Publication Report

The Scottish Suicide Information Database Report 2014: July 2014 revision

Based on 2009-2012 death registrations

Publication date – 29 July 2014

The 29 July 2014 revision includes information on previous psychiatric hospital discharges (section 2.2) which was unavailable when the report was originally published on 29 April 2014.

Post publication, in October 2014, it was discovered that Table 26 erroneously included the numbers of deaths from probable suicide of non-Scottish residents, instead of being limited to just Scottish residents. This was corrected in this version, along with the linked Tables 27-32 in sections 2.6 (Mental health drug prescribing in the community) and 2.7 (Accident and Emergency attendances). Appendix 4 and the Key Points section were also corrected. This does not affect the overall interpretation or conclusions to be drawn from the data.

An Official Statistics Publication for Scotland

Acknowledgements

The Scottish Suicide Information Database (ScotSID) was initiated by Dr Laurence Gruer OBE, former Director of Public Health Science, NHS Health Scotland. He chaired the ScotSID Steering Group until May 2012, when Stephen Platt, Professor Emeritus of Health Policy Research at the University of Edinburgh, took over that role. The ISD ScotSID project team is funded by Scottish Government's Mental Health and Protection of Rights Division.

The database is held in ISD. The compilation and management of the database is currently undertaken by Dr Parveen Chishti and Angela Prentice. Data analysis and preparation of this report was mainly by Chris Black, Craig Collins, Scott Jackson and Dr Alison Burlison.

We would like to take this opportunity to thank the past and present members of the ScotSID Steering Group who have provided valuable support and advice. Present membership is indicated in Appendix 1.

We are also grateful to the Scottish Fatalities Investigation Unit, for their continued support and assistance in the scoping of potential data on the deceased from the Crown Office and Procurator Fiscal Service; and also to NHS Health Improvement Scotland for their continued assistance in identifying suicide review information for incorporation into ScotSID.

Contents

Key points 4
Introduction 6
Suicide in Scotland 6
Scottish suicide rates compared to other countries 6
The Scottish Suicide Information Database (ScotSID) 7
Data held in ScotSID 7
Definition of a probable suicide 9
Linkage process 10
Results 11
1 The Scottish Suicide Information Database (ScotSID) cohort 11
1.1 Socio-demographics 11
1.1.1 Geographical area 11
1.1.2 Age and gender 13
1.1.3 Marital status 14
1.1.4 Employment status and occupation 15
1.1.5 Socio-economic deprivation 17
1.1.6 Urban rural classification 18
1.2 Circumstances of death 19
1.2.1 Month and day of the week of death 19
1.2.2 Place where suicidal act and death occurred 19
1.2.3 Method of suicide 20
1.2.4 Post mortem examinations 22
2 Contact with health services 23
2.1 General acute hospital discharge episodes 24
2.2 Psychiatric hospital discharge episodes 28
2.3 Psychiatric outpatient appointments 32
2.4 Births in hospital 34
2.5 Contact with specialist drug treatment services 34
Notes on data for mental health drug prescribing, and A&E attendances: probable suicides 2010-12 36
2.6 Mental health drug prescribing in the community 36
2.7 Accident & Emergency attendances 38
2.8 Healthcare Improvement Scotland (HIS) data on suicide reviews 42
Commentary 43

References 45
Glossary 47
List of tables and figures 50
Contact 53
Further information 53
Rate this publication 53
Appendices 54
Appendix 1 ScotSID Steering Group membership, February 2014 54
Appendix 2 Policy context 55
Appendix 3 ScotSID cohort and suicide coding rules 56
Appendix 4 ScotSID comparisons of cause of death codes for suicide 58
Appendix 5 ScotSID data items 62
Appendix 6 Prescribing Information System 66
Appendix 7 Record linkage, data confidentiality and information governance 67
Appendix 8 Future ScotSID developments 69
Appendix 9 Publication metadata (including revisions details) 71
Appendix 10 Early Access details (including Pre-Release Access) 74
Appendix 11 ISD and Official Statistics 75

Key points

As previously published by the National Records of Scotland (NRS), there were 3,059 deaths from 'probable suicide' (intentional self-harm and undetermined intent) registered in Scotland between January 2009 and December 2012. Further details of these individuals, including prior contact with a range of health services, are included in the Scottish Suicide Information Database (ScotSID) and reported here.

Who they were

- Almost half the probable suicide deaths were of people aged 35-54 years.
- There were a greater proportion of single or divorced individuals compared to the general population of Scotland.
- Almost three-quarters of probable suicide deaths were male.
- Over a quarter of females who died were mothers who had given birth to one or more children who would be under the age of 16 at the time of their mother's suicide.
- Among people of employment age, around two-thirds were in employment, with a wide range of occupations recorded.

Where they lived

- There was a strong deprivation effect, with the suicide rate more than three times higher in the most deprived fifth of the population than in the least deprived fifth (25 compared with 8 per 100,000 population respectively).
- Across urban rural categories, the suicide rate ranged from 11 per 100,000 population in accessible rural areas to 20 per 100,000 in very remote small towns.
- The rates in most NHS board areas did not differ significantly from the Scottish average, but Forth Valley appeared to have a relatively low rate.

What happened

- Almost three-quarters of suicidal acts occurred in a private dwelling.
- For males, the most common method used was 'hanging, strangulation and suffocation'. For females, the most common was 'poisoning'; this includes drug overdose.

Previous contact with health services

- Over half (59%) of the Scottish residents in ScotSID had at least one mental health drug prescription dispensed in the community within the 12 months before death. This suggests that they were receiving care for a mental health problem or illness from a healthcare professional such as their GP or staff at an outpatient clinic.
- At least 20% had been offered a psychiatric outpatient appointment during the 12 months before death; records show that 16% attended their appointment and 4% did not attend.
- Around 13% had been a psychiatric inpatient/day case discharged within 12 months prior to death. Most of these (87%) had been admitted on a voluntary basis.
- Nearly one-third of all cases (32%) had been an inpatient/day case in a general hospital within the 12 months before death, and 14% of all cases had had a diagnosis of injury/

poisoning. Over half of these patients (9% of all ScotSID cases) were recorded as having intentionally self-harmed.

- A&E records showed that 17% attended A&E in the 30 days before death, and 26% attended within the three months before death. These figures exclude attendances which were likely to have resulted from the suicidal act.
- Among the ScotSID cohort, 6% were known to specialist drug treatment services and at least 3% reported that they had injected drugs at some point in their lives.

Future work

- Analysis of ScotSID will be developed further to examine healthcare pathways and contact with more than one health service, and to identify further characteristics of individuals with particular risk of suicide. This information will assist health professionals and others to identify opportunities for intervention to reduce future loss of life through suicide.
- Future reports will also analyse contextual information from police sudden death reports from the Crown Office and Procurator Fiscal Service. This will enhance our understanding of the social factors and the wider circumstances surrounding suicides in Scotland.
- Supplementary analyses (Appendix 4) have raised urgent questions for UK statistical agencies about whether to continue to analyse ‘probable suicide’ (intentional self-harm deaths plus undetermined intent deaths) as a single group. More work is needed to see if it would be better to revert to the previous convention of analysing ‘definite suicide’, i.e. intentional self-harm, alone.

Notes:

‘Probable suicide’ deaths in this report are of people aged 5 years and over, and are coded as ‘intentional self-harm’ and ‘undetermined intent’. The latter category is based on old coding rules as defined by the National Records of Scotland (NRS).

The data on both psychiatric outpatient appointments and psychiatric inpatient/day case discharges are known to be incomplete, leading to a potential underestimate of the prior contact with these services.

Introduction

Since 2002, suicide and non-fatal self-harm have become increasingly recognised as important issues for public health policy and practice in Scotland. Appendix 2 provides further detail on the policy context.

This introduction briefly outlines some of the epidemiology of suicide in Scotland, including comparisons with other countries, then goes on to describe the Scottish Suicide Information Database (ScotSID).

Suicide in Scotland

The Scottish Public Health Observatory (ScotPHO) website suicide topic [Ref.1] provides comprehensive data on suicide trends in Scotland by age, gender, geographical area and deprivation level, as well as UK and international comparisons. Most comparisons are based on European age-sex-standardised rates (EASRs) per 100,000 population. Chart 1 on the ScotPHO suicide webpage for Scottish trends [Ref.2] shows that in the trend in EASRs for persons between 1982 and 2012, there was a peak in 1993 and again in 2002, after which there has been a general tendency to decline. A broadly similar pattern was observed for males. For females, rates have tended to decrease slightly overall between 1982 and 2012.

The NHS HEAT (Health improvement, Efficiency, Access to services and Treatment) target for Scotland is to reduce the suicide rate between 2002 and 2013 by 20%. ScotPHO analyses using three-year rolling averages show that between 2000-02 and 2010-12 there was an 18% fall in suicide EASRs overall (20% for males and 10% for females). (These figures are based on the old coding rules (see Appendix 3), the European Standard Population 1976 and un-rebased population estimates (see Glossary)).

Scottish suicide rates compared to other countries

Rates of probable suicides (intentional self-harm and events of undetermined intent combined) appear to be higher in Scotland than in England and Wales, but the rates for England and Wales may be under-estimated due to differences in recording procedures. For further details, please see the ScotPHO suicide webpage for UK comparisons [Ref.3].

Potential differences in recording procedures between countries should also be borne in mind when looking at international comparisons. Mortality rates from suicide (defined as intentional self-harm only) are published annually by the Organisation for Economic Co-operation and Development (OECD), and the latest (2013) Health at a Glance report [Ref.4] shows that the UK rate was lower than the OECD average in 2011. The Scotland and European Health for All Database 2012 [Ref.5] shows that between 1980 and 2010 the Scottish suicide rate (intentional self-harm only) has generally been lower than or around the European Union average.

The Scottish Suicide Information Database (ScotSID)

During the 2008 'Choose Life' summit, NHS Health Scotland made a commitment to lead work to establish a Scottish Suicide Information Database (ScotSID) to improve the quality of information available on suicides in Scotland. A steering group was set up and the Information Services Division (ISD) was commissioned to develop, analyse and maintain the database.

The overall aim of ScotSID is to provide a central repository for information on all probable suicide deaths in Scotland, in order to support epidemiology, policy-making and preventive activity. The database covers demographic information, contact with health services and related health data, and will eventually (through inclusion of information from other data sources) provide further details relating to the suicide event and an individual's wider social circumstances.

This is the third report on the Scottish Suicide Information Database. It presents data on deaths due to probable suicides *registered* with the National Records of Scotland (NRS) during the four-year period 2009 to 2012. Note that this is in line with the reporting convention adopted by NRS, but is different from the last (December 2012) ScotSID report which was based on probable suicide deaths *occurring* in 2009 and 2010.

Another change is that the 2014 report reflects the recent addition of data from Healthcare Improvement Scotland relating to adverse event reviews. If an individual has been in contact with NHS mental health services in the year prior to their suicide, the NHS board is obliged to carry out a suicide review looking into the circumstances leading up to the suicide. The suicide review should always be submitted to HIS and in certain cases the Mental Welfare Commission for Scotland should be notified.

Data held in ScotSID

At the time of this report being compiled, ScotSID contained the finalised NRS death records of all probable suicides registered in Scotland from 1 January 2009 to 31 December 2012. It also included linked records from the following data sources held by ISD:

- General acute hospital inpatient and daycase records (SMR01) (from January 1981)
- Psychiatric hospital inpatient and daycase records (SMR04) (from January 1981)
- Outpatient appointments (SMR00) (from January 2008)
- Maternity hospital records (SMR02) (from April 1993)
- Scottish Drug Misuse Database (SMR25) (from April 2005)
- Accident and Emergency (A&E) attendances (from September 2009)
- Prescriptions dispensed in the community (Prescribing Information System, PIS) (from January 2009).

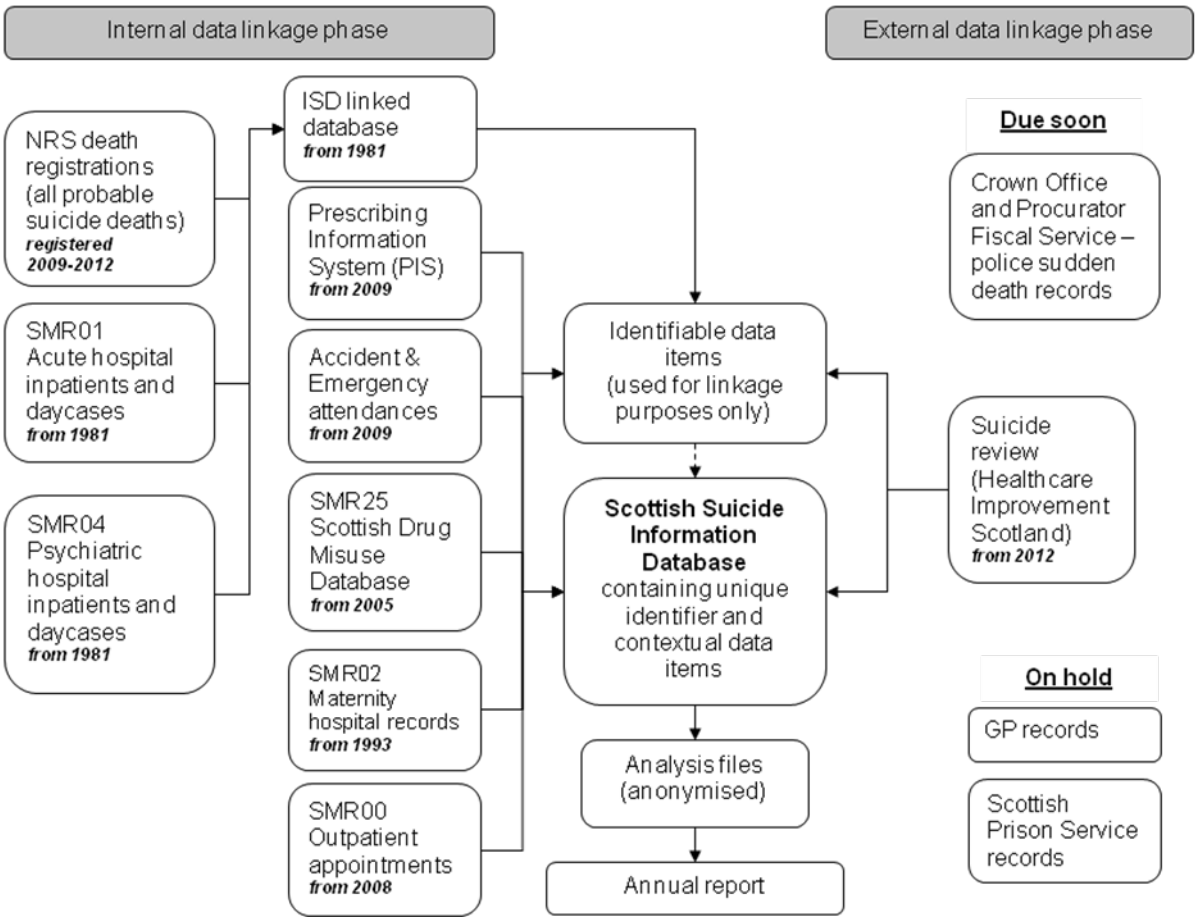
In addition, the deaths records for probable suicides were linked to records held by Healthcare Improvement Scotland (HIS) for:

- Suicide reviews (from January 2012).

A list of the current ScotSID data items can be found in Appendix 5. More information on the ISD data sets can be found on the ISD website.

In addition to the data sources listed above, it is intended that over time, relevant information from other data sources will be linked in to ScotSID to provide a greater depth of information on individuals' circumstances, the nature of their deaths, and their contact with services. One such key data source is the Crown Office and Procurator Fiscal Service, and we are pleased to report that work is starting to assess then integrate these data, with some results expected in the next ScotSID report (likely to be published in spring 2015). Figure 1 shows the range of data sources included in ScotSID now and those planned for the future. Further details of planned ScotSID developments can be found in Appendix 8.

Figure 1: Data sources for the Scottish Suicide Information Database, at March 2014



Definition of a probable suicide

The National Records of Scotland (NRS) define probable suicides as deaths resulting from:

- intentional self-harm (codes X60–X84, Y87.0 of the International Classification of Diseases, Tenth Revision (ICD10)); and
- events of undetermined intent (ICD10 codes Y10-Y34, Y87.2).

'Events of undetermined intent' are cases where it is not clear whether the death was the result of intentional self-harm, an accident or an assault. It is thought that most of these deaths are likely to be suicides and therefore NRS combine these with the 'intentional self-harm' deaths to produce their statistics. As some 'undetermined intent' deaths may not have been suicides, including these cases may over-estimate the 'true' (unknowable) number.

ScotSID uses the same definition of a probable suicide as NRS. NRS publications include probable suicides occurring to people of any age, but ScotSID excludes any such deaths under the age of 5 years on the basis that they are unlikely to be actual suicides. There were two such cases in the time period 2009-2012, and therefore the total number of suicides quoted in this publication (3,059) is two less than the number published by NRS (3,061). Further details are given in Appendix 3.

In 2011, NRS made a change to the way deaths are classified, in order to match changes in World Health Organization (WHO) coding rules. This has resulted in some deaths caused by drug misuse which would previously have been counted under 'mental and behavioural disorders due to psychoactive substance use' now being counted as 'self-poisoning of undetermined intent' and therefore being included in the increased total for probable suicides.

