ScotPHO Suicide Statistics Publication – released July 2012.

NOTE: This is an Archive Report of the content of the Suicide Statistics web pages on the ScotPHO website, prior to a new annual update in August 2013. Links, interactive tables and related excel files have been removed.

For the most up to date release, go to the <u>ScotPHO suicide page</u>. Please direct any enquires to <u>scotpho@nhs.net</u>.

Suicide: key points

- In 2011 the National Records of Scotland (NRS) made a change to the way deaths are classified to match changes in World Health Organisation (WHO) coding rules. This has resulted in some deaths previously coded under 'mental and behavioural disorders' now being classed as 'self-poisoning of undetermined intent' and therefore included in the suicide figures. NRS has estimated what the suicide figures for 2011 would have been, had the data been coded using the old rules, in order that users of these statistics can see the underlying changes between 2010 and 2011 and the longer-term trends without the break in series caused by the introduction of the new coding rules.
- This ScotPHO update primarily presents 2011 data relating to the old rules (as estimated by NRS) so that trends over time can be assessed. We also present 2011 data based on the new rules when single year (rather than rolling average) estimates are shown. For any analysis over time, data based on the old coding rules is the appropriate set to use and 2011 data based on the new rules is not directly comparable.
- There were 889 suicides (deaths from intentional self harm and events of undetermined intent combined) in Scotland in 2011. However, NRS estimate that only 772 of these would have been counted as suicides under the old coding rules. The latter number equates to an age-sex-standardised rate of 14.5 per 100,000 population compared to 14.7 per 100,000 in 2010.
- Based on estimates using the old coding rules for 2011, three-year rolling averages between 2000-02 and 2009-11 shows there was a 17% fall in suicide rates overall (19% for males and 9% for females). The national target is to reduce the suicide rate in Scotland by 20% between 2000-02 and 2011-2013.
- In 2011, the suicide rate for males was almost three times that for females.
- Suicide is a leading cause of mortality in those under the age of 35 years.
- Suicide rates generally increase with increasing deprivation, with rates in the most deprived areas of Scotland significantly higher than the Scottish average. The rate is four times higher in the most deprived decile (tenth of the population) compared to the least deprived decile.

- Suicide rates vary among NHS boards and local authority areas. Based on the old coding rules, between 2002-06 and 2007-11 the age-sex-standardised suicide rate per 100,000 population decreased in 9 of the 14 NHS Boards and 15 of the 32 local authorities. The rate for 2007-11 was significantly higher than the rate for Scotland in one NHS board (Greater Glasgow and Clyde) and two local authority areas (Glasgow City and West Dunbartonshire).
- In 2008 (the latest year for which comparable UK data are available) the Scottish female rate (7.7 per 100,000 population) was higher than rates in other countries in the UK, for example, 3.8 for England and Wales. In 2008 the Scottish male rate was 24.1 per 100,000 population, compared to 12.6 in England and Wales. Note that numbers of suicides (and therefore suicide rates) in the smaller nations of the UK are subject to a greater degree of year-on year fluctuation than in England. In making UK comparisons it would be preferable to use pooled rates over several years. but as only annual data was available, caution should be taken when interpreting these data.

Full details on changes to the coding of causes of death in 2011 can be found on the NRS website.

ScotPHO welcomes feedback from users on the information included in this update and the manner of presentation. Any comments on how the data is used and presented and how this could be improved can be emailed to us at scotpho@nhs.net.

Section updates:

The last major update of this section was completed in August 2012.

The next major update is due to be carried out by end August 2013.

Suicide: introduction

Many factors put individuals at risk of suicide, with four key groups of risk factors identified:

- risks and pressures within society, including poverty and inequalities, access to methods
 of suicide, prevalence of alcohol problems and substance misuse, and changing trends
 in society such as marital breakdown;
- risks and pressures within communities, including neighbourhood deprivation, social exclusion, isolation, and inadequate access to local services;
- risks and pressures for individuals, including sociodemographic characteristics, previous deliberate self harm, lack of care, treatment and support towards recovery from serious mental illness, loss (e.g. bereavement or divorce), and experience of abuse;
- quality of response from services, including insufficient identification of those at risk.

