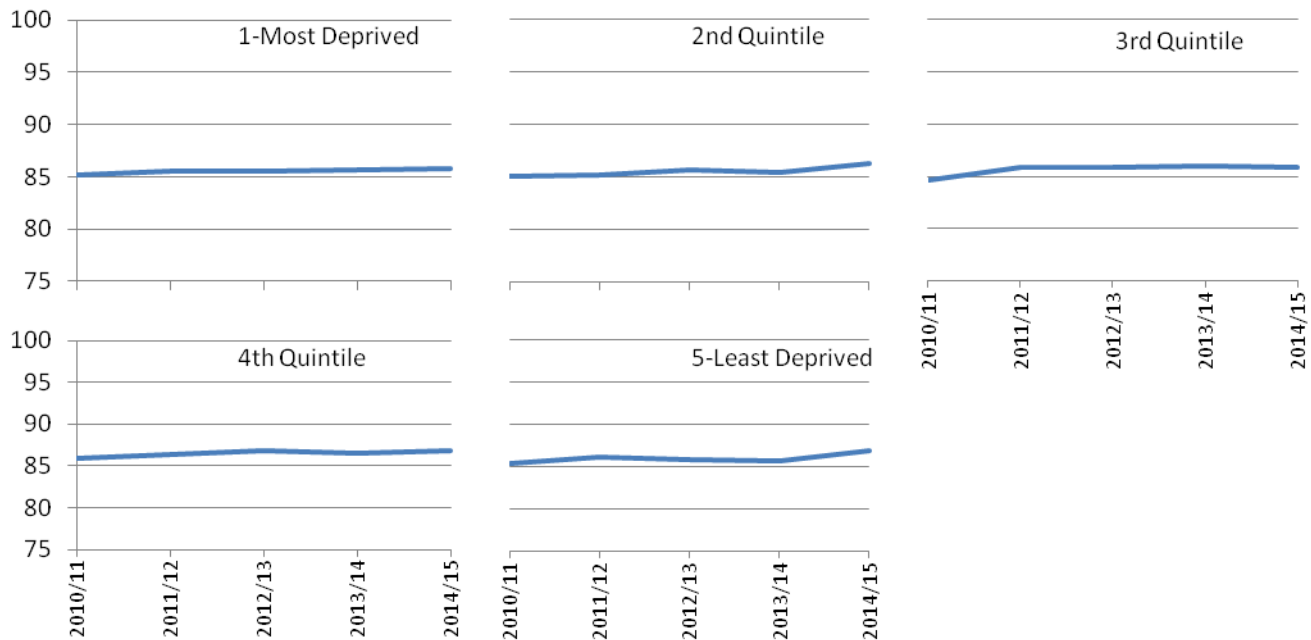


1. Please note that the y-axis does not start at zero.

Caution should be used when comparing health and social care partnership / health board data due to different service designs and rurality of the area.

Percentage of end of life spent at home or in a community setting by Scottish Index of Multiple Deprivation.