To ensure consistency across the four years of data in this publication, only those ‘undetermined intent’ deaths classified using the old coding criteria are included in the main tables and figures. Further details are given in Appendix 3. Appendix 4 uses the ScotSID cohort to compares suicide patterns a) between deaths coded to intentional self-harm and undetermined intent (old coding rules); and b) between deaths coded to undetermined intent using old and new coding rules.

More information on the definition of a probable suicide can be found on the NRS website.

Linkage process

NRS reports annually on all deaths in Scotland due to intentional self-harm or undetermined intent, and routinely sends information relating to these deaths to ISD. Ensuring the security and confidentiality of the data, the records are then electronically linked to other databases held by ISD. More information on the record linkage methods used, data confidentiality and information governance, can be found in Appendix 7.

Results

1 The Scottish Suicide Information Database (ScotSID) cohort

This publication focuses on the 3,059 'probable suicide' deaths registered in Scotland during the four-year period 2009-12. This is the main 'ScotSID cohort' discussed in these results. Of the total 3,059 deaths, 2,233 were classified by NRS as deaths due to intentional self-harm, while 826 were classified as deaths due to events of undetermined intent (old coding). (Appendix 4 breaks down some of the results for these two groups, and also the new coding group.)

All results presented are for the aggregate four-year period, except where stated. Corresponding time trends were produced, but we have only included the results where there appears to be a noteworthy trend. Formal statistical tests for trend were not performed. Percentages are presented to one decimal place in the tables, but rounded to whole numbers in the text.

The main ScotSID cohort (3,059 deaths) included 46 individuals whose country of residence was outwith Scotland/unknown. As the NRS publish information on all deaths that occur in Scotland, including non-residents, the ScotSID analyses relating to socio-demographics in Section 1.1 below also include non-residents.

1.1 Socio-demographics

1.1.1 Geographical area

Table 1 shows the numbers and rates of probable suicides for Scotland and by NHS board area (based on the new NHS board boundaries as at 1 April 2014). Of the total 3,059 deaths, 3,013 (98%) were of Scottish residents. For these people, the NHS board reflects where the individual lived at the time of death. Forty-six individuals were either not resident in Scotland (44) or country of residence was not known (2). Of the non-residents of Scotland, over half of them (23) were from England. For all 46 cases, the NHS board reflects where the individual died. These deaths occurred throughout the mainland NHS board areas.

An annual crude rate is presented for Scotland (15 per 100,000 population) and for each NHS board area; this shows the number of deaths for ages 5 and over relative to the size of the population aged 5 and over. The crude rate indicates whether a board area has a comparatively high or low overall rate of deaths in the four-year period, but takes no account of differences among boards in their population's age and gender composition.

European age-sex-standardised rates (EASRs) permit more meaningful comparisons between board areas and are also shown, along with the 95% confidence interval in brackets (see Glossary). The EASRs were broadly similar to the crude rates for suicide and ranged from 11 per 100,000 population in Western Isles NHS Board area and 12 in Forth Valley, to 18 in Highland and 26 in Shetland (although most of these rates were not significantly different from each other in statistical terms when assessed by their 95% confidence limits). Rates in the smaller boards are subject to a greater degree of year-on-

year fluctuation than larger population areas, and the wider confidence intervals indicate that caution should be taken when interpreting these data.

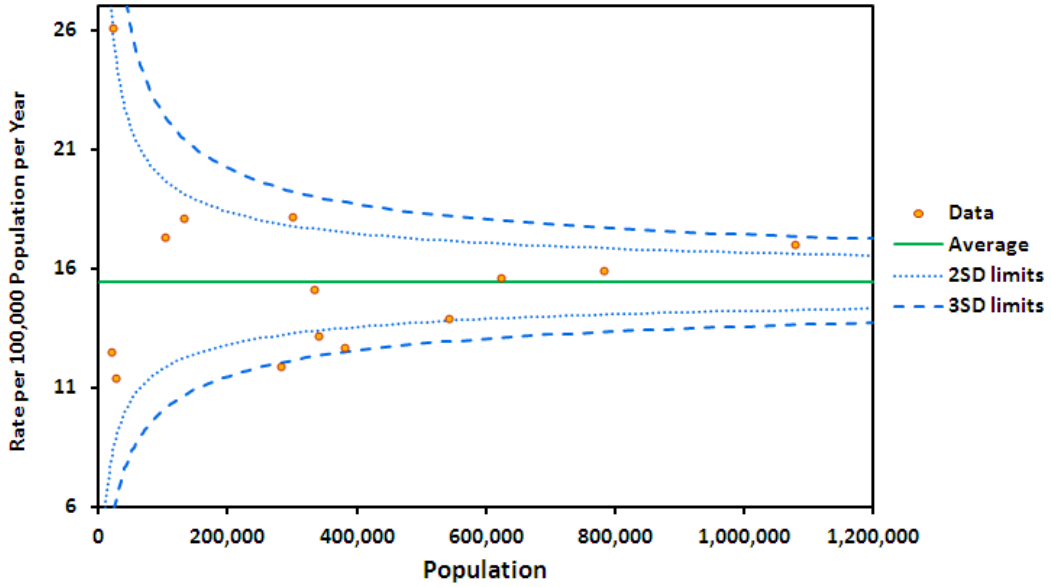
Table 1: Deaths caused by probable suicide[1] – Numbers, rates (crude[2] and EASRs[3]) by NHS board area[4,5] in Scotland, persons aged 5 years and over, 2009-12

NHS board[4,5]	4-year number of probable suicides[1]	Annual crude rate per 100,000 population[2]	EASR
Scotland	**3,059**	**15.3**	15.4 (14.6-16.1)
Ayrshire & Arran	180	12.7	13.2 (10.6-15.8)
Borders	71	16.4	17.3 (11.8-22.8)
Dumfries & Galloway	95	16.5	18.1 (13-23.1)
Fife	201	14.6	15.1 (12.3-17.9)
Forth Valley	134	12.0	11.9 (9.1-14.7)
Grampian	301	14.1	13.9 (11.8-16.1)
Greater Glasgow & Clyde	734	17.2	17.0 (15.3-18.7)
Highland	218	18.0	18.2 (14.8-21.5)
Lanarkshire	389	15.9	15.6 (13.4-17.7)
Lothian	498	15.9	15.9 (14-17.9)
Orkney	10	12.4	12.5 (1.7-23.4)
Shetland	23	26.5	26.1 (11.9-40.3)
Tayside	193	12.5	12.7 (10.2-15.2)
Western Isles	12	11.4	11.4 (2.4-20.5)

Source: NRS
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.
[2] The denominators for rates are NRS mid-year population estimates for 2009-12 for ages 5+ years, rebased following the 2011 Census.
[3] EASRs are European age-sex standardised rates. The data in this table are directly standardised to the European Standard Population (ESP) 2013. (Note that the last ScotSID report standardised to the ESP 1976). For further details on standardising: see ScotPHO Methodology.
[4] These are the NHS boards based on the new boundaries as at 1 April 2014.
[5] For Scottish residents, this is the NHS board of residence at the time of death. For individuals resident outwith Scotland or where the country of residence is unknown, the NHS board reflects where the individual died (46 cases).

Figure 2 illustrates in a funnel plot the variation in EASRs for persons across the NHS boards, ordered by population size. Each data point represents a board, and the average rate for all boards is also shown. Expected variation around the average is illustrated by limits for both 2 SDs (equivalent to approximately 95% confidence intervals) and 3 SDs (equivalent to approximately 99.8% confidence intervals). Only Forth Valley NHS Board falls outwith (below) the 3 SD limit, indicating a significantly lower suicide rate than expected compared with the Scotland mean. All other NHS boards appear within the 3 SD limits, suggesting an expected level of variation at this confidence level, although some boards lie outwith the 2SD (95% confidence interval) limit.

Figure 2: Deaths caused by probable suicide[1] – EASRs[2,3] for persons aged 5 years and over, by NHS board area[4,5] in Scotland, 2009-12

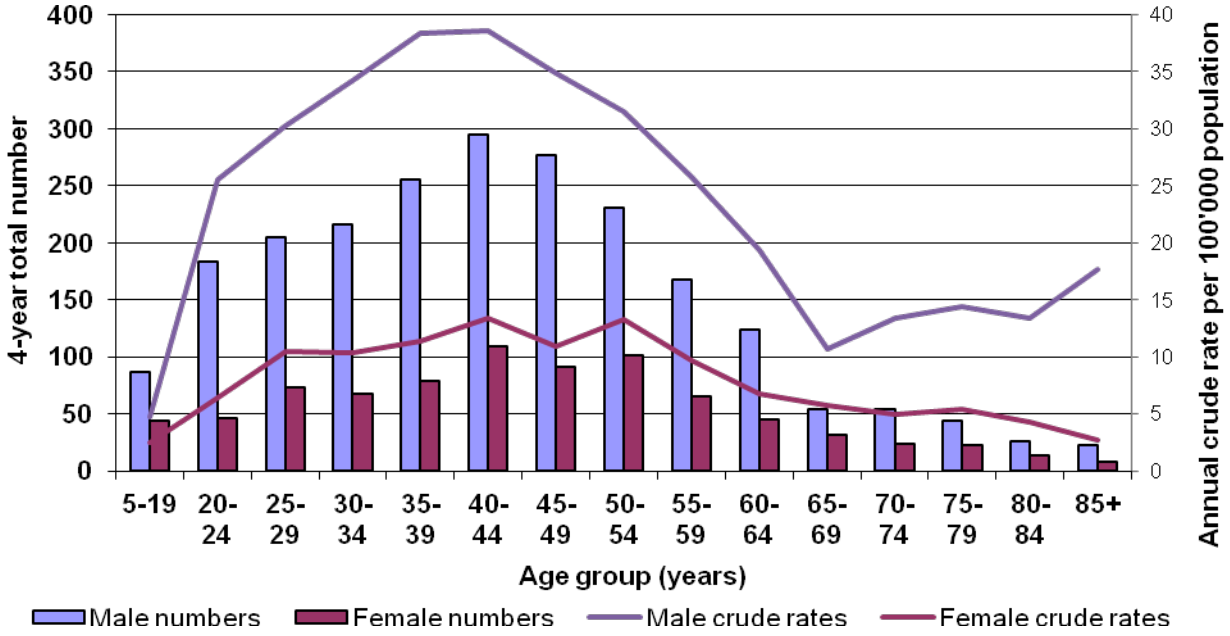


Source: NRS
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.
[2] The denominators for rates are NRS mid-year population estimates for 2009-12 for ages 5+ years, rebased following the 2011 Census.
[3] EASRs are European age-sex standardised rates. The data in this figure are directly standardised to the European Standard Population (ESP) 2013.
[4] These are the NHS boards based on the new boundaries as at 1 April 2014.
[5] For Scottish residents, this is the NHS board of residence at the time of death. For individuals resident outwith Scotland or where the country of residence is unknown, the NHS board reflects where the individual died (46 cases).

1.1.2 Age and gender

The age and gender breakdown of the ScotSID cohort is shown in Figure 3. Almost three-quarters of the total cohort were males (2,240, 73%) and there were 819 females. The median age at death for men was 43 years and for women, 44 years. The highest number of deaths occurred in the 40-44 year age group (295 males and 109 females), followed by the 45-49 year age group for males (277 deaths) and the 50-54 year age group for females (101 deaths). Almost half of all deaths (1,437, 47%) were among people aged 35-54 years.

Figure 3: Deaths caused by probable suicide[1] – four-year total numbers and annual age-specific crude rates, by age group and gender, Scotland, 2009-12



Source: NRS
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

1.1.3 Marital status

Marital status was known for 3,035 of the 3,044 ScotSID cases aged 16 and over. Around 71% of cases were reported as single, widowed or divorced at the time of their death. The remaining 29% were reported as married or in a civil partnership (Table 2).

Figures from Scotland's Census 2011 [Ref.6] on the marital status of all adults aged 16 years or over are included in the table for comparison purposes. Around half the cases in ScotSID were reported as 'single', compared with 35% in the general population. The percentage for 'divorced/civil partnership dissolved' was also higher in ScotSID (15% compared with 8%). Conversely, ScotSID had 29% in the 'married/civil partnership' category compared with 49% in the general population.

Table 2: Deaths caused by probable suicide[1], by marital status – persons aged 16 and over, Scotland, 2009-12

Marital Status	Number	%	2011 Census[2] %
Single	1530	50.4	35.4
Married/Civil Partnership	881	29.0	48.6
Widowed/Surviving Civil Partner	183	6.0	7.7
Divorced/Civil Partnership Dissolved	441	14.5	8.2
Total	**3,035**	**100.0**	**100.0**
Not recorded	9	-	-

Source: NRS
[1] ScotSID cohort is based on old WHO coding rules to ensure consistency across 2009-12.
[2] Scotland's Census 2011 (www.scotlandscensus.gov.uk), Table KS103SC.

1.1.4 Employment status and occupation

Of the 3,059 cases, 2,744 (90%) were of working age (16-64 years). Employment status was known in 2,741 cases (Table 3) and one-third of these were either students, unemployed, unable to work due to a long-term condition, or of independent means. The remaining two-thirds were in employment at the time of their death, and over half (55%) of those with known employment status were classed as 'employees, apprentices, armed forces - other ranks'.

Table 3: Deaths caused by probable suicide[1] by employment status[2] – 16-64 year olds, Scotland, 2009-12

Employment Status[2]	Number	%
Employees, apprentices, armed forces - other ranks	1496	54.6
Self-employed, without employees	136	5.0
Managers, superintendants, armed forces - officers	105	3.8
Self-employed, with employees	46	1.7
Foremen	34	1.2
Students, independent means, no occupation, long term illness	924	33.7
Total	**2,741**	**100.0**
Not recorded	3	-

Source: NRS
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Employment status codes derived from NRS socio-economic code list: http://www.gro-scotland.gov.uk/statistics/theme/vital-events/general-bckgr-info/code-lists.html.

The last known occupation was available for 2,121 (77%) of the individuals of employment age. Due to the vast range of different occupations of the ScotSID cohort, the occupations have been grouped using the Standard Occupational Classification 2000 (SOC 2000) [Ref.7]. Occupations are combined into 353 'unit' occupational groups, e.g. 'painters and decorators', forming the base tier of the classification, and these are combined further to form nine 'major' occupational groups, e.g. 'skilled trades occupations', which form the top tier of the classification.

Table 4 shows the numbers of probable suicides by 'major' occupational group. Suicides were most common in the 'skilled trades occupations' (517 cases, 24%) and 'elementary

occupations' group (368 cases, 17%). 'Students' are not included in the SOC 2000 classification major occupational groups but have been added to the table for comparison.

Table 4: Deaths caused by probable suicide[1], by occupational group[2,3] – 16-64 year olds, Scotland, 2009-12

'Major' Occupational Group[2]	Number	%
Skilled Trades Occupations	517	24.4
Elementary Occupations[4]	368	17.4
Process, Plant and Machine Operatives	302	14.2
Associate Professional and Technical Occupations	189	8.9
Professional Occupations	154	7.3
Caring, Leisure and Other Service Occupations	147	6.9
Managers and Senior Officials	137	6.5
Sales and Customer Service Occupations	119	5.6
Students[5]	98	4.6
Administrative and Secretarial Occupations	90	4.2
Total	**2,121**	**100.0**
Not recorded	3	-
Not Employed	620	-

Source: NRS

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] 'Major' occupation groups as defined in the Standard Occupational Classification 2000.

[3] Note that some individuals may be unemployed at the time of death but identified as having an occupation (last known occupation).

[4] Elementary occupations consist of simple and routine tasks which mainly require the use of hand-held tools and often some physical effort.

[5] 'Students' are not included in the SOC 2000 classification but have been added to the table.

Table 5 provides a list of the most frequently occurring 'unit' occupational groups for deaths registered in the period 2009-11 (2012 is excluded due to a coding update). The most common unit group was 'labourers in building and woodworking trades' (86 cases). 'Students' are not included in the SOC 2000 classification unit occupational groups, but have been added to Table 5 for comparison, and there were 73 cases.

Table 5: Deaths caused by probable suicide[1], by most common occupations[2,3] – 16-64 year olds, Scotland, 2009-11[4]

'Unit' Occupational Group[2]	Number
Labourers in building and woodworking trades	86
Students[3]	73
Sales and retail assistants	47
Care assistants and home carers	44
Carpenters and joiners	38
Cleaners, domestics	38
Electricians, electrical fitters	36
Painters and decorators	34
Chefs, cooks	34

Source: NRS
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12
[2] 'Unit' occupation groups as defined in the Standard Occupational Classification 2000.
[3] 'Students' are not included in the SOC 2000 classification but have been added to the table
[4] Note that SOC 2000 occupation codes were applied to the 2009-11 deaths data, and SOC 2010 codes to the 2012 data. They are not comparable due to differences in codes for some 'unit' occupations, and therefore 2012 data are excluded from this table.

1.1.5 Socio-economic deprivation

Table 6 shows numbers and age-sex standardised rates for probable suicides by deprivation quintile, based on the Scottish Index of Multiple Deprivation (SIMD) published in 2012 [Ref.8]. The rate of probable suicides in the most deprived quintile was more than three times higher than in the least deprived quintile. A similar pattern has been observed in the ScotPHO suicide webpage on deprivation [Ref.9].