The relationship between these factors is complex. Choose Life's action plan - Scotland's suicide prevention strategy and action plan - states that such factors should not be addressed in isolation.

The epidemiology of suicide in Scotland 1989-2004 published in March 2007 examines temporal trends and risk factors.

Risk and Protective Factors for Suicide and Suicidal Behaviour published in December 2008 is a systematic international literature review of review-level data on suicide risk factors and primary evidence of protective factors against suicide.

Please note that when considering suicide data, it is conventional to combine deaths by intentional self harm with deaths of undetermined intent.

Suicide: policy context

The Scottish Government's Choose Life strategy and action plan was launched in December 2002. This ten year National Strategy and Action Plan has seven objectives:

- Early Prevention and Intervention: providing earlier intervention and support to prevent problems and reduce the risks that might lead to suicidal behavior
- Responding to Immediate Crisis: providing support and services to people at risk/in crisis, to provide an immediate response and to help reduce the
- severity of any immediate problem
- Longer Term Work to Provide Hope and Support Recovery: providing on-going support and services to enable people to recover and deal with the issues that may be contributing to their suicidal behavior
- Coping with Suicidal Behaviour and Completed Suicide: providing effective support to those who are affected by suicidal behaviour or a completed suicide
- Promoting Greater Public Awareness and Encouraging People to Seek Help Early:
 ensuring greater public awareness of positive mental health and wellbeing, suicidal
 behaviour, potential problems and risks amongst all age groups and encouraging people
 to seek help early
- Supporting the Media: ensuring that any depiction or reporting by all sections of the media of a completed suicide or suicidal behaviour is undertaken sensitively and appropriately and with due respect for confidentiality
- Knowing What Work s: 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.

Choose Life was established by the National Programme for Improving Mental Health and Wellbeing in Scotland and now resides as a cross cutting programme within NHS Health Scotland. The Choose Life website is the key suicide prevention portal for Scotland. The website provides details of local and national activity, as well as information on training, research, awareness raising and other initiatives.

In 2010, a national suicide review group, led by the Scottish Government, met to consider the findings of the two evaluations undertaken so far to assess the impact of the strategy. As a result, a refresh of the National Strategy and Action Plan has been published to better reflect what the focus of the work needs

Choose Life refreshed objectives

- Identify and intervene to reduce suicidal behaviour in high risk groups.
- Develop and implement a co-ordinated approach to reduce suicidal behaviour.

- Ensure interventions to reduce suicidal behaviour are informed by evidence from research and evaluated appropriately.
- Provide support to those affected by suicidal behaviour.
- Provide education and training about suicidal behaviour and promote awareness about the help available.
- Reduce availability and lethality of methods used in suicidal behaviour.

Key high risk groups

Although the Choose Life strategy acknowledges that anyone can have thoughts of suicide, evidence gathered during the life of the strategy suggests that certain groups are at a higher relative risk of suicide; these are:

- people experiencing mental illness (primarily depression and bi-polar disorder)
- people who misuse substances especially alcohol
- people with co-existing mental illness and substance misuse
- people who have a history of self-harm or who have attempted suicide
- people in psychiatric care and those recently discharged from psychiatric hospital
- · people recently bereaved
- people living in areas of socio-economic deprivation
- people with low socio-economic status
- people who are unemployed
- people who have experienced life stress especially physical and/or sexual abuse
- · people who are lesbian, gay, bisexual or transgender

The Scottish Government publication Towards a Mentally Flourishing Scotland 2009-2011, sets out targets and commitments for the development of mental health services in Scotland. Published in May 2009, it makes a commitment to reduce the suicide rate between 2002 and 2013 by 20%, supported by 50% of key front-line staff in mental health and substance misuse services, primary care and accident and emergency being educated and trained in using suicide assessment tools/suicide prevention training programmes by 2010.

*Suicide prevention is an umbrella term for collective efforts both nationally and locally. In Scotland, suicide prevention efforts are guided by the Choose Life national strategy published by the Scottish Executive in 2002. Suicide prevention interventions fall into two broad categories: prevention targeted at the level of the individual and prevention targeted at the whole of the population.