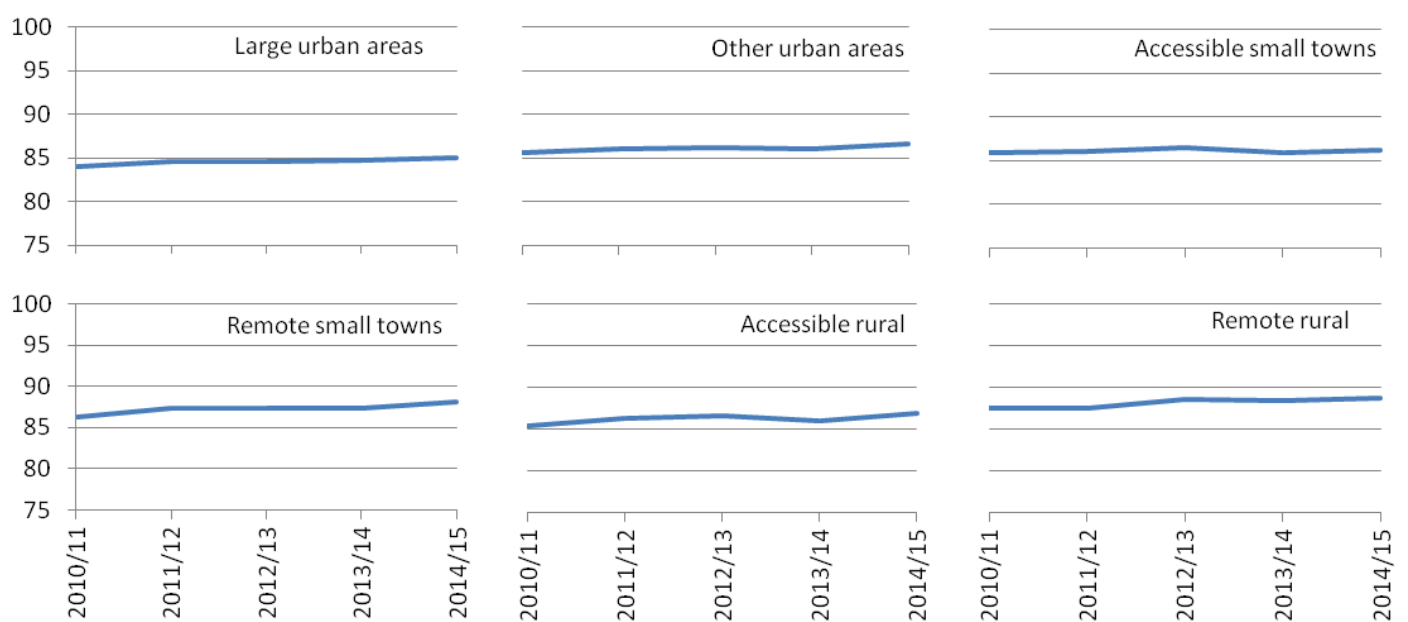
Figure A1.3: Percentage of end of life spent at home or in a community setting by financial year for each SIMD quintile.



1. Please note that the y-axis does not start at zero.

Percentage of end of life spent at home or in a community setting by Urban/Rural Classification.

Figure A1.4: Percentage of end of life spent at home or in a community setting by financial year for each Urban/Rural classification



1. Please note that the y-axis does not start at zero.

A2 – Background Information

End of life care (palliative care) is an important, integral aspect of the health care provided to those living with and dying from any advanced or progressive and life-threatening condition. It is now possible to predict the progress of many of these conditions, enabling a planned approach to end of life care in ways which reflect, as far as possible, the needs and wishes of patients, carers and their families.

[Living and Dying Well: A National Action Plan for Palliative and End of Life Care in Scotland](#) was published in 2008 with the aim to provide focus and momentum to improve palliative and end of life care for everyone in Scotland who requires it, regardless of their geographic or demographic circumstances, and to encourage efficient collaborative practice across health care, social care and voluntary sectors.

More recently, in May 2010, the [NHS Healthcare Quality Strategy](#) was launched with the aim of delivering high quality healthcare services to people in Scotland. A direct action identified by the Quality Strategy was to develop a [Quality Measurement Framework](#) supporting a number of Quality Outcome Measures (QOMs). These measures cover a range of healthcare topics including; care experience, healthcare acquired infections, hospital mortality rates and end of life care.

ISD have been working in support of the Quality Measurement Framework to develop Quality Outcome Measure 10: *'The percentage of last six months of life spent at home or in a community setting'*.

The proportion of time spent at home or in a community setting towards the end of life provides a high level indication of progress in implementation of the national action plan. This is inferred by measuring the amount of time spent in a hospital setting during the last months of life (using hospital admissions data) and from this estimating the time spent at home or in a community setting.

It is envisaged that an increase in this measure will reflect both quality and value through more effective, person centred and efficient end of life care with people being better able to be cared for at home or closer to home with a planned approach to end of life care resulting in less time in a hospital setting.

Over time, an increase in the proportion of time spent at home / in a community setting at the end of life may indicate an improvement in the quality and efficiency of palliative care. This increase would be expected in the medium to long term as a result of an increase in the use of anticipatory care plans and electronic palliative care summaries.

This measure is based on SMR01 and SMR04 returns covering non-obstetric hospitals in Scotland. Information on SMR data completeness can be found on the [ISD Data Monitoring Service webpage](#).

A3 – Methodology

This publication includes data from financial years 2010/11 to 2014/15 at Scotland, Health Board and Health and Social Care Partnership level.