Table 6: Deaths caused by probable suicide[1] – Numbers and EASRs[2], Scotland by SIMD 2012 quintile[3], persons aged 5 years and over, 2009-12

SIMD quintile	Number	EASR per 100,000 population (95% confidence limits)[2]
1 – most deprived	971	24.6 (22.6-26.9)
2	688	17.3 (15.6-19.2)
3	614	15.3 (13.7-17.1)
4	441	11.1 (9.7-12.6)
5 – least deprived	299	7.7 (6.5-9.0)
Unknown	46	-
Scotland[4]	**3,059**	15.4 (14.6-16.1)

Source: NRS
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.
[2] EASRs are European age-sex standardised rates. The rates in this table are directly standardised to the European Standard Population (ESP) 2013. Note that the population denominators for SIMD quintiles are NRS mid-year population estimates for ages 5+ years, rebased following the 2011 Census for the years 2011 and 2012, but still based on the 2001 Census for the years 2009 and 2010. This is because SIMD quintiles are aggregates of data zones, and rebased data zone

populations for 2009 and 2010 were not available at the time of the analysis. For further details on standardising: see ScotPHO Methodology.
[3] Scottish Index of Multiple Deprivation (SIMD) release published in 2012. Individuals were allocated to a SIMD quintile (fifth of the Scottish population) based on their postcode of residence at the time of death.
[4] The Scotland EASR and its confidence limits are calculated for all deaths, including the 46 with unknown SIMD quintile, and use entirely rebased Scottish population estimates.

1.1.6 Urban rural classification

The Scottish Government (SG) urban rural classification [Ref.10] provides a standard definition of urban and rural areas in Scotland, based on settlement size and drive times. Table 7 shows the number of probable suicides by urban rural category.

The rates ranged from 11 per 100,000 population in accessible rural areas to 20 per 100,000 in very remote small towns (although these rates were not significantly different in statistical terms when assessed by their confidence limits). The tendency towards lower rates in accessible rural areas, and higher rates in very remote/remote small towns as well as large urban areas, has been noted in previous work by Stark *et al* [Ref.11].

Table 7: Deaths caused by probable suicide[1] – Numbers and EASRs[2], Scotland by eight-fold 2011-12 urban rural classification[3], persons aged 5 years and over, 2009-12

Urban Rural Classification[3]	Number	EASR per 100,000 population (95% confidence limits)[2]
1 - Large urban areas	1,255	16.1 (14.8-17.3)
2 - Other urban areas	922	15.5 (14.2-17)
3 - Accessible small towns	252	15.3 (12.8-18.1)
4 - Remote small towns	77	18 (13.2-24.2)
5 - Very remote small towns	50	20.1 (13.2-29.4)
6 - Accessible rural	270	11.4 (9.6-13.4)
7 - Remote rural	96	14.3 (10.6-18.9)
8 - Very remote rural	91	15.2 (11.2-20.3)
Not resident in Scotland/ country of residence unknown	46	-
Scotland[4]	**3,059**	15.4 (14.6-16.1)

Source: NRS
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.
[2] EASRs are European age-sex standardised rates. The rates in this table are directly standardised to the European Standard Population (ESP) 2013. Note that the population denominators for urban rural classifications are NRS mid-year population estimates for ages 5+ years, rebased following the 2011 Census for the years 2011 and 2012, but still based on the 2001 Census for the years 2009 and 2010. This is because urban rural categories are aggregates of data zones, and rebased data zone populations for 2009 and 2010 were not available at the time of the analysis. For further details on standardising: see ScotPHO Methodology.

[3] Scottish Government urban rural classification identifies urban and rural areas based on settlement size and drive times. Individuals were allocated to an urban rural category by ISD, based on their postcode of residence at the time of death.

[4] The Scotland EASR and its confidence limits are calculated for all deaths, including the 46 individuals not resident in Scotland/unknown, and use entirely rebased Scottish population estimates.

1.2 Circumstances of death

1.2.1 Month and day of the week of death

In the last (December 2012) ScotSID report, for deaths registered in 2009-10, it was noted that no significant association was found between occurrence of suicide and either the day of the week or the month of the year. No further analyses have been undertaken for this report, but future ScotSID reports will explore whether excess risk of suicide is found on specific days of the year, and possibly dates of major events and the period around an individual's birthday.

1.2.2 Place where suicidal act and death occurred

NRS death registration records include information from the death certificate and from the person registering the death. The place where the suicidal act occurred was not known for 445 of the total 3,059 ScotSID records (15%). For those where location was known, the majority of events that caused death occurred in a private dwelling (72%) (Table 8). The second most frequent category was 'other specified place' (23%), which includes locations such as a beach, campsite, railway line, river, school and sports area, etc.

Table 8: Deaths caused by probable suicide[1] – place where suicidal act occurred, Scotland, 2009-12

Place of Occurrence[2]	Number	%
Private dwelling[3]	1,886	72.1
Street or highway	40	1.5
Trade and service area	40	1.5
Residential Unit	23	0.9
Industrial and construction area	22	0.8
Other specified place	603	23.1
Total	**2,614**	**100.0**
Not known (Unspecified place)	445	

Source: NRS

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Based on the ICD10 codes for the place of occurrence of the event which caused the death.

[3] Private dwelling refers to a person's home, or someone else's home, garage, garden, driveway, etc.

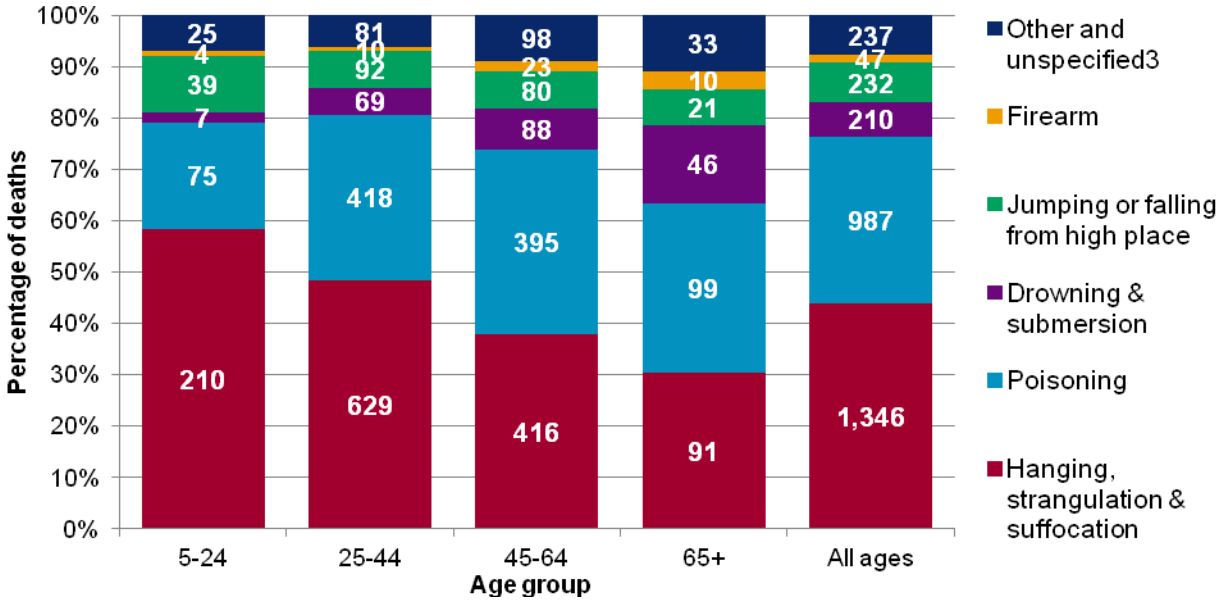
The death records also indicate that the place of death was in hospital for 449 individuals (15% of the total cohort). The location where the suicidal act occurred was unspecified in the majority of these cases, perhaps because it was not known by the hospital doctor who completed the death certificate; only very rarely will the act have been *initiated* in the hospital. The remaining 85% of cases are likely to have died at the same location as the suicidal act occurred.

It is anticipated that more comprehensive information regarding the place where a suicide was attempted, including locations recorded as 'other specified place' and 'unspecified place' in Table 8, will be available from police sudden death reports from the Crown Office and Procurator Fiscal Service. Details of a future pilot exercise to evaluate the quality and completeness of such reports can be found in Appendix 8. It is proposed that information from the reports will be added to the database and findings included in the 2015 ScotSID report.

1.2.3 Method of suicide

The most common method of suicide for all age groups except 65 years and over was 'hanging, strangulation & suffocation' (in total 1,346 cases, 44% of the cohort). This was followed by 'poisoning', a category which includes drug overdose (987 cases, 32% of the cohort). Figure 4 shows the breakdown by age group and method of suicide.

Figure 4: Deaths caused by probable suicide[1], by age and method of suicide[2], Scotland, 2009-12



NB Numbers in white show <u>numbers</u> of deaths for each method, not percentages.

Source: NRS

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

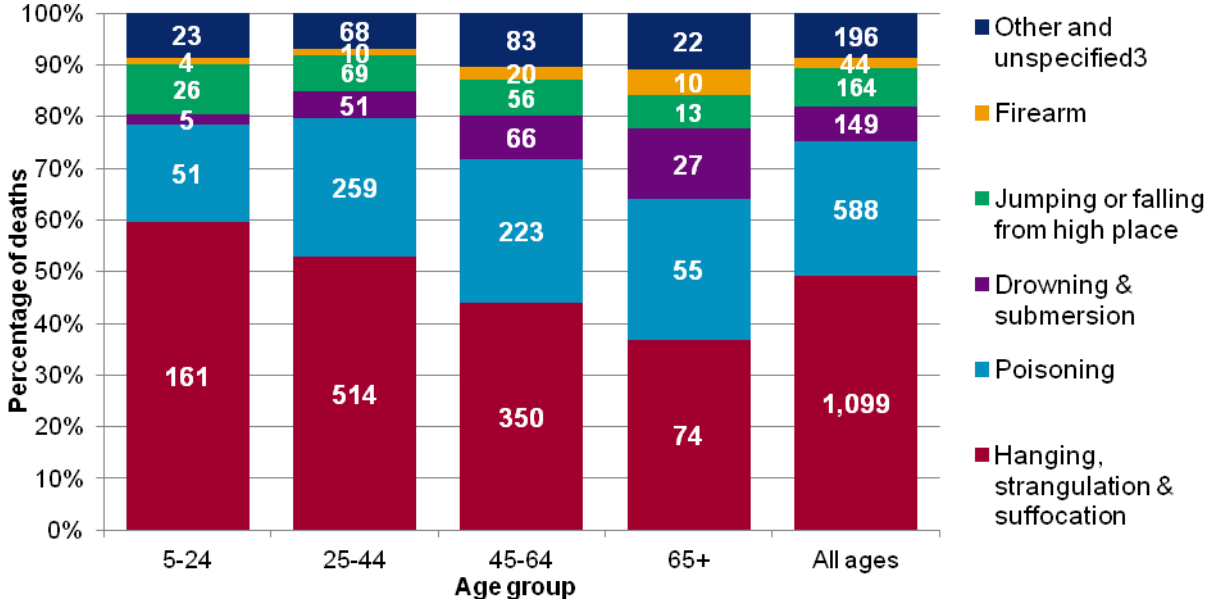
[2] The methods are defined by groupings of ICD10 codes for the underlying cause of death.

[3] Includes deaths caused by smoke and fire, sharp objects (e.g. knives), moving objects (e.g. trains) and unspecified events (e.g. the death certificate stated simply 'head injury', with no indication of its cause).

A gender-specific breakdown of the methods used (Figures 5 and 6) shows that 'hanging, strangulation & suffocation' was the most common method amongst males overall (1,099 cases, 49% of the male cohort) and 'poisoning' was the most common amongst females overall (399 cases, 49% of the female cohort). This concurs with previous findings by Platt *et al* in 2007 [Ref.12].

'Hanging, strangulation & suffocation' was also the most common method amongst males in each age group. 'Poisoning' was the most common method amongst females in each age group except under 25 years, where this was 'hanging, strangulation & suffocation'. Overall, the second most common method for males was 'poisoning' (588 cases, 26%) and for females 'hanging, strangulation & suffocation' (247 cases, 30%).

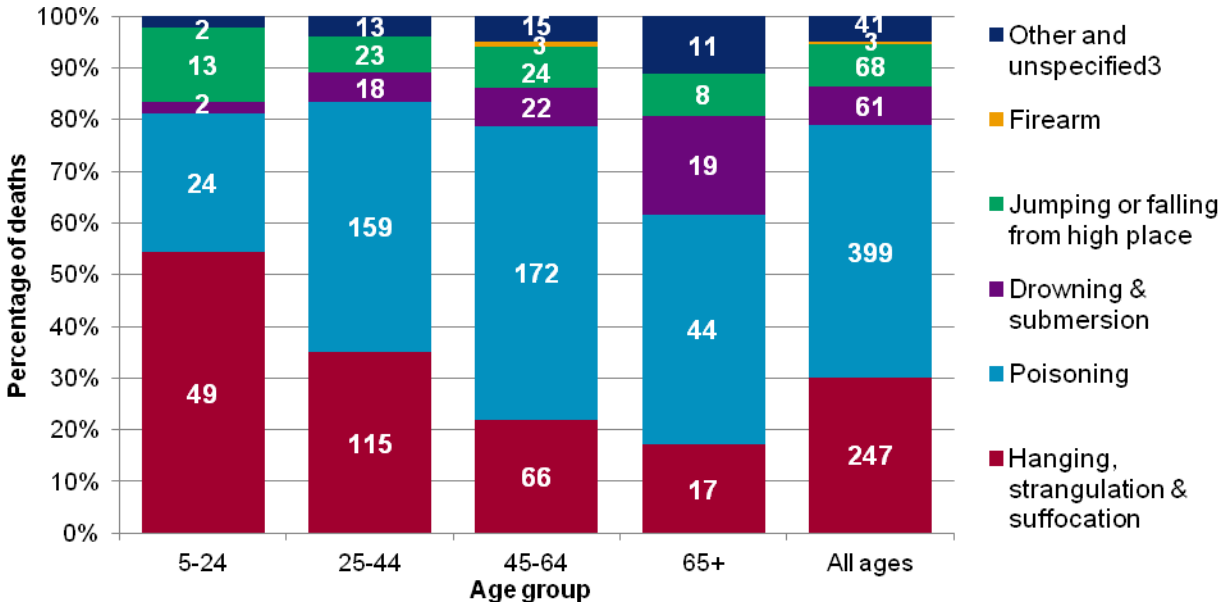
Figure 5: Deaths caused by probable suicide[1], by age and method of suicide[2] – Males, Scotland, 2009-12



NB Numbers in white show numbers of deaths for each method, not percentages.

Source: NRS
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.
[2] The methods are defined by groupings of ICD10 codes for the underlying cause of death.
[3] Includes deaths caused by smoke and fire, sharp objects (e.g. knives), moving objects (e.g. trains) and unspecified events (e.g. the death certificate stated simply 'head injury', with no indication of its cause).

Figure 6: Deaths caused by probable suicide[1], by age and method of suicide[2] – Females, Scotland, 2009-12



NB Numbers in white show numbers of deaths for each method, not percentages.

Source: NRS
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.
[2] The methods are defined by groupings of ICD10 codes for the underlying cause of death.
[3] Includes deaths caused by smoke and fire, sharp objects (e.g. knives), moving objects (e.g. trains) and unspecified events (e.g. the death certificate stated simply 'head injury', with no indication of its cause).

1.2.4 Post mortem examinations

In Scotland, sudden and unexpected deaths must be referred to the Procurator Fiscal for investigation to determine the cause of death. The Procurator Fiscal may require a post mortem examination to be carried out as part of this process. In addition, even if a post mortem is not formally required, this may be carried out as part of local procedures for deaths occurring in hospital.

In the ScotSID cohort, a post mortem examination was known to have been carried out on 2,727 cases (90% of the total with known post mortem status on the death record (Table 9). In 13 cases, it was not possible to determine whether a post mortem was undertaken. This situation may occur where a case was recorded as 'may be performed' but the outcome was not known when the NRS death records for the year were finalised.

Table 9: Deaths caused by probable suicide[1] – post mortem indicator status, Scotland, 2009-12

Post Mortem Indicator	Number	%
Has been performed	2,727	89.5
Not performed	319	10.5
Total	**3,046**	**100.0**
Not Known[2]	13	-

Source: NRS.
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.
[2] Recorded as 'may be performed' but outcome was not known when the NRS death records for the year were finalised.

Table 10 breaks down the 2,727 cases where a post mortem was performed into the numbers by year. The percentages declined from 93% in 2009 to 87% in 2012.

Table 10: Deaths caused by probable suicide[1] – post mortem indicator status by year of registration, Scotland, 2009-12

Post Mortem Indicator	2009		2010		2011		2012	
	Number	%	Number	%	Number	%	Number	%
Has been performed	692	93.3	696	89.5	675	88.0	664	87.5
Not performed	50	6.7	82	10.5	92	12.0	95	12.5
Total	**742**	**100.0**	**778**	**100.0**	**767**	**100.0**	**759**	**100.0**
Not Known[2]	4	-	2	-	4	-	3	-

Source: NRS.
[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.
[2] Recorded as 'may be performed' but outcome was not known when the NRS death records for the year were finalised.

2 Contact with health services

This section examines probable suicide deaths in relation to previous contact with a wide range of health services in Scotland. These include: general acute hospital inpatient/ daycase care, psychiatric outpatient appointments, births in hospital, contact with drug services, mental health drug prescribing in the community, and Accident & Emergency (A&E) attendances. In addition, data from Healthcare Improvement Scotland (HIS) are included on suicide reviews (see Introduction - ScotSID, page 7, for more details on what these are).

Of the 3,059 individuals included in ScotSID for 2009-2012, 3,013 were Scottish residents and 46 were resident outwith Scotland or their country of residence was unknown. These 46 would be unlikely to have had contact with health services in Scotland prior to death and

were therefore excluded from all the tables in this section. The gender and age breakdown of the Scottish residents in ScotSID is shown in Table 11.

Table 11: Deaths caused by probable suicide[1], by age and gender – Scottish residents, 2009-12

Gender	Age <25	Age 25-44	Age 45-64	Age 65+	Total
Males	266	959	782	199	2,206
Females	88	323	297	99	807
Total	**354**	**1282**	**1079**	**298**	**3,013**

Source: NRS.

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

2.1 General acute hospital discharge episodes

ScotSID links the death records for probable suicides with data on inpatient and daycase discharges from non-obstetric, non-psychiatric specialties in general acute hospitals in Scotland (SMR01). More information on these data can be found on ISD's Inpatient and Day Case Activity webpage [Ref.13].

It should be noted that in compiling Tables 12 to 15 below, episodes of hospital care with a discharge date matching the date of death were excluded from the analysis, as such admissions were likely to have resulted from the suicidal act rather than being for care prior to the suicide. A total of 245 individuals had such a record, and of these, 47 had no other episode of care within the five years prior to death.

Tables 12, 13 and 14 show the number and percentage of cases who had at least one general acute hospital discharge within the last 30 days, 12 months and 5 years, respectively, before death. These figures are cumulative. Of the 3,013 individuals who were resident in Scotland at the time of death, 281 (9%) had been an inpatient/daycase and discharged within 30 days of death, whilst 970 (32%) had been discharged within one year. One thousand seven hundred and ninety-eight (60%) had been discharged within five years of their death. The remaining 1,215 individuals (40%) had no record of a general acute hospital discharge in the five years before their death.

The percentage of probable suicide deaths with prior hospitalisations increased with age and was generally higher for females than males. Future plans for analyses include a comparison of the rates of prior hospitalisations for suicide cases with those for the general population. This will help ascertain if people who die by suicide have greater contact with general hospital services prior to death.

Table 12: Deaths caused by probable suicide[1] – patients discharged from a general acute hospital within 30 days prior to death, by age and gender, Scottish residents, 2009-12

Gender	Age <25		Age 25-44		Age 45-64		Age 65+		Total	
	Number	%[2]	Number	%[2]	Number	%[2]	Number	%[2]	Number	%[2]
Males	9	3.4	72	7.5	70	9.0	32	16.1	**183**	8.3
Females	7	8.0	36	11.1	38	12.8	17	17.2	**98**	12.1
Total	**16**	**4.5**	**108**	**8.4**	**108**	**10.0**	**49**	**16.4**	**281**	**9.3**

Source: NRS; SMR01.

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Percentages are calculated using denominators from the total suicides figures for Scottish residents in Table 11.

Table 13: Deaths caused by probable suicide[1] – patients discharged from a general acute hospital within 12 months prior to death, by age and gender, Scottish residents, 2009-12

Gender	Age <25		Age 25-44		Age 45-64		Age 65+		Total	
	Number	%[2]	Number	%[2]	Number	%[2]	Number	%[2]	Number	%[2]
Males	55	20.7	253	26.4	242	30.9	83	41.7	**633**	28.7
Females	27	30.7	129	39.9	135	45.5	46	46.5	**337**	41.8
Total	**82**	**23.2**	**382**	**29.8**	**377**	**34.9**	**129**	**43.3**	**970**	**32.2**

Source: NRS; SMR01.

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12

[2] Percentages are calculated using denominators from the total suicides figures for Scottish residents in Table 11.

Table 14: Deaths caused by probable suicide[1] – patients discharged from a general acute hospital within 5 years prior to death, by age and gender, Scottish residents, 2009-12

Gender	Age <25		Age 25-44		Age 45-64		Age 65+		Total	
	Number	%[2]	Number	%[2]	Number	%[2]	Number	%[2]	Number	%[2]
Males	135	50.8	502	52.3	447	57.2	148	74.4	**1,232**	55.8
Females	52	59.1	241	74.6	200	67.3	73	73.7	**566**	70.1
Total	**187**	**52.8**	**743**	**58.0**	**647**	**60.0**	**221**	**74.2**	**1,798**	**59.7**

Source: NRS; SMR01.

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12

[2] Percentages are calculated using denominators from the total suicides figures for Scottish residents in Table 11.

The main diagnosis at discharge of the 1,798 individuals who had at least one general acute hospital discharge within five years before death is presented in Table 15. In cases where an individual had multiple episodes of care, the diagnosis listed relates to the most

recent episode (excluding discharges occurring on the day of death). High level ICD10 chapter headings were used to categorise the relevant conditions due to the large volume of detailed ICD10 diagnostic codes used.

Table 15 includes the diagnosis 'Injury, poisoning and other external causes', coded as either a result of intentional self-harm or not. Some of these cases may have been intentional self-harm but this was not recorded on the discharge record. It is known that different hospitals may vary in how readily they use the intentional self-harm codes, and it is therefore useful to consider these two categories together, bearing in mind that those 'not coded as intentional self-harm' will include accidents and assaults. The boundary between intentional and unintentional injuries is not always clear [Ref.14,15].

'Injury, poisoning and other external causes' (from self-harm, accidents and assault combined) was the most common reason for prior hospitalisation of ScotSID cases as an inpatient/daycase. A total of 132 individuals were discharged with this diagnosis within the 30 days prior to death (47% of the total who had a hospitalisation). This number increased to 426 for the 12 months prior to death, and 751 for the 5 years prior to death.

It is not known whether the order and frequency of the diagnoses listed in the table for the ScotSID cohort, including 'mental and behavioural disorders', are similar to those expected in the general population, but this may be examined in future.

Table 15: Deaths caused by probable suicide[1] – patients discharged[2] from a general acute hospital within the last 30 days, 12 months and 5 years before death, by main diagnosis, Scottish residents, 2009-12

		Most recent general acute hospital discharge within:					
		30 days		12 months		5 years	
Main Diagnosis	**ICD10 Codes (main position unless stated)**	**Number**	**%**	**Number**	**%**	**Number**	**%**
Injury, poisoning and other external causes – Intentional Self Harm	**S00-T99 and a secondary code X60-84**	**97**	**34.5**	**262**	**27.0**	**428**	**23.8**
Injury, poisoning and other external causes – not coded as Intentional Self Harm[3]	**S00-T99 without a secondary code X60-84**	**35**	**12.5**	**164**	**16.9**	**323**	**18.0**
Diseases of the digestive system	K00-K99	33	11.7	105	10.8	212	11.8
Symptoms and abnormal findings not elsewhere classified	R00-R99	34	12.1	123	12.7	202	11.2
Diseases of the respiratory system	J00-J99	17	6.0	47	4.8	97	5.4
Diseases of the musculoskeletal system and connective tissue	M00-M99	3	1.1	38	3.9	87	4.8
Diseases of the circulatory system	I00-I99	5	1.8	33	3.4	68	3.8
Factors influencing health status and contact with health services	Z00-Z99	7	2.5	30	3.1	67	3.7
Mental and behavioural disorders[4]	F00-F99	21	7.5	41	4.2	63	3.5
Diseases of the genitourinary system	N00-N99	6	2.1	27	2.8	52	2.9
Malignant and non-malignant neoplasms	C00-D49	8	2.8	25	2.6	47	2.6
Other		15	5.3	75	7.7	152	8.5
Total with a general acute hospital discharge		**281**	**100.0**	**970**	**100.0**	**1,798**	**100.0**
Number of individuals with no general acute hospital discharge		2,732		2,043		1,215	
Total deaths caused by probable suicide (Scottish residents only)		**3,013**		**3,013**		**3,013**	

Source: NRS; SMR01.

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12

[2] Most recent discharge, excluding discharges occurring on the day of death.

[3] The episode of care reported was not coded as intentional self-harm but some of these cases may actually have been intentional self-harm.

[4] Note that this table relates only to general acute hospitals (SMR01 data), not psychiatric hospitals or units (SMR04 data), and therefore the numbers are not high for the diagnosis 'mental and behavioural disorders'.

2.2 Psychiatric hospital discharge episodes

ScotSID links the death records for probable suicides with data on inpatient and day case discharges from psychiatric specialties in Scottish hospitals (SMR04). It should be noted that at the time of data analysis for this revised report (June 2014), the SMR04 discharge data were known to be incomplete in two NHS boards. (For further details see the 2014 interim report on Mental health hospital inpatient care.) Unlike the mental health hospital inpatient care report, which excluded some boards' data, this revised report used all SMR04 data which were available at June 2014.

Tables 16, 17 and 18 show the number and percentage of cases who had at least one psychiatric discharge within the last 30 days, 12 months and 5 years, respectively, before death. These figures are cumulative. In cases where an individual had multiple hospital discharges, only the most recent episode before death was considered.

Of the 3,013 individuals who were resident in Scotland at the time of death, 144 (5%) had been a psychiatric inpatient/day case discharged within 30 days prior to death. A total of 382 individuals (13%) were discharged within 12 months prior to death and 637 (21%) within 5 years prior to death. The remaining 2,376 individuals (79%) had no record of a psychiatric hospital discharge in the 5 years before their death.

For each time period, there was a higher proportion of probable suicides with a prior discharge from a psychiatric hospital for females than for males. In contrast there was a lower percentage of probable suicides with a previous psychiatric discharge for those aged under 25 compared to those aged 25 and over.

Fifty-one cases had a date of death that matched the date of discharge. This could indicate that the individual died whilst in hospital, shortly after discharge, or whilst absent on pass from an inpatient unit or ward. (For mental health specialties, a patient may be absent on pass for up to 28 nights). Episodes with a date of discharge matching the date of death are included in the tables because patients are not admitted to a psychiatric unit after an act of significant self-harm.

Table 16: Deaths caused by probable suicide[1] occurring within 30 days of discharge from a mental health specialty, by age and gender, Scottish residents, 2009-12

	Age <25		Age 25-44		Age 45-64		Age 65+		Total	
Gender	**Number**	**%[2]**	**Number**	**%[2]**	**Number**	**%[2]**	**Number**	**%[2]**	**Number**	**%[2]**
Males	4	1.5	39	4.1	35	4.5	13	6.5	**91**	4.1
Females	2	2.3	19	5.9	29	9.8	3	3.0	**53**	6.6
Total	**6**	1.7	**58**	4.5	**64**	5.9	**16**	5.4	**144**	4.8

Source: NRS; SMR04.

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Percentages are calculated using denominators from the total suicides figures for Scottish residents in Table 11.

Table 17: Deaths caused by probable suicide[1] occurring within 12 months of discharge from a mental health specialty, by age and gender, Scottish residents, 2009-12

	Age <25		Age 25-44		Age 45-64		Age 65+		Total	
Gender	Number	%[2]	Number	%[2]	Number		Number	%[2]	Number	%[2]
Males	17	6.4	100	10.4	90	11.5	20	10.1	**227**	10.3
Females	7	8.0	66	20.4	64	21.5	18	18.2	**155**	19.2
Total	**24**	6.8	**166**	12.9	**154**	14.3	**38**	12.8	**382**	12.7

Source: NRS; SMR04

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Percentages are calculated using denominators from the total suicides figures for Scottish residents in Table 11.

Table 18: Deaths caused by probable suicide[1] occurring within 5 years of discharge from a mental health specialty, by age and gender, Scottish residents, 2009-12

	Age <25		Age 25-44		Age 45-64		Age 65+		Total	
Gender	Number	%[2]	Number	%[2]	Number		Number	%[2]	Number	%[2]
Males	32	12.0	183	19.1	142	18.2	31	15.6	**388**	17.6
Females	13	14.8	111	34.4	100	33.7	25	25.3	**249**	30.9
Total	**45**	12.7	**294**	22.9	**242**	22.4	**56**	18.8	**637**	21.1

Source: NRS; SMR04

1 ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

2 Percentages are calculated using denominators from the total suicides figures for Scottish residents in Table 11.

As shown in Table 18, only around one in five probable suicides had a discharge from a mental health specialty in the five years prior to death. Patients may also be treated in primary and specialist community-based mental health care services, however information on these cases is not centrally collected and therefore not available in ScotSID. Opportunities for intervention/prevention may not always be easy to determine, and future suicide prevention initiatives need to take into account all the contacts that an ‘at risk’ individual may have in the period prior to a suicide attempt.

The main diagnosis at discharge of the 637 individuals who had a psychiatric discharge within 5 years prior to death is presented in Table 19. In cases where an individual had multiple hospital discharges, this relates to the most recent one.

The most frequent condition at discharge was ‘mood (affective) disorders’ followed by ‘mental and behavioural disorders due to psychoactive substance use’. This pattern was consistent across each time period (30 days, 12 months, 5 years). Other common conditions were ‘schizophrenia, schizotypal and delusional disorders’ and ‘neurotic, stress related and somatoform disorders’.

Table 19: Deaths caused by probable suicide[1] – patients discharged[2] from a mental health specialty within the last 30 days, 12 months and 5 years before death, by main diagnosis on discharge, Scottish residents, 2009-12

		Most recent psychiatric hospital discharge within:					
		30 days		12 months		5 years	
Main Diagnosis	**ICD10 Codes**	**Number**	**%**	**Number**	**%**	**Number**	**%**
Mood (affective) disorders	F30-F39	48	33.3	127	33.2	216	33.9
Mental and behavioural disorders due to psychoactive substance use	F09-F19	20	13.9	73	19.1	148	23.2
Schizophrenia, schizotypal and delusional disorders	F20-F29	37	25.7	82	21.5	116	18.2
Neurotic, stress related and somatoform disorders	F40-F48	16	11.1	40	10.5	61	9.6
Disorders of adult personality and behaviour	F60-F69	12	8.3	33	8.6	51	8.0
Other		11	7.6	27	7.1	45	7.1
Total		**144**	**100.0**	**382**	**100.0**	**637**	**100.0**
Number of individuals with no psychiatric hospital discharge		2,869		2,631		2,376	

Source: NRS; SMR04.

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Most recent discharge, including discharges occurring on the day of death.

The majority of admissions to a psychiatric hospital were informal in status, i.e. the individual was voluntarily admitted (Table 20). Within the period of 5 years prior to death, 82 individuals (13%) were formally admitted, i.e. detained under the provisions of the Mental Health (Scotland) Acts 1960 and 1984 and the Mental Health (Care and Treatment) (Scotland) Act 2003. If a patient had multiple admissions, only the status of the most recent admission was included in the table.

If a patient was admitted on a formal basis and had their status revoked whilst in hospital, they would still be counted as a formal admission in the table.

Table 20: Deaths caused by probable suicide[1] – patients discharged from a mental health specialty within the last 30 days, 12 months and 5 years before death, by status on admission, Scottish residents, 2009-12

	Most recent psychiatric hospital discharge within:					
	30 days		12 months		5 years	
Status on admission	**Number**	**%**	**Number**	**%**	**Number**	**%**
Informal admission[2]	122	84.7	331	86.6	555	87.1
Formal admission[3]	22	15.3	51	13.4	82	12.9
Total	**144**	**100.0**	**382**	**100.0**	**637**	**100.0**
Number of individuals with no psychiatric hospital discharge	2,869		2,631		2,376	

Source: NRS; SMR04.

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Voluntary mental health hospital admission.

[3] Patient detained under the provisions of the Mental Health (Scotland) Acts 1960 &1984 and the Mental Health (Care and Treatment) (Scotland) Act 2003.

2.3 Psychiatric outpatient appointments

ScotSID links the death records for probable suicides with SMR00 data on outpatient appointments (new and return/follow-up, whether the patient attended or not). Not all hospitals submit data for return appointments, as completion of this information is not mandatory. Therefore, the data will underestimate the true number of outpatient appointments offered. More information on outpatient data can be found on ISD's Outpatient Activity webpage.

Bearing in mind this under-recording, at least 184 individuals (6% of the 3,013 'probable suicides' who were resident in Scotland) were allocated an outpatient appointment in the specialty of psychiatry within the last 30 days before their death (Table 21). At least 604 individuals (20%) were allocated such an appointment within the twelve months prior to death (Table 21). This means that up to eight out of 10 people who died from suicide were *not* allocated an appointment in the year before death.

The percentages allocated appointments were generally higher for females than males for each age group shown in Tables 21 and 22. Note that these data include appointments where the patient did not attend; the percentages of patients seen will be even lower.