This year we have revised the methodology on how the measure: *'percentage of the last six months of life spent at home or in a community setting'* is calculated compared to previous years' publications. Therefore results presented in this publication will not be comparable to previous published figures. However trend data from 2010/11 to 2014/15 is available using the revised methodology in this publication.

Calculation of Measure

Using date of death, Scottish residents who died between 2010/11 and 2014/15 are identified using data sourced from NRS death records and the possible number of bed days that could have been spent in hospital in a six-month period is calculated by multiplying the total number of deaths by 182.5. Patients who died where an external cause of death (e.g. unintentional injuries) is recorded on the death record have been excluded from the analysis; however patients who died where a fall is recorded are included.

The deaths data are linked to hospital discharge data (SMR01 and SMR04) and the actual number of bed days spent in hospital in Scotland in the six months prior to the death of each patient is calculated and added together for all patients. This includes bed days from all acute and community hospitals, psychiatric hospitals or geriatric long stay facilities.

The percentage of time spent in hospital in the last six months of life is therefore arrived at by dividing the actual number of bed days by the possible number of bed days and this is subtracted from 100% to obtain the percentage of time spent at home or in a community setting.

For each financial year from 2010/11 to 2014/15 this report presents the percentage of the last six months of life which was spent at home or in a community setting for patients who died within each financial year. A summary of how the measure is calculated can be found below.

<u>Calculation of Measure</u>	
Actual bed days	= Total bed days in hospital in the 6 months prior to death for those people who died within specific year
Possible bed days	= Total number of deaths in specified period x 182.5
% of time in a hospital in last 6 months of life	= (Actual bed days/ possible bed days) x 100
% of time at home or in a community setting in last 6 months of life	= 100 – % time in hospital in last 6 months before death