Table 21: Deaths caused by probable suicide[1] occurring within 30 days after a psychiatric outpatient appointment[2,3], by age and gender, Scottish residents, 2009-12

Gender	Age <25		Age 25-44		Age 45-64		Age 65+		Total	
	Number	%[4]	Number	%[4]	Number	%[4]	Number	%[4]	Number	%[4]
Males	6	2.3	60	6.3	40	5.1	7	3.5	**113**	5.1
Females	3	3.4	33	10.2	28	9.4	7	7.1	**71**	8.8
Total	**9**	**2.5**	**93**	**7.3**	**68**	**6.3**	**14**	**4.7**	**184**	**6.1**

Source: NRS; SMR00.

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12

[2] Includes DNAs (people who 'did not attend').

[3] Not all hospitals submit an SMR00 for return appointments, as completion of this information is optional. Therefore, this may be an underestimate of the true number of outpatient appointments offered.

[4] Percentages are calculated using denominators from the total suicides figures for Scottish residents in Table 11.

Table 22: Deaths caused by probable suicide[1] occurring within 12 months after a psychiatric outpatient appointment[2,3], by age and gender, Scottish residents, 2009-12

Gender	Age <25		Age 25-44		Age 45-64		Age 65+		Total	
	Number	%[4]	Number	%[4]	Number	%[4]	Number	%[4]	Number	%[4]
Males	52	19.5	182	19.0	122	15.6	25	12.6	**381**	**17.3**
Females	13	14.8	98	30.3	85	28.6	27	27.3	**223**	**27.6**
Total	**65**	**18.4**	**280**	**21.8**	**207**	**19.2**	**52**	**17.4**	**604**	**20.0**

Source: NRS; SMR00.

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12

[2] Includes DNAs (people who 'did not attend').

[3] Not all hospitals submit an SMR00 for return appointments, as completion of this information is optional. Therefore, this may be an underestimate of the true number of outpatient appointments offered.

[4] Percentages are calculated using denominators from the total suicides figures for Scottish residents in Table 11.

Table 23 shows that of the 604 individuals where SMR00 records show that they were allocated an appointment within the year before death, half (302) were new appointments while half were follow up/return appointments. However, this finding should be treated with caution as return appointments may be underestimated in this record system. Of these 604 individuals, 130 (22%) did not attend (DNA) the most recent appointment and did not cancel it. Of these 130 DNAs, 37 were among the 184 individuals in Table 21 who had an appointment allocated 30 days before death.

Table 23: Deaths caused by probable suicide[1] occurring within 12 months after a psychiatric outpatient appointment – Appointment type by clinic attendance status[2], Scottish residents, 2009-12

Appointment Type	Attended	Did not attend	Total
New outpatient	246	56	**302**
Follow-up/return outpatient[3]	228	74	**302**
Total	**474**	**130**	**604**

Source: NRS; SMR00

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Attendance status at most recent appointment.

[3] Not all hospitals submit an SMR00 for return appointments, as completion of this information is optional. Therefore, this may be an underestimate of the true number of outpatient appointments offered.

Considering only the more reliable data for *new* psychiatric outpatient appointments in Table 23, and using the 3,013 Scottish residents as the denominator, 302 (10%) were offered such appointments, 246 (8%) attended and 56 (2%) did not attend.

2.4 Births in hospital

ScotSID links the death records for probable suicides with maternity and birth data. Records are only available on births within a Scottish maternity unit and therefore details of home births or children born outwith Scotland will not be captured. Records on the baby born fourth or later in a multiple delivery are also not captured. More information on these data can be found on ISD's Maternity and Births webpage.

Of the 811 female Scottish residents in the ScotSID cohort, maternity records indicated that 207 (26%) had given birth to one or more children who (assuming they were still living) would be under the age of 16 at the time of their mother's suicide (Table 24). Of these 207 women, 33 had had three or more children. Twenty women had given birth within the twelve months before death; all of these were live births.

Table 24: Female deaths caused by probable suicide[1] – number of known births of children who would be under 16 years old at the time of their mother's suicide[2,3], Scottish residents, 2009-12

Number of children under 16 years[2,3]	Number	%
0	603	74.4
1	112	13.8
2	62	7.6
3+	33	4.1
Total number of female probable suicides	**811**	**100**

Source: NRS; SMR02

[1] ScotSID cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Excludes home births, children born outwith Scotland, and babies born fourth or later in a multiple delivery.

[3] Includes one stillbirth and two neonatal deaths recorded on SMR02, but it is not known if the other children were all still living at the time of their mother's suicide.

2.5 Contact with specialist drug treatment services

The Scottish Drug Misuse Database (SDMD) offers a profile of individuals being treated for problem drug use, based on information provided at various points throughout specialist drug treatment. The majority of information is collected when an individual first attends for an initial assessment of their drug misuse problems. However the database has now been

extended to allow the collection of information at 12 week, annual and ad-hoc follow-up time points.

Due to low compliance of services submitting follow-up information to the SDMD, ScotSID only links to the data collected in the initial assessment part of the SDMD. The information presented in this section relates to the client's most recent initial assessment prior to death from suicide. Details on the method used to link these data to the ScotSID cohort can be found in Appendix 7.

There are some issues with the SDMD which means that answers to some questions are known to be poorly recorded.

Of the 3,013 Scottish residents in the ScotSID cohort, 189 (6%) were known to specialist drug treatment services. Self-reported information on previous injecting behaviour was available for 169 of these individuals, and of this group, 102 (60%) reported that they had injected drugs at some point in their lives.

Twenty-eight individuals were known to have undergone an initial assessment by specialist drug treatment services within 6 months prior to their death, while a further 22 had undergone assessment 6-12 months before death (Table 25). Note that these data do not include any follow-up contact the client may have had following initial assessment, and cannot therefore be used to determine how recently individuals were in contact with drug treatment services. Additional information on drugs deaths and contact with specialist drug treatment services can be found in the National Drug Related Deaths Database (NDRDD) (Scotland) report [Ref.16].

Table 25: Deaths caused by probable suicide[1] registered in 2009-12 – Timing of last known initial assessment by specialist drug treatment services before death[2], Scottish residents

Months/Years	Number	%
< 6 months	28	14.8
6 months to < 1 year	22	11.6
1 year to < 2 years	43	22.8
2 years & over	96	50.8
Total	**189**	**100**
Number of individuals with no record on SDMD	2,824	

Source: NRS; Scottish Drug Misuse Database

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Based on date of client's initial assessment; does not reflect any follow-up treatment.

Notes on data for mental health drug prescribing, and A&E attendances: probable suicides 2010-12

Nearly all patients in NHS Scotland have a unique Community Health Index (CHI) number which makes it possible to link a patient's records in different datasets, and to identify which prescription items have been dispensed for an individual.

The CHI number has only been reliably captured on the Prescribing Information System (PIS) since April 2009, and became mandatory for A&E attendances in September 2009. Therefore, analyses of prescriptions dispensed in the community and A&E attendances (Tables 26-32) are only presented for probable suicides occurring from 2010 to 2012. The denominator information for Tables 28 and 29 – the gender and age breakdown of the ScotSID cohort of Scottish residents for the three-year period 2010-2012 – is shown in Table 26.

Table 26: Deaths caused by probable suicide[1], by age and gender – Scottish residents[R], 2010-12

Gender	Age <25	Age 25-44	Age 45-64	Age 65+	Total
Males	191	715	597	164	**1,667**
Females	66	237	237	75	**615**
Total	**257**	**952**	**834**	**239**	**2,282**

Source: NRS

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[R] In October 2014, this table was corrected to show deaths of Scottish residents only. Prior to this, the 31 deaths of non-residents of Scotland were included in this table in error, giving a grand total of 2,313 rather than 2,282. This revision also affects Tables 27-32 in sections 2.6 and 2.7 below.

2.6 Mental health drug prescribing in the community

Appendix 6 gives details of the Prescribing Information System (PIS) and its suitability to analyse mental health drug prescribing in the community. An overview is given here.

The Prescribing Information System (PIS) is a comprehensive database of details of NHS prescriptions dispensed in the community in Scotland. The data include prescribing by GPs, nurses, dentists and pharmacists, and also hospital prescribing where items are dispensed in the community. Hospital dispensed prescriptions are not included in the figures. The data available cannot identify what proportion of the drugs dispensed are actually consumed or when they were consumed, and do not include products purchased 'over the counter'.

Patient-based analysis has been made possible through the recent availability of comprehensive patient-identifiable data using the CHI number. For medicines used in mental health, CHI capture rates have become high enough to permit accurate patient analyses for financial years 2009/10 to 2012/13. ScotSID analyses have been carried out

for prescriptions dispensed within 12 months prior to death for probable suicides occurring in the period 2010-2012. Prior to April 2009, CHI capture rates were slightly lower which may have resulted in a slight undercount for patients who died in January to March 2010, but these patients are likely to have been included in patient counts through items dispensed to them later on.

Of the 2,282 Scottish residents included in ScotSID whose deaths were registered in 2010-12, 1,340 (59%) had at least one mental health drug prescription dispensed within the twelve months prior to their death, although it cannot be determined from the data what proportion of the drug dispensed was actually consumed.

Table 27 shows the breakdown of drug types for these 1,340 individuals. Note that an individual might have had prescriptions for more than one mental health drug, in which case they were only counted once per row in the table, but could be counted in more than one row (eg under hypnotics and under antidepressants). Around four out of five of these individuals (1,079) had been prescribed an antidepressant drug in the 12 months prior to death, and almost two-thirds (843) had had a prescription for hypnotics or anxiolytics. The latter may represent treatment for increased levels of anxiety and/or agitation in individuals at greater risk of self-harm or suicide. In addition, prescription of hypnotics or anxiolytics may indicate treatment of an underlying alcohol or drug dependency in some individuals, which in itself may increase suicide risk. The high rate of hypnotic/anxiolytic use within the ScotSID cohort is consistent with previous studies that have reported high rates of benzodiazepine use associated with suicide or self-harm [Ref.17.]

Table 27: Deaths caused by probable suicide[1] – Individuals with mental health drug prescriptions dispensed within 12 months[2] prior to death, by British National Formulary (BNF) sub-section, Scottish residents[R], 2010-12

BNF sub-section[3]	Number	%
Hypnotics and anxiolytics (BNF 04.01)	843	62.9
Drugs used in psychoses and related disorders (BNF 04.02)	411	30.7
Antidepressant drugs (BNF 04.03)	1,079	80.5
Total number of individuals	**1,340**	**100.0**
Number of individuals with no mental health drug prescriptions within 12 months prior to death	942	
Total deaths caused by probable suicide (Scottish residents only)	**2,282**	

Source: NRS; PIS

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Estimated by the date the prescription was processed by PSD for payment.

[3] Individuals may be counted under more than one row (BNF sub-section).

[R] Revised Oct 2014. Tables 26 to 32 have been updated as the total number of suicide deaths for Scottish residents was incorrect. However, as the 1,340 figure has not changed, the percentages in this table are not affected.

The gender and age breakdown of these 1,340 individuals is shown in Table 28. Overall, within the ScotSID cohort of Scottish residents with deaths registered in 2010-12, around half of the males (52%) and three-quarters of the females (78%) had had mental health drug prescriptions dispensed within the year before death.

Table 28: Deaths caused by probable suicide[1] – Individuals with mental health drug prescriptions dispensed within 12 months[2] prior to death, by age group and gender, Scottish residents[R], 2010-12

Gender	Age <25		Age 25-44		Age 45-64		Age 65+		Total	
	Number	%[3]	Number	%[3]	Number	%[3]	Number	%[3]	Number	%[3]
Males	58	30.4	388	54.3	331	55.4	84	51.2	**861**	**51.6**
Females	30	45.5	197	83.1	199	84.0	53	70.7	**479**	**77.9**
Total	**88**	**34.2**	**585**	**61.4**	**530**	**63.5**	**137**	**57.3**	**1,340**	**58.7**

Source: NRS; PIS

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Estimated by the date the prescription was processed by Practitioner Services for payment.

[3] Percentages are calculated using denominators from the total suicides figures for Scottish residents in 2010-12 in Table 26.

[R] Revised Oct 2014. Tables 26 to 32 have been updated as the total number of suicide deaths for Scottish residents was incorrect. Most of the percentages in this table have increased slightly (by a maximum of 1.4%).

2.7 Accident & Emergency attendances

Information on Emergency Department attendances across Scotland is collected and maintained by ISD. All sites which provide emergency care are required to submit data. The A&E database contains data from June 2007 to the present day on patient attendances at Emergency Departments, Minor Injuries Units and community hospital A&E departments across NHS Scotland.

There are two levels of data submitted: episode and aggregate level data. The larger hospitals with emergency departments generally submit episode level data containing a detailed record for each patient attendance. Smaller sites such as minor injury units or community hospitals generally only submit aggregate level data as they do not have the information systems and support to enable collection of detailed patient-based information.

Recording of CHI number for A&E attendances became mandatory only from September 2009 and therefore analysis is presented for attendances within three months prior to death for probable suicides occurring in calendar years 2010 to 2012. Data can only be linked for records where the CHI number has been recorded within those sites recording episode level data. Completeness of CHI for A&E attendances varies from approximately 50-60% to 98% in some departments. Therefore, these statistics may underestimate the true number of attendances at A&E.

Please note that in the remainder of this section on A&E attendances, 75 attendances were excluded from the analysis as they were likely to have resulted from the suicidal act itself rather than been for care prior to the suicide. These 75 were identified as attendances of people whose A&E discharge date matched their NRS death record's date of death, *and* their A&E discharge destination was coded as either 'death' or 'admitted to the same NHS healthcare provider' (where they were assumed to have died later that day). Note that the 75 exclusions were of A&E attendance records, *not* individuals. A person could have attended A&E in an incident unrelated to their eventual death, then attended in a separate incident after a suicidal act, and we need to include the former set of records in the analysis.

Of the 2,282 Scottish residents in the ScotSID cohort who died in 2010-12, 380 (17%) attended A&E within 30 days prior to death, and 587 (26%) attended within three months prior to death. These figures are cumulative and exclude attendances which were likely to have resulted from the suicidal act. The gender and age breakdown for the attendances within three months is shown in Table 29.

Table 29: Deaths caused by probable suicide[1] – Individuals with at least one A&E attendance[2] within 3 months prior to death[3], by age and gender, Scottish residents[R], 2010-12

Gender	Age <25		Age 25-44		Age 45-64		Age 65+		Total	
	Number	%[4]	Number	%[4]	Number	%[4]	Number	%[4]	Number	%[4]
Males	43	22.5	168	23.5	136	22.8	46	28.0	**393**	**23.6**
Females	25	37.9	93	39.2	48	20.3	28	37.3	**194**	**31.5**
Total	**68**	**26.5**	**261**	**27.4**	**184**	**22.1**	**74**	**31.0**	**587**	**25.7**

Source: NRS; A&E attendances

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Not all sites submit episode level data and CHI completeness rates vary, therefore this may be an underestimate of the true number of A&E attendances.

[3] 75 A&E attendances were excluded from the analysis because they were likely to have resulted from the suicidal act rather than been for care prior to the suicide.

[4] Percentages are calculated using denominators from the total suicides figures for Scottish residents in 2010-12 in Table 26.

[R] Revised Oct 2014. Tables 26 to 32 have been updated as the total number of suicide deaths for Scottish residents was incorrect. Most of the percentages in this table have increased very slightly (by a maximum of 0.5%).

Table 29 shows that the percentage of females attending A&E was generally higher than for males, with the exception of the 45-64 year age group. However, in the general population, attendance rates in 2012/13 tended to be higher for males in all age groups. For more information, see ISD's Emergency Department Activity webpage.

Table 30 shows how often ScotSID cases attended A&E within the three months prior to their death from suicide. A total of 1,695 individuals (74% of Scottish residents dying in

2010-12) had not attended. A further 398 had attended once, and 189 had visited at least twice (these two figures summing to the grand total of 587 individuals shown in Table 29)

Table 30: Deaths caused by probable suicide[1], by frequency of A&E attendances[2,3] within 3 months prior to death, Scottish residents[R], 2010-12

Number of A&E attendances[2,3]	Number	%
0	1,695	74.3
1	398	17.4
2	108	4.7
3	38	1.7
4+	43	1.9
Total	**2,282**	**100.0**

Source: NRS; A&E attendances

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Not all sites submit episode level data and CHI completeness rates vary, therefore this may be an underestimate of the true number of A&E attendances.

[3] 75 A&E attendances were excluded from the analysis because they were likely to have resulted from the suicidal act rather than been for care prior to the suicide.

[R] Revised Oct 2014. Tables 26 to 32 have been updated as the total number of suicide deaths for Scottish residents was incorrect. The percentages in this table have changed very slightly (by a maximum of 0.3%).

Tables 31 and 32 give further detail on the individual's *most recent* A&E attendance (excluding attendances where this was likely to have resulted from the suicidal act). Of the 587 individuals attending within the three months before their death, 118 (20%) died within 2 days of leaving A&E, and a further 94 (16%) died later that week (Table 31).

Table 31: Deaths caused by probable suicide[1] – People attending A&E within the 3 months before death: days between most recent attendance[2,3] and death, Scottish residents[R], 2010-12

Number of days	Number	%
0 to 1 days	79	13.5
2 days	39	6.6
3 to 7 days	94	16.0
>1 to <4 weeks	165	28.1
4 to <8 weeks	109	18.6
8 to 13 weeks	101	17.2
Total	**587**	**100.0**
Number of individuals with no A&E attendances within 3 months prior to death	1,695	
Total deaths caused by probable suicide (Scottish residents only)	**2,282**	

Source: NRS; A&E attendances

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Not all sites submit episode level data and CHI completeness rates vary; therefore some A&E attendances may not be captured.

[3] 75 A&E attendances were excluded from the analysis because they were likely to have resulted from the suicidal act rather than been for care prior to the suicide.

[R] Revised Oct 2014. Tables 26 to 32 have been updated as the total number of suicide deaths for Scottish residents was incorrect. However, as the 587 figure has not changed, the percentages in this table are not affected.

Discharge destinations are shown in Table 32. For the 587 individuals who attended A&E within three months prior to death (excluding attendances where this was likely to have resulted from the suicidal act), at their most recent attendance around half (51%) were admitted to other NHS healthcare (either at the same healthcare provider or elsewhere).

Table 32: Deaths caused by probable suicide[1] – People attending A&E within the 3 months before death: discharge destination at most recent attendance[2,3], Scottish residents[R], 2010-2012

Discharge destination	Number	%
Admission to same NHS healthcare provider	269	45.8
Private residence - unspecified	115	19.6
Private residence - usual place of residence	114	19.4
Transfer to same/other hospital	28	4.8
Other	61	10.4
Total individuals with an A&E attendance within the 3 months before death	**587**	**100.0**
Number of individuals with no A&E attendances within 3 months prior to death	1,695	
Total deaths caused by probable suicide (Scottish residents only)	**2,282**	

Source: NRS; A&E attendances

[1] ScotSID cohort excludes <5 year olds. Cohort is based on old WHO coding rules to ensure consistency across 2009-12.

[2] Not all sites submit episode level data and CHI completeness rates vary; therefore some A&E attendances may not be captured.

[3] 75 A&E attendances were excluded from the analysis because they were likely to have resulted from the suicidal act rather than been for care prior to the suicide.

[R] Revised Oct 2014. Tables 26 to 32 have been updated as the total number of suicide deaths for Scottish residents was incorrect. However, as the 587 figure has not changed, the percentages in this table are not affected.

2.8 Healthcare Improvement Scotland (HIS) data on suicide reviews

The role of Healthcare improvement Scotland (HIS) is to support healthcare providers in Scotland to deliver high quality, evidence-based, safe, effective and person-centred care; and to scrutinise those services to provide public assurance about the quality and safety of that care.

If an individual has been in contact with NHS mental health services in the year prior to their suicide, the NHS board is obliged to carry out a suicide review looking into the circumstances leading up to the suicide. The suicide review should always be submitted to HIS and in certain cases the Mental Welfare Commission for Scotland should be notified.

The Mental Welfare Commission for Scotland is an organisation which is accountable to Ministers at the Scottish Government for its statutory duties and how it spends public money. However, it carries out its work and produces reports independently from the Scottish Government. In relation to suicide cases the Commission looks into whether or not the patient was receiving the right care and support in the lead up to their suicide.

2012 is the first year for which information from HIS has been linked into the ScotSID database. In 2012, there were 106 deaths caused by probable suicide for which the relevant NHS board carried out a suicide review because the individual had had contact with NHS mental health services in the year prior to their death (14% of all ScotSID cases in that year). None of the 106 deaths was referred to the Mental Welfare Commission for Scotland, but HIS is aware that the Commission has been notified of four suicide cases in 2012 for which they have not yet received the suicide review.

Commentary

Socio-demographics

- The ScotSID findings emphasise the importance of addressing suicide as an inequalities, as well as mental health, issue. Increased suicide risk was associated with both socio-demographic characteristics (with, for example, higher numbers among males, people of 'middle age', and those who were single or divorced) and socio-economic characteristics (increasing disadvantage and deprivation).
- The considerably higher rate of suicide among males in Scotland is found in high income countries across the world [Ref.18]. There are many possible reasons for men's excessive suicide risk, including: societal expectations of men's behaviour and social role performance; differences in socially acceptable methods of dealing with stress; availability of, and preference for, different means of suicide (with differential lethality); availability and patterns of use of alcohol and drugs; and differences in help-seeking for psychological distress and mental health problems. The tendency of males to use more lethal methods, such as hanging, may also reflect a higher level of suicidal intent or greater impulsivity.
- Peak suicide rates in the ScotSID cohort occurred in the middle years (35-54) for both sexes. Charts on the ScotPHO suicide webpage for Scottish trends [Ref.2] show that over the 20 years since 1990-92, the rates for males have increased in this age group, while decreasing in both younger and older age groups (ScotPHO chart 3). There is a similar pattern for females (except that the 15-24 year age group also shows a slight rise) (ScotPHO chart 4). These changes may reflect the impact of cultural, social and economic changes ('period effects') which have interacted with birth cohort effects.
- Non-married (single and divorced) people are over-represented in the ScotSID cohort, indicating that increased suicide risk may be associated with social isolation and disconnectedness. A major suicide prevention challenge is to increase social integration and social capital, especially among vulnerable, socially-excluded men.
- The ScotSID findings serve as a timely reminder that, in addition to targeting those who are unemployed as an important risk group, suicide prevention efforts need to focus attention on the workplace. This includes raising awareness among employers about work-related threats to mental health and facilitating effective interventions to promote mental health in the workforce.
- Socio-economic deprivation is strongly associated with the general health of the population and all-cause mortality [Ref.19]. Previous UK research [Ref.20] has also demonstrated that area-level incidence of suicide and of (hospital-treated) self-harm is higher in areas where there is greater socio-economic deprivation.

Circumstances of death

- Reducing access to the means commonly used to complete suicide in a particular socio-cultural context is one of the most effective suicide prevention strategies [Ref.21]. In Scotland, hanging is the most common method of suicide overall and among men. It is particularly difficult to prevent such deaths, given the ubiquity of materials that

can be used. As noted by Yip et al [Ref.21]: ‘Hanging, jumping from heights (particularly from individuals’ own apartments or houses), and fatal shooting with firearms in countries with relatively non-restrictive gun laws … cannot be readily restricted’.

Contact with health services

- The majority (86-97%) of those who die by suicide have a diagnosed or undiagnosed mental health problem at the time of death [Ref.22]. The lifetime risk of suicide (probability that an individual will at some point die from this cause) is estimated to be around 4-5% among those with mood disorders, schizophrenia and borderline personality disorder, and 10%-15% in people with bipolar disorder. This compares with around 1% in the general population [Ref.23]. A review of 28 studies found that, during an average of 10 years follow-up, the risk of suicide among patients diagnosed with bipolar illness was 22 times the risk of suicide in the general population [Ref.24, 25].
- Among Scottish residents in ScotSID, over half (59%) had at least one mental health drug prescription dispensed in the community within the year prior to their death, indicating that they were receiving care for a mental illness from a healthcare professional such as their GP or staff at an outpatient clinic. At least 20% of Scottish residents in ScotSID had been offered a psychiatric outpatient appointment and around 13% had been a psychiatric inpatient/day case discharged within the year prior to their death.
- A&E records showed that 17% attended A&E within the 30 days before death, and 26% attended within the three months before death (figures exclude attendances which were likely to have resulted from the suicidal act). It is possible that opportunities to engage in suicide prevention efforts were missed for some of these individuals. Health professionals and early responders need to be well trained to recognise and intervene successfully where people present in pre-suicidal crisis and distress.

Potential for further analysis

- Healthcare pathways and patterns of contact with more than one health service will be explored, set alongside details of the wider circumstances surrounding an individual’s death (established via police sudden death records). Improvements in identifying characteristics of individuals with high suicide risk will help to ensure improved targeting of Scotland’s suicide prevention efforts in the future.

References

1 Suicide: key points, ScotPHO, www.scotpho.org.uk/health-wellbeing-and-disease/suicide/key-points

2 Suicide: Scottish trends, ScotPHO, http://www.scotpho.org.uk/health-wellbeing-and-disease/suicide/data/scottish-trends

3 Suicide: UK trends, ScotPHO, http://www.scotpho.org.uk/health-wellbeing-and-disease/suicide/data/uk

4 OECD (2013), Health at a Glance 2013: OECD Indicators, OECD Publishing. http://www.oecd.org/els/health-systems/Health-at-a-Glance-2013.pdf

5 Scotland and European Health for all Database 2012, ScotPHO, http://www.scotpho.org.uk/comparative-health/scotland-and-european-hfa-database

6 Scotland's Census 2011, http://www.scotlandscensus.gov.uk

7 Office for National Statistics: Standard Occupational Classification 2000, http://www.ons.gov.uk/ons/guide-method/classifications/archived-standard-classifications/standard-occupational-classification-2000/about-soc-2000/index.html

8 Scottish Government: Scottish Index of Multiple Deprivation (SIMD) 2012 http://simd.scotland.gov.uk/publication-2012/

9 Suicide: deprivation, ScotPHO, www.scotpho.org.uk/health-wellbeing-and-disease/suicide/data/deprivation

10 Scottish Government: Urban Rural Classification, http://www.scotland.gov.uk/Topics/Statistics/About/Methodology/UrbanRuralClassification

11 Stark C, Hopkins P, Gibbs D, Belbin A, Hay A. Population density and suicide in Scotland. *Rural and Remote Health* 7: 672. (Online) 2007. http://www.rrh.org.au/articles/subviewnew.asp?ArticleID=672

12 Platt S, Boyle P, Crombie I, Feng Z, Exeter D. The epidemiology of suicide in Scotland 1989-2004: an examination of temporal trends and risk factors at national and local levels. Scottish Executive Social Research 2007. www.scotland.gov.uk/Resource/Doc/168696/0046868.pdf

13 ISD Scotland: Inpatient Day Case Activity, http://www.isdscotland.org/Health-Topics/Hospital-Care/Publications/

14 National Institute for Health and Clinical Excellence (2011). *Self-harm: longer-term management*. London: National Collaborating Centre for Mental Health, http://guidance.nice.org.uk/CG133/

15 Department of Health and Human Sciences, Centers for Disease Control and Prevention, www.cdc.gov/ncipc/wisqars/nonfatal/definitions.htm

16 ISD Scotland. National Drugs Related Deaths Database (NDRDD) Scotland report, http://www.isdscotland.org/Health-Topics/Drugs-and-Alcohol-Misuse/Publications/

17 National Confidential Inquiry Into Suicide and Homicide by People with Mental Illness (2014), *Suicide in primary care in England,* http://www.bbmh.manchester.ac.uk/cmhr/research/centreforsuicideprevention/nci/reports/SuicideinPrimaryCare2014.pdf

18 World Health Organization *World Suicide Report* (due for publication in 2014).

19 Deaths: introduction, ScotPHO, http://www.scotpho.org.uk/population-dynamics/deaths/introduction/

20 Hawton K, Harriss L, Hodder K, Simkin S, Gunnell D. The influence of the economic and social environment on deliberate self-harm and suicide: an ecological and person-based study. *Psychological Medicine* 2001; 31(5): 827–836, http://ora.ox.ac.uk/objects/uuid%3A1fb49e46-1193-485e-8e50-9d4dea20380a/datastreams/ATTACHMENT01

21 Yip PSF, Caine E, Yousuf S, Chang S-S, Chien-Chang Wu K, Chen Y-Y. Means restriction for suicide prevention. *Lancet* 2012; 379: 2393–2399, http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2812%2960521-2/fulltext#article_upsell

22 Cavanagh JTO, Carson AJ, Sharpe M, Lawrie SM. Psychological autopsy studies of suicide: a systematic review. *Psychological Medicine* 2003; 33: 395–405, http://www.ncbi.nlm.nih.gov/pubmed/12701661

23 Are We Any Closer to Predicting Suicide? Psych Central Professional http://pro.psychcentral.com/are-we-any-closer-to-predicting-suicide/002126.html

24 McGirr A, Turecki G. Schizophrenia, other psychotic disorders, and suicidal behaviour. In: O'Connor R, Platt S, Gordon J (eds). International handbook of suicide prevention: research, policy and practice. Chichester: Wiley-Blackwell, 2011, pp.75–92

25 Rhimer Z. Depression and suicidal behaviour. In: O'Connor R, Platt S, Gordon J (eds). International handbook of suicide prevention: Research, Policy and Practice. Chichester: Wiley-Blackwell, 2011, pp.59-73

26 Choose life: A National Strategy and Action Plan to Prevent Suicide in Scotland, www.scotland.gov.uk/Publications/2002/12/15873/14466

27 Refreshing The National Strategy and Action Plan to Prevent Suicide in Scotland: Report of The National Suicide Prevention Working Group, http://www.scotland.gov.uk/Publications/2013/12/7616

28 Probable Suicides: Deaths which are the Result of Intentional Self-harm or Events of Undetermined Intent, National Records of Scotland, http://www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/suicides/index.html

29 Adelstein A, Mardon C. Suicides 1961–1974. *Population Trends* 1975; 2: 48–55

30 Kendrick S. The Scottish Record Linkage System. Information Services Division, NHS Scotland, 1997, http://www.isdscotland.org/Products-and-Services/Medical-Record-Linkage/Files-for-upload/The_Scottish_Record_Linkage_System.doc

Glossary

A&E attendance	The presence of a patient at an Accident & Emergency service seeking unplanned medical attention.
Acute hospital records	'Acute' hospital inpatient and daycase activity is recorded on SMR01 discharge records. It includes care in major teaching hospitals, district general hospitals and community hospitals, but excludes obstetric and psychiatric care.
British National Formulary (BNF)	A standard classification of drugs into conditions of primary therapeutic use. The aim is to provide prescribers, pharmacists and other healthcare professionals with sound up-to-date information about the use of medicines.
Coding rules	'Probable suicide' deaths are defined using the following ICD10 codes: Intentional self-harm: X60-X84, Y87.0 and Undetermined intent: Y10-Y34, Y87.2. New rules for coding causes of death were introduced in 2011 by NRS. Some deaths caused by drug misuse which were coded under the **old** rules as 'mental and behavioural disorders' are classified under the **new** rules as 'self-poisoning of undetermined intent' and consequently as probable suicides. A note on the changes to the way in which causes of death are coded is available in the Death Certificates and Coding the Causes of Death section of the NRS website. The main ScotSID analyses in this report are all based on **old** coding rules for consistency: for further information see the 'Data held in ScotSID' section of the Introduction and Appendix 3.
Community Health Index (CHI)	The Community Health Index or CHI number is the unique national number for any health communication for a given patient. It is a ten-digit number created from a patient's date of birth and four other numbers. All patients who register with a GP will be allocated a CHI number.
Confidence interval for an EASR	The difference between the upper and lower confidence limit defines the confidence interval. The 95% confidence interval indicates the degree of uncertainty around the EASR; 95 times out of 100, the interval will include the true underlying rate. The width of the confidence interval depends on the size of the population and the underlying variability in the data.
Continuous inpatient stay	An unbroken period of time that a patient spends as an inpatient. A patient may change consultant, significant facility, specialty and/or hospital during a continuous inpatient stay.

Deterministic matching	Used to link datasets for an individual when there is a common unique identifier in both datasets, for example the CHI number.
Discharge	A hospital discharge marks the end of an episode of care. Discharges include deaths, transfers to other specialties/significant facilities and hospitals, and routine discharges home.
EASR	European age-sex standardised rate, usually expressed per 100,000 population. For details on standardising, see ScotPHO Methodology.
ESP 1976	European Standard Population (ESP), a theoretical population which is defined as having a particular distribution by age and sex. The first version of the ESP was introduced in 1976, and the second in 2013.
ESP 2013	See above.
Funnel plot	A type of chart where the indicator of interest is plotted against the denominator or sample size - this gives it the characteristic funnel shape. For more information on the use of statistical process control charts in public health, please see APHO Technical Briefing 2.
ICD10	The International Classification of Diseases and Related Health Problems, Tenth Revision (World Health Organization).
Intentional self-harm	A cause of death or morbidity defined by ICD10 codes X60-X84.
ISD	Information Services Division of NHS National Services Scotland. (From 1 June 2013, ISD became part of the Public Health and Intelligence Strategic Business Unit.)
Lifetime risk of suicide	Probability that an individual will at some point die from this cause.
New coding rules	See Coding rules above.
NDRDD	The National Drug-related Deaths Database (see ISD Drugs and alcohol misuse publications).
NRS	National Records of Scotland (established on 1 April 2011, following the merger of the General Register Office for Scotland (GROS) and the National Archives of Scotland).
Old coding rules	See Coding rules above.
ONS	Office for National Statistics.

Population estimates	NRS publish annual mid-year estimates of the Scottish population. These estimates are based on the Census, which is carried out every 10 years. In this report 'rebased populations' refer to those updated in light of the 2011 Census. 'Unrebased populations' are still based on the 2001 Census.
Probability matching	In linking data from different datasets for an individual, probability matching uses a set of identifiers to estimate the *probability* that two records correspond.
'Probable suicide'	Death for which the underlying cause is classified as 'intentional self-harm' or 'event of undetermined intent'.
Specialty	A division of medicine or dentistry covering a specific area of clinical activity.
Undetermined intent	A cause of death defined by ICD10 codes; Y10-Y34, Y87.2. Events where available information is insufficient to enable a medical or legal authority to make a distinction between accident, self-harm and assault.