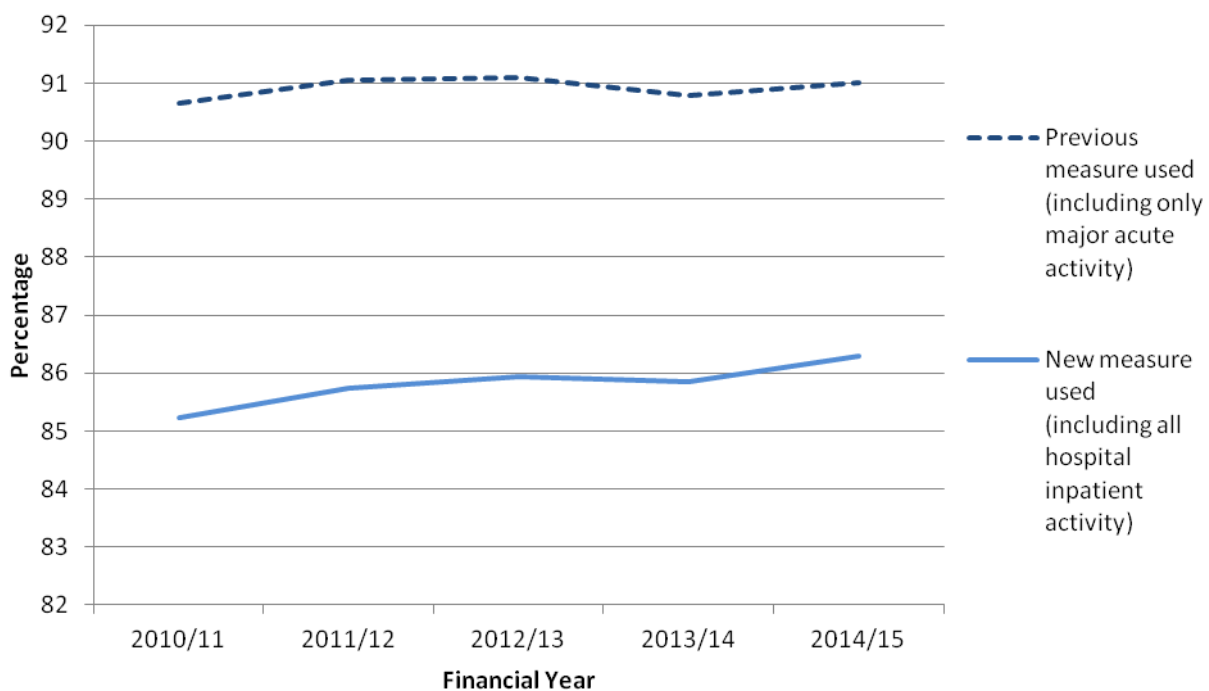
Comparison to previous measure

In previous years the total number of bed days was calculated using only SMR01 records from major acute hospitals. This year we have calculated the total number of bed days using all inpatient records from acute and community hospitals (SMR01), psychiatric hospitals (SMR04) and geriatric long stay facilities (SMR01 GLS). This means that the measure used in this year's publication counts **more** time spent in hospital and therefore will count **less** time spent at home.

Figure A3.1 below gives a comparison of these two measures over the five financial years. The percentage of time spent at home or in a community setting was around 91% using the previous methodology and around 86% using the new methodology. This is because more activity or bed days have been counted under the new measure as 'time spent in hospital'. The trend over the five financial years is very similar for both measures, both showing a broadly consistent pattern over this period.

Revising the methodology to include all hospital inpatient activity rather than only major acute activity is intended to give a more accurate estimate of the *percentage of time spent at home or in a community setting*.

Figure A3.1: Percentage of end of life spent at home or in a community setting by financial year; comparison to previous measure.



1. Please note that the y-axis does not start at zero.

The measure is under development and the definitions are subject to change in light of stakeholder feedback. This may result in future revisions to the published data in accordance with ISD's revisions policy.

A4 – Publication Metadata (including revisions details)

Metadata Indicator	Description
Publication title	Percentage of end of life spent at home or in a community setting
Description	Percentage of time in the last six months of life that is spent outside of a hospital setting. Figures are presented at health board and health and social care partnership levels with further demographic breaks on Gender, Age, Deprivation and Rurality.
Theme	Health and Social Care
Topic	Health and Social Care
Format	PDF publication report Excel tables
Data source(s)	SMR01 / SMR01 GLS / SMR04 / NRS deaths
Date that data are acquired	July 2016
Release date	30 August 2016
Frequency	Annual
Timeframe of data and timeliness	Financial years ending 31 st March 2010 - 2015
Continuity of data	Reports include annual data up to 2014/15
Revisions statement	This measure is at an early stage of development and is subject to review in future as feedback is received. Revisions to the published data may be necessary.
Revisions relevant to this publication	See changes in methodology described in Appendix 3 - Methodology .
Concepts and definitions	Policy concepts; http://www.gov.scot/Topics/Health/Policy/Quality-Strategy/Quality-Measurement-Framework Methodology; Appendix 2 – Background Information Appendix 3 - Methodology
Relevance and key uses of the statistics	Making information publicly available; Allowing assessment of implementation/impact of policies or targets
Accuracy	SMR01 and SMR04 standard validation processes; Wide stakeholder consultation on technical methodology
Completeness	SMR01 considered more than 99% complete for 2014/15.

	<p>SMR04 considered 98% complete for 2014/15; there are particular completeness issues in Borders and Highland.</p> <p>SMR01 GLS considered 93% complete for 2014/15; there are particular completeness issues in Lanarkshire and Lothian.</p> <p>http://www.isdscotland.org/Products-and-Services/Data-Support-and-Monitoring/SMR-Completeness/</p>
Comparability	<p>Due to a change in methodology (which is described in Appendix 3) results presented in this publication will not be comparable to previous published figures.</p> <p>Trend information from 2010/11 to 2014/15 is available in this publication.</p>
Accessibility	<p>It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines.</p>
Coherence and clarity	N/A
Value type and unit of measurement	Proportion expressed as a percentage.
Disclosure	<p>The ISD protocol on Statistical Disclosure Protocol is followed.</p>
Official Statistics designation	Official Statistics
UK Statistics Authority Assessment	Not currently put forward for assessment
Last published	25/08/2015
Next published	30/05/2017
Date of first publication	30/08/2011
Help email	r.bainbridge@nhs.net , andrew.lee6@nhs.net
Date form completed	19/08/2016

A5 – 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.

Standard Pre-Release Access:

Scottish Government Health Department

NHS Board Chief Executives

NHS Board Communication leads

A6 – 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](#).