List of tables and figures

Table No.	Name	Time period	File & size
1	Deaths caused by probable suicide – Numbers, rates (crude and EASRs) by NHS board area in Scotland, males, females and persons aged 5 years and over [Only data for persons shown in Report]	2009-2012	Excel [337kb]
2	Deaths caused by probable suicide by marital status – persons aged 16 and over, Scotland	2009-2012	
3	Deaths caused by probable suicide by employment status – 16-64 year olds, Scotland	2009-2012	
4	Deaths caused by probable suicide, by occupational group – 16-64 year olds, Scotland	2009-2012	
5	Deaths caused by probable suicide, by most common occupations (count >30) – 16-64 year olds, Scotland	2009-2011	
6	Deaths caused by probable suicide – Numbers and EASRs, Scotland by SIMD 2012 quintile, persons aged 5 years and over	2009-2012	
7	Deaths caused by probable suicide – Numbers and EASRs, Scotland by eight-fold 2011-12 urban rural classification, persons aged 5 years and over	2009-2012	
8	Deaths caused by probable suicide - Place where suicidal act occurred, Scotland	2009-2012	
9	Deaths caused by probable suicide - Post Mortem indicator, Scotland	2009-2012	
10	Deaths caused by probable suicide - Post Mortem indicator status by year of registration, Scotland	2009-2012	
11	Deaths caused by probable suicide by age and gender - Scottish residents	2009-2012	
12	Deaths caused by probable suicide – patients discharged from a general acute hospital within 30 days prior to death, by age and gender, Scottish residents	2009-2012	
13	Deaths caused by probable suicide – patients discharged from a general acute hospital within 12 months prior to death, by age and gender, Scottish residents	2009-2012	
14	Deaths caused by probable suicide – patients discharged from a general acute hospital within 5 years prior to death, by age and gender, Scottish residents	2009-2012	

15	Deaths caused by probable suicide – patients discharged from a general acute hospital within the last 30 days, 12 months and 5 years before death, by main diagnosis, Scottish residents	2009-2012	Excel [337kb]
16	Deaths caused by probable suicide – patients discharged from a mental health specialty within 30 days prior to death, by age and gender, Scottish residents	2009-2012	Excel [337kb]
17	Deaths caused by probable suicide – patients discharged from a mental health specialty within 12 months prior to death, by age and gender, Scottish residents	2009-2012	
18	Deaths caused by probable suicide – patients discharged from a mental health specialty within 5 years prior to death, by age and gender, Scottish residents	2009-2012	
19	Deaths caused by probable suicide – patients discharged from a mental health specialty within the last 30 days, 12 months and 5 years before death, by main diagnosis, Scottish residents	2009-2012	
20	Deaths caused by probable suicide – patients discharged from a mental health specialty within the last 30 days, 12 months and 5 years before death, by status on admission, Scottish residents	2009-2012	
21	Deaths caused by probable suicide occurring within 30 days of a psychiatric outpatient appointment by age and gender, Scottish residents	2009-2012	Excel [337kb]
22	Deaths caused by probable suicide occurring within 12 months of a psychiatric outpatient appointment by age and gender, Scottish residents	2009-2012	
23	Deaths caused by probable suicide occurring within 12 months after a psychiatric outpatient appointment – Appointment type by clinic attendance status, Scottish residents	2009-2012	
24	Female deaths caused by probable suicide – number of known births of children who would be under 16 years old at the time of their mother's suicide, Scottish residents	2009-2012	
25	Deaths caused by probable suicide registered in 2009-12 – Timing of last known initial assessment by specialist drug treatment services before death, Scottish residents	2009-2012	
26	Deaths caused by probable suicide by age and gender – Scottish residents[R]	2009-2012	
27	Deaths caused by probable suicide – Individuals with mental health drug prescriptions dispensed	2010-2012	

	within 12 months prior to death, by British National Formulary (BNF) sub-section, Scottish residents[R]		
28	Deaths caused by probable suicide – Individuals with mental health drug prescriptions dispensed within 12 months prior to death, by age group and gender, Scottish residents[R]	2010-2012	
29	Deaths caused by probable suicide – Individuals with at least one A&E attendance within 3 months prior to death, by age and gender, Scottish residents[R]	2010-2012	
30	Deaths caused by probable suicide , by frequency of A&E attendances within 3 months prior to death, Scottish rResidents[R]	2010-2012	
31	Deaths caused by probable suicide – People attending A&E within the 3 months before death: days between most recent attendance and death, Scottish residents[R]	2010-2012	
32	Deaths caused by probable suicide – People attending A&E within the 3 months before death: discharge destination at most recent attendance, Scottish residents[R]	2010-2012	

[R] Table revised October 2014. Full details given in each table

Figure No.	Name	Time period	File & size
1	Data sources for the Scottish Suicide Information Database	at March 2014	
2	Deaths caused by probable suicide – EASRs for persons aged 5 years and over, by NHS board area in Scotland	2009-2010	Excel [337kb]
3	Deaths caused by probable suicide by age-group and gender, Scotland	2009-12	
4	Deaths caused by probable suicide by age and method of suicide, Scotland	2009-12	
5	Deaths caused by probable suicide by age and method of suicide - Males, Scotland	2009-12	
6	Deaths caused by probable suicide by age and method of suicide - Females, Scotland	2009-12	

Contact

ScotSID analysis and report preparation:

Chris Black

Senior Information Analyst, Information Services Division

chrisblack@nhs.net

0131 275 7449

Craig Collins

Senior Information Analyst, Information Services Division

craig.collins@nhs.net

0141 282 2124

Dr Alison Burlison

Principal Information Analyst, Information Services Division

alison.burlison@nhs.net

0131 275 6216

ScotSID data management:

Dr Parveen Chishti

Data Manager, Information Services Division

parveen.chishti@nhs.net

0141 282 2084

Angela Prentice

Information Manger, Information Services Division

angela.prentice@nhs.net

0131 275 6691

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

Appendix 1 ScotSID Steering Group membership, February 2014

Name	Title/Organisation
Alana Atkinson	Programme Manager, National Programme for Suicide Prevention, NHS Health Scotland
Chris Black	Senior Information Analyst, Information Services Division
Alison Burlison	Principal Information Analyst, Information Services Division
Parveen Chishti	Data Manger, Information Services Division
David Christmas	Consultant Psychiatrist, NHS Tayside
Craig Collins	Senior Information Analyst, Information Services Division
Moira Connolly	Principal Medical Officer (Mental Health), Scottish Government
Frank Dixon	Vital Events Statistician, National Records of Scotland
Niall Kearney	Head of Mental Health Improvement Unit, Scottish Government
Monica Merson	Head of Health and Wellbeing Team, NHS Health Scotland
Stephen Platt	Emeritus Professor of Health Policy Research, University of Edinburgh; Chair of ScotSID Steering Group
Angela Prentice	Information Manger, Information Services Division
Cameron Stark	Consultant in Public Health Medicine, NHS Highland
Elaine Strange	Service Manager, Information Services Division
Mark Taylor	Consultant Psychiatrist, NHS Lothian
Joanna Teuton	Public Health Adviser (Evidence for Action), NHS Health Scotland
Rachel Watson	Head of Information Management Edinburgh, Police Scotland
Anna Wimberley	Clinical Governance Support and Development, Healthcare Improvement Scotland
Rachael Wood	Consultant in Public Health Medicine, Information Services Division
Clare Wyllie	Head of Policy and Research, Samaritans

Appendix 2 Policy context

Choose Life

The Scottish Government's Choose Life strategy and action plan [Ref.26] was launched in December 2002. This ten year action plan had seven objectives, the last of which stated:

'Knowing What Works: *improving the quality, collection, availability and dissemination of information on issues relating to suicidal behaviour (and self-harm) and on effective interventions to ensure the better design and implementation of responses and services and use of resources.'*

As part of the action plan, Choose Life set an NHS HEAT (Health improvement, Efficiency, Access to services and Treatment) target to reduce suicides in Scotland by 20% between 2002 and 2013. Over the last few years, a wide range of actions have been implemented to support people at risk of suicide. Whilst claims of a direct causal link through these actions cannot be made, there has been an 18% reduction in the suicide rate in Scotland between 2000-02 and 2010-12.

During the 2008 'Choose Life' summit, NHS Health Scotland made a commitment to lead work to establish a Scottish Suicide Information Database, in order to address the dearth of contextual information available within a central resource. This led to ISD being commissioned by NHS Health Scotland to develop, analyse and maintain such a database (ScotSID).

Suicide Prevention Strategy 2013-2016

Following an engagement process involving stakeholders and members of the public, and the deliberations of a Working Group and a Reference Group, the Scottish Government's new suicide prevention strategy [Ref.27] was developed and published in December 2013.

The strategy is structured around five themes, with 11 specific commitments for action. The key theme most pertinent to ScotSID is: *D Developing the evidence base*, where commitment 9 states:

'We will continue to fund the work of ScotSID and the Scottish element of the National Confidential Inquiry into Suicide and Homicide and we will also contribute to developing the national and international evidence base. In doing so we will work with statutory, voluntary sector and academic partners.'

The new strategy will build upon the success of the last 10 years, with new commitments for suicide prevention activities in communities and in services, supported by research evidence which has emerged in recent years.

Appendix 3 ScotSID cohort and suicide coding rules

The ScotSID cohort

The number of 'probable suicide' deaths included in ScotSID differs slightly from the number published by National Records of Scotland (NRS). Both use the same definition and old coding rules, and are based on the year in which a death is registered. However, unlike NRS, ScotSID excludes deaths of children aged less than 5 years (which are considered unlikely to be suicides). There were two such cases for deaths registered in the period 2009-2012 (Table A3, last column), and therefore the total number of probable suicides quoted in this publication (3,059) is two fewer than the number published by NRS (3,061). The ScotPHO website suicide topic publishes the same numbers as NRS.

Table A3 cross-tabulates year of registration with year of death for probable suicide deaths (old coding rules, NRS figures for all ages). Out of 3,061 probable suicide deaths registered in 2009-2012, only 80 (3%) did *not* occur in the year of registration. Note that the last (December 2012) ScotSID report was based on year of death rather than year of registration, for people aged 5 years and over.

Table A3: Deaths caused by probable suicide (old coding rules) - by year of registration (2009 to 2012) and year of death[1], Scotland, all ages

Year of registration	Year of death						
	2008	2009	2010	2011	2012	Total[1]	Age 0-4
2009	12	734				**746**	
2010		26	755			**781**	1
2011			20	**752**		**772**	1
2012				**22**	**740**	**762**	
Total[1]	n/a	**760**	**775**	**774**	n/a	**3,061**	**2**

[1] Totals by year of death are not given for 2008 and 2012 because the table does not show all the probable suicides for these years. For example, some deaths that occurred in 2012 would not be registered until 2013.

Changes in suicide coding rules

In 2011, NRS changed its coding practice to take account of changes made by the World Health Organization (WHO) to coding rules for certain causes of death. As a result there is a difference in how deaths data were coded for 2011 and 2012 compared to previous years, with some deaths previously coded under 'mental and behavioural disorders' now being classified as 'self-poisoning of undetermined intent' and consequently as suicides. NRS publish their annual mortality statistics for 'probable suicides' based on both the old and the new coding rules for 2011 onwards [Ref.28].

Based on NRS figures for all ages, the new coding rules increased the Scotland 'probable suicide' total by 117 deaths (from 772 to 889) in 2011, and by 68 deaths (from 762 to 830) in 2012. This ScotSID report presents 2011 and 2012 data based on the old rules (as estimated by NRS), ensuring consistency with the 2009 and 2010 data and facilitating the

exploration of temporal trends. Full details on changes to the coding of causes of death between 2010 and 2011 can be found on the NRS website.

Appendix 4 ScotSID comparisons of cause of death codes for suicide

Statistical note: All statements about differences in this Appendix are based on the findings of chi squared statistical tests, apart from occupational group (which had too many categories for a reliable analysis to be performed).

1. Deaths coded to intentional self-harm ('ISH') compared with deaths coded to undetermined intent using old coding rules ('UIO'), for the period 2009-12

As detailed in 'Definition of a probable suicide' (page 9), the main ScotSID report is based on all 'probable suicide' deaths registered in 2009-12. These deaths comprise two groups: those coded to intentional self-harm ('ISH'); and those coded to undetermined intent using old coding rules ('UIO'). The inclusion of deaths of undetermined intent in the operational definition of 'probable suicide' by NRS (following the lead given by ONS) is based on the assumption that these deaths are self-inflicted but there is insufficient evidence to prove that the deceased deliberately intended to kill him/herself [Ref.29]. There has been little effort, however, to assess whether intentional self-harm and undetermined intent deaths have similar profiles or characteristics. The greater the dissimilarity between the two groups, the greater the degree of uncertainty about the appropriateness of combining the two types of death into a single category ('probable suicide').

We undertook a comparative analysis, testing for statistically significant differences between ISH and UIO deaths in respect of the key variables explored in the main report. The results below are drawn from Tables 1.1 to 1.15 in the Appendix 4 spreadsheet.

Results:

ISH deaths were *more likely* to …

- Be male (ISH 75%; UIO 69%)
- Be younger (under 40 years: ISH 43%; UIO 35%)
- Be employed in managerial and professional occupations (ISH 24%; UIO 19%)
- Be living in less socio-economically disadvantaged areas (in the two least deprived SIMD quintiles: ISH 26%; UIO 21%)
- Use hanging as the suicide method (and less likely to use poisoning and drowning) (hanging: ISH 59%; UIO 3%).

ISH deaths were *less likely* to …

- Have had a general hospital inpatient/daycase episode within 12 months of death (ISH 28%; UIO 43%)
- Have had a mental health drug prescription within 12 months of death (ISH 56%; UIO 65%) [R]
- Have had an A&E attendance within 3 months of death (ISH 22%; UIO 34%; figures exclude attendances likely to have resulted from the suicidal act) [R].

There was *no difference* between ISH deaths and UIO deaths with regard to:

- Proportion classified as 'employees, apprentices, armed forces - other ranks' (55% overall)
- Having post mortem performed (90% overall)
- Having assessment at specialist drug treatment services within 12 months of death (6% overall)
- Having a psychiatric outpatient appointment within 12 months of death (20% overall).

There were substantial differences between NHS boards and local authorities in the proportion of 'probable suicides' (ISH plus UIO) which were coded 'definite suicides' (ISH). Overall, 73% of 'probable suicides' were coded ISH, but:

- NHS boards ranged from 48% (Shetland; 11/23) to 86% (Ayrshire & Arran; 155/180)
- Local authorities ranged from 48% (Shetland; 11/23) to 91% (Dundee City; 80/88).

Conclusion: The findings of this comparative analysis point to several socio-demographic and service-related (possibly clinical) differences between ISH and UIO deaths. This raises doubts about the appropriateness of the widely-adopted current operational definition of 'probable suicide' (ISH plus UIO and possibly UIN – undetermined intent using new coding rules).

In addition, the differences in the composition of 'probable suicides' across NHS boards and local authorities raise further questions about the reliability of assigning deaths to ISH versus UIO codes.

[R] In October 2014, these percentages were corrected in light of an error discovered in Table 26.

2. Comparison of deaths coded to undetermined intent using old coding rules ('UIO') and new coding rules ('UIN'), for the two-year period 2011-12

As detailed in Appendix 3, coding changes were introduced in 2011. This resulted in extra deaths being coded to one of the 'probable suicide' categories: undetermined intent. To ensure consistency with previous years' ScotSID data, however, only the *old coding rules* were used throughout the main part of this report (although the new data are also held in the database).

This section examines the differences between deaths coded to undetermined intent using old coding rules ('UIO') and new coding rules ('UIN'). It should be noted that all UIN deaths are classified as 'poisoning' by definition. Other systematic differences in the composition of UIO and UIN deaths would point to a lack of homogeneity within the category of undetermined deaths, as redefined following the 2011 coding changes. It would also cast

doubt on the value of applying an operational definition of 'probable suicide' that comprises *all* undetermined deaths (as well as intentional self-harm deaths).

We undertook a comparative analysis, testing for statistically significant differences between UIO and UIN deaths in respect of the key variables explored in the main report. The results below are drawn from Tables 2.1 to 2.15 in the Appendix 4 spreadsheet.

Results:

UIO deaths were *more likely* to …

- Be older (under 40 years: UIO 34%; UIN 70%)
- Be classified as 'employees, apprentices, armed forces - other ranks' (UIO 54%; UIN 36%)
- Be employed in managerial and professional occupations (UIO 21%; UIN 13%)
- Be living in less socio-economically disadvantaged areas (in the two least deprived deciles: UIO 21%; UIN 15%)
- Use a range of methods, not just poisoning (non-poisoning: UIO 39%; UIN 0%).

UIO deaths were *less likely* to …

- Have had a post mortem performed (UIO 87%; UIN 96%)
- Have had assessment at specialist drug treatment services within 12 months of death (UIO 2%; UIN 15%).

There was *no difference* between UIO deaths and UIN deaths with regard to:

- Gender (male: 69% overall)
- Having a general hospital inpatient/daycase episode within 12 months of death (43% overall)
- Having a psychiatric outpatient appointment within 12 months of death (25% overall)
- Having a mental health drug prescription within 12 months of death (67% overall)
- Having an A&E attendance within 3 months of death (38% overall – figures exclude attendances likely to have resulted from the suicidal act).

Conclusion: These findings point to contrasting socio-demographic profiles between the UIO and UIN groups. The service-related differences were less pronounced than for the comparison between ISH and UIO deaths above; however, this is probably due, at least in part, to the small sample size of the UIN group.

This analysis suggests that, regardless of whether it is appropriate to continue to adopt an operational definition of ‘probable suicide’ as ISH plus UIO, it may not be sensible to adopt a definition that includes *all* undetermined deaths (UIN as well as UIO).

Overall conclusion:

These two analyses raise urgent questions for UK statistical agencies about the appropriateness of continuing to adopt an operational definition of ‘probable suicide’ which

a) combines intentional self-harm deaths with undetermined intent deaths
b) combines undetermined intent deaths based on new coding rules with those based on old coding rules.

Additional analysis is required to test the validity of the 'probable suicide' category and further consideration should be given to reverting to the previous convention of reporting on ‘definite suicide’, i.e. intentional self-harm, alone.

Appendix 5 ScotSID data items

National Records of Scotland (NRS)
Date of death
Date of registration
Registration district number
Gender
Employment status
Occupation code
Marital status
Place of occurrence
Institution
Primary cause of death
Secondary cause of death
Post mortem
NHS board of residence
CHP code
Local government region
Local government district
Age
Council area
Country of residence code
SIMD quintile, based on postcode at time of death
SIMD decile, based on postcode at time of death
Time of death
Outpatient attendances (SMR00)
Specialty
Clinic date
Referral type
Clinic attendance (attendance status)
Date referral received
Referral reason 1
Referral reason 2
Referral reason 3
Referral reason 4
SG Urban rural code 2004
General acute hospital inpatient and day case records (SMR01)
Ethnic group
Main condition
Other condition 1
Other condition 2

Other condition 3
Other condition 4
Other condition 5
Admission date
Admission type
Old admission type code
Admission reason
Discharge date
Continuous inpatient stay
Length of stay
Health board of residence
Health board of treatment
SG Urban rural code 2004
Maternity records (SMR02)
Outcome of pregnancy, baby 1
Outcome of pregnancy, baby 2
Outcome of pregnancy, baby 3
Date of delivery
SG Urban rural code 2004
Discharges from mental health specialties (SMR04)
Ethnic group
Main condition at discharge
Other condition at discharge 1
Other condition at discharge 2
Other condition at discharge 3
Other condition at discharge 4
Other condition at discharge 5
Date of admission
Admission reason
Specialty
Date of discharge
Discharge type
Admission/transfer from
Waiting list type
Discharge/transfer to
Admission - referral from
Admission type
Treatment NHS board
Status on admission
SE Urban rural code 2004
Arrangements for aftercare 1

Arrangements for aftercare 2
Arrangements for aftercare 3
Arrangements for aftercare 4
Prescriptions dispensed in the community (Prescribing Information System, PIS)
Calendar year
Month
Approved name
Prescribable item name
Item code
Item description
Product description
Item strength
Item strength unit of measure
Drug formulation code
BNF chapter code
BNF section
BNF sub section
Defined daily dose conversation
Number of dispensed items
Number of defined daily doses dispensed
Dispensed quantity
Scottish Drug Misuse Database (SMR25)
Known illicit drug user assessment completed date
IV drug use
Contact with drug services
Recent illicit drug user
Illicit drug used in past month 1
Illicit drug used in past month 2
Illicit drug used in past month 3
Illicit drug used in past month 4
Illicit drug used in past month 5
Frequency drug 1
Frequency drug 2
Frequency drug 3
Frequency drug 4
Frequency drug 5
A&E attendances - September 2009 onwards
Location/hospital code
Case reference number
Arrival mode
Referral source

Diagnosis 1
Diagnosis 2
Diagnosis 3
Disease 1
Disease 2
Disease 3
Discharge destination
Referred to 1
Referred to 2
Referred to 3
Arrival date
Arrival time
Date of discharge, admission or transfer
Time of discharge, admission or transfer
Intent of injury
Presenting complaint
Health Improvement Scotland (HIS) - 2012 onwards
Review undertaken by NHS board (Y/N)
Referred to the Mental Welfare Commission for Scotland (Y/N)

Appendix 6 Prescribing Information System

The Prescribing Information System (PIS) is a comprehensive database of details of NHS prescriptions dispensed in the community in Scotland. ISD maintains the system, and the data come from Practitioner Services which processes NHS prescriptions for payment. The data include prescribing by GPs, nurses, dentists and pharmacists, and also hospital prescribing where items are dispensed in the community. Hospital dispensed prescriptions are not included in the figures. The data available cannot identify what proportion of the drugs dispensed are actually consumed or when they were consumed, and do not include products purchased 'over the counter'.

The following mental health medicines prescribed from the British National Formulary (BNF) were included in ScotSID:

- Hypnotics and anxiolytics indicated for the treatment of anxiety and insomnia (BNF 4.1)
- Drugs used in psychoses and related disorders (BNF 4.2)
- Antidepressant drugs (BNF 4.3).

Patient-based analysis has been made possible through the recent availability of comprehensive patient-identifiable data using the Community Health Index (CHI) number. Prior to April 2009, the proportion of prescriptions with a valid CHI number recorded was generally not comprehensive enough to make patient-based analysis possible. For medicines used in mental health, CHI capture rates have improved, becoming high enough to permit accurate patient analyses for financial years 2009/10 to 2012/13.

ScotSID analyses have been carried out for prescriptions dispensed within 12 months prior to death for probable suicides occurring in the period 2010-2012. Prior to April 2009, CHI capture rates were slightly lower which may have resulted in a slight undercount for patients who died in January to March 2010, but these patients are likely to have been included in patient counts through items dispensed to them later on. Table A6 shows the CHI recording completeness, calculated as the percentage of dispensed items that have a valid CHI number attached and are therefore included in the analysis.

Table A6: CHI recording completeness for Scotland, by drug type, 2009 to 2012

Topic[1]	2009	2010	2011	2012
Hypnotics and anxiolytics (BNF 04.01)	87.5%	92.7%	92.8%	94.5%
Drugs used in psychoses and related disorders (BNF 04.02)	87.5%	93.8%	94.0%	95.2%
Antidepressant drugs (BNF 04.03)	90.1%	95.4%	95.4%	97.0%

[1] BNF – British National Formulary sub-section.

Note that the date used to identify prescriptions for ScotSID cases was the 'paid date'. This is the last day of the month in which the prescription was processed by Practitioner Services and payment issued to the dispenser. In some cases, the 'paid month' may not be the same month that the prescription was prescribed and/or dispensed.

Appendix 7 Record linkage, data confidentiality and information governance

Record linkage

Record linkage is a means of identifying records in different databases that relate to the same individual [Ref.30]. For the purposes of the ScotSID database, two approaches were employed in order to link the different records together:

- Deterministic (or exact) matching – uses a common unique identifier (e.g. Community Health Index (CHI) number)
- Probability matching – uses a set of personal identifiers to estimate the *probability* that the two records correspond and to decide the threshold (level) of agreement for matching of records.

Deterministic matching was used when there was a common unique identifier between the datasets to be linked, for example the CHI number.

For linking other datasets where there was no common identifier, or there were completeness/data quality issues with the CHI number, probability matching was used. Probability matching takes account of typing errors, movement of individuals between geographical areas and other issues that may arise during data recording. This allows the 'linker' to quantify levels of agreement and disagreement between records.

CHI became mandatory for A&E attendances in September 2009, and therefore ScotSID (deterministic) linkage with A&E data was only possible for records after this date. For linkage to the Scottish Drugs Misuse Database, where CHI is not recorded, probability matching was used.

Data confidentiality and information governance

ScotSID links existing information relating to individuals who are thought to have died by suicide, from a range of sources. The specific data elements that were linked for this report include individuals' death records, hospital emergency, outpatient and inpatient attendance records, prescriptions dispensed in the community, and adverse event reviews for individuals who are thought to have died by suicide within a year of being under the care of NHS Scotland mental health services. It is envisaged that future linkages will extend to records from the Crown Office and Procurator Fiscal Service, and eventually also to GP records. The linkage of this information will enable as complete a picture as possible to be built up of those individuals who are thought to have died by suicide and will help identify high risk groups.

Full Privacy Advisory Committee (PAC) approval was obtained for the linkage of data items from individuals' ISD health records into ScotSID.

The person identifiable information used for linkage purposes and contained within ScotSID includes:

- Forename
- Surname
- Previous name
- Community Health Index (CHI) number
- Gender
- Postcode
- Date of birth
- Date of death/Date death registered

ScotSID is held within ISD in accordance with established information security and data protection/ confidentiality procedures. Access is limited to authorised ISD personnel only. Although information on those who have died is not directly covered by the Data Protection Act 1998, ISD considers that such data are protected by a Duty of Confidence and their confidentiality needs to be protected. ISD produced the document 'How the Scottish Suicide Information Database project meets the six Caldicott Guardian principles' which was disseminated to all NHS board Caldicott Guardians.

The person-identifiable data are stored separately from any contextual information and used only for linkage purposes to incorporate other datasets. For the purposes of this report, analysis was undertaken on a pseudo-anonymised dataset (data for which the personal identifiers had been removed and replaced with a unique identifier).

Appendix 8 Future ScotSID developments

The overall aim of the Scottish Suicide Information Database is to provide a central repository for information on all probable suicide deaths in Scotland, in order to support epidemiology, preventive activity, and policy making. Further investigation into additional data sources will help inform how ScotSID continues to develop and capture a wider range of information on the health and wider social circumstances of individuals.

Police sudden death reports, from the Crown Office and Procurator Fiscal Service (COPFS)

The COPFS has a duty to investigate all sudden and unexplained deaths, as well as deaths in suspicious circumstances. Deaths are usually reported to the Procurator Fiscal by the police, a doctor or the Registrar of Births, Deaths and Marriages. The COPFS's Scottish Fatalities Investigation Unit holds information on all sudden, suspicious, accidental and unexplained deaths in a central location for all 11 Procurator Fiscal areas in Scotland.

During 2014, consideration will be given to incorporating information from police sudden death reports obtained from the Scottish Fatalities Investigation Unit of the COPFS. Linking this additional source should provide a clearer picture of the factors leading to the suicide event and the circumstances surrounding it.

ISD are currently in the process of setting up a pilot exercise to evaluate the quality and completeness of police reports for those deaths due to intentional self-harm or events of undetermined intent. Once complete and if relevant, information governance processes will be established in order to link to ScotSID the data retrieved for all applicable deaths registered in 2009 onwards.

The police sudden death reports will be assessed for the following information:

- Date of suicidal act
- Time of suicidal act
- Place of suicidal act
- Suicide note
- Circumstances of death
- Ethnicity
- Employment status
- Occupation
- Recent event (last 12 months)
- Recent event type (last 12 months)
- Living where
- Living with whom
- Looked after or accommodated child
- Number of children <16 lived with deceased
- Number of biological children <16
- History of self-harm (ever)
- Method of previous self-harm episodes.

It is proposed that this information will be added to ScotSID in 2014 and will be included in the next ScotSID report which is due in spring 2015.

Primary care information

A pilot exercise, exploring the feasibility of extracting data on possible suicides from GP notes, was completed in 2011. Further investigation into obtaining GP data is on hold while a new national GP information system (the Scottish Primary Care Information Resource: SPIRE) is developed. This may provide a more efficient way of accessing primary care data for record linkage. It is planned that the SPIRE development project will be completed in December 2014, and primary care data will not be available for consideration for using in ScotSID until after that.

Appendix 9 Publication metadata (including revisions details)

Metadata Indicator	Description
Publication title	The Scottish Suicide Information Database Report 2014: July 2014 Revision
Description	This publication describes the development of the Scottish Suicide Information Database (ScotSID) and presents detailed information on deaths due to 'probable suicide' (intentional self-harm and undetermined intent) registered between January 2009 and December 2012.
Theme	Health and Social Care
Topic	Public Health
Format	PDF Document
Data source(s)	Linked data in ScotSID are from: death registrations (National Records of Scotland; NRS), general hospital inpatient and daycase records (SMR01), outpatient attendances (SMR00), maternity records (SMR02), Psychiatric hospital Inpatient/day case records (SMR04), Scottish Drug Misuse Database (SMR25), Accident and Emergency (A&E) attendances, prescriptions dispensed in the community (Prescribing Information System; PIS), and suicide review records (Healthcare Improvement Scotland; HIS).
Date that data are acquired	Range of dates up to 4 June 2014
Release date	29 July 2014 (with corrections made in October 2014)
Frequency	Annual
Timeframe of data and timeliness	Data based on 2009-12 finalised death registrations. The most recent (2012 calendar year) finalised registrations were released by NRS in August 2013. ISD then linked in a range of other datasets as they became available, with the latest being SMR25 data in March 2014.
Continuity of data	In 2011, NRS made a change to the way deaths are classified, to match changes in World Health Organization coding rules. The new coding rules resulted in some drug misuse deaths previously coded under 'mental and behavioural disorders' being classified as 'self-poisoning of undetermined intent' and therefore included as 'probable suicides'. To ensure consistency across the four years of data in the main report, only those undetermined intent deaths classified using the **old coding** criteria are included. Psychiatric hospital inpatient/daycase (SMR04) records for recent years were not considered complete enough at the time of publication of the original (29 April 2014) ScotSID report. These data became available for release in July 2014 (see 2014 interim report on Mental health hospital

	inpatient care) and so a revised ScotSID report was released then with the inclusion of SMR04 data. HIS suicide review data are newly available in this 2014 publication, covering 2012 only.
Revisions statement	The inclusion of additional datasets into ScotSID over time will help develop the database to capture a wider range of information on the health and social circumstances of individuals. In the coming year, consideration will be given to incorporating information from Procurator Fiscal reports and, when available, GP information from the developing Scottish Primary Care Information Resource (SPIRE) project.
Revisions relevant to this publication	This report is based on year of death registration, whereas the previous (December 2012) report was based on year of death. It makes little difference to the results, but aligns with NRS publications and permits more timely reporting. This report uses the new NHS board boundaries which came into effect on 1 April 2014, while the previous report used the previous board configuration. This report reflects the recent addition of data relating to suicide reviews from HIS. Psychiatric hospital inpatient/daycase (SMR04) records for recent years were not considered complete enough at the time of publication of the original (29 April 2014) ScotSID report. These data became available for release in July 2014 (see 2014 interim report on Mental health hospital inpatient care) and so a revised ScotSID report was released then with the inclusion of SMR04 data. Post publication, in October 2014, it was discovered that Table 26 erroneously included the numbers of deaths from probable suicide of non-Scottish residents, instead of being limited to just Scottish residents. This was corrected, along with the linked Tables 27-32 in sections 2.6 (Mental health dug prescribing in the community) and 2.7 (Accident and Emergency attendances). Appendix 4 and the Key Points section were also corrected. This does not affect the overall interpretation or conclusions to be drawn from the data.
Concepts and definitions	The definition of a probable suicide for ScotSID is based on the NRS classification of deaths due to intentional self-harm or undetermined intent based on old coding rules. (Further details under Continuity of data above.) Full details on changes to the coding of causes of death between 2010 and 2011 can be found on the NRS website. As deaths of people aged less than 5 are not likely to be suicides, these have been excluded from the statistics in

	this publication.
Relevance and key uses of the statistics	The overall aim of ScotSID is to provide a central repository for information on all probable suicide deaths in Scotland, in order to support epidemiology, policy-making and suicide prevention.
Accuracy	Quality checks are conducted by ISD. Figures are compared to previously published data and expected trends.
Completeness	Completeness rates of the SMRs held by ISD and contained in ScotSID can be found on ISD's SMR completeness webpage.
Comparability	Some data contained in the report are comparable to those of other European countries and studies carried out in England and Wales. Comments on this are made where relevant throughout the report.
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines.
Coherence and clarity	All ScotSID tables and charts are accessible via ISD's Mental Health webpage.
Value type and unit of measurement	Numbers, percentages, crude and European age-sex standardised rates per 100,000 population, and 95% confidence intervals.
Disclosure	ISD's Statistical Disclosure Control Protocol is followed. The likelihood and impact of disclosure were assessed as low and medium risk respectively, and no disclosure control was applied.
Official Statistics designation	Official Statistics
UK Statistics Authority Assessment	Not submitted for assessment
Last published	29 April 2014
Next published	April 2015
Date of first publication	20 Dec 2011
Help email	nss.isdmentalhealth@nhs.net
Date form completed	10 July 2014

Appendix 10 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

Extended Pre-Release Access

Extended Pre-Release Access of 8 working days is given to a small number of named individuals in the Scottish Government Health Department (Analytical Services Division). This Pre-Release Access is for the sole purpose of enabling that department to gain an understanding of the statistics prior to briefing others in Scottish Government (during the period of standard Pre-Release Access).

Scottish Government Health Department (Analytical Services Division)

Members of the ScotSID Steering Group (see Appendix 1)

Senior Corporate Communications Manager, NHS Health Scotland.

Early Access for Quality Assurance

These statistics will also have been made available to those who needed access to help quality assure the publication:

Members of the ScotSID Steering Group (see Appendix 1).

Appendix 11 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 (i.e. assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (i.e. legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (i.e. 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.

These statistics are Official Statistics.