Suicide: national trends

In 2011, 639 males and 250 females died from suicide (intentional self harm and events of undetermined intent combined). However, NRS estimate that 555 males and 217 females would have been counted as suicides under the previous WHO coding rules.

Chart 1 (view chart) shows national suicide trends in Scotland over the past 30 years. Based on the old coding rules, in 2011 the European age-sexstandardised rate (EASR) was 14.5 deaths per 100,000 population, a decrease from 14.7 per 100,000 in 2010. The rate peaked at 17.6 deaths per 100,000 population in 1993 and again in 2002.

The EASR for males has increased from 19.8 deaths per 100,000 in 1982 to 21.2 in 2011, based on estimates using the old coding rules. However, this includes a general increase in the 1990s and a general decrease in recent years. For females, rates have decreased from 9.7 deaths per 100,000 in 1982 to 7.1 in 2011 based on estimates using the old coding rules. Therefore in 2011 the suicide rate for males was almost three times that for females.

Based on the new coding rules, in 2011 the rate was 16.9 deaths per 100,000 population (24.6 deaths per 100,000 population for males and 9.1 deaths per 100,000 for females).

Three-year rolling averages using estimates using the old coding rules for 2011 show that between 2000-02 and 2009-11 there was a 17% fall in suicide rates overall (19% for males and 9% for females). The national target is to reduce the suicide rate in Scotland by 20% between 2000-02 and 2011-2013

These EASRs, along with numbers and crude rates by 5-year age band, sex and year, are available in the Suicide_National_Overview (101KB).

Suicide categories

Chart 2 (view chart) presents the trends for intentional self harm and events of undetermined intent separately (using estimates based on the old coding rules for 2011), and shows that recent declines have been due to a reduction in deaths recorded in both categories. The change to cause of death coding in 2011 has resulted in an increase in events of undetermined intent with some deaths previously coded under 'mental and behavioural disorders' now being classed as 'self-poisoning of undetermined intent' (data not shown in chart).

Age groups

Chart 3 (view chart) shows age-specific suicide rates for males across two three-year time periods: 1989-1991 and 2009-2011 (using estimates of the old coding rule for 2011). Over this 20 year period the rates have decreased in males in the age groups 15-24 years, 25-34 years and 55 years and over, with the biggest decrease in those aged 65 and over. Rates have increased in males in the age groups between 35 and 54, with the highest rate in males aged 35-44 years.

Chart 4 (view chart) shows the same information for females. Over the 20 year period there has been a large decrease in rates in the age groups 55 years and over, and an increase in younger age groups. The highest rate is in females aged 35-44 years.

Important note in relation to chart 1 and 2 and the Suicide National Overview excel file: Annual changes are based on relatively small numbers, so may not be statistically significant. For monitoring purposes it is conventional to pool rates over a three-year period, and develop three-year rolling averages. In this way, attention shifts from yearly fluctuations. Notwithstanding this convention, we have also included annual data in charts 1 and 2 in the interests of transparency.

Note: In 2011 the National Records of Scotland (NRS) changed its coding practice to take account of changes made by the World Health Organisation (WHO) to coding rules for certain causes of death. As a result there is a difference in how death data were coded for 2011 compared to previous years, with some deaths previously coded under 'mental and behavioural disorders' now being classed as 'self-poisoning of undetermined intent' and consequently as suicides. Full details on Changes to the coding of causes of death between 2010 and 2011 can be found on the NRS website .

Suicide: by NHS board

This page provides breakdowns of suicides (deaths caused by intentional self harm and events of undetermined intent) by NHS board area.

The Suicide NHS Board overview (70KB) spreadsheet contains numbers, crude rates and European age-standardised rates (EASRs) for persons (see Persons Trend), males (see Male Trend) and females (see Female Trend) from 1987-1991 to 2007-2011 (based on estimates using the old coding rules for 2011). The EASRs are also charted (see Charts 1-3 in excel file). An annual breakdown of suicides is also available from 1982 to 2011 (see Annual Deaths) which presents the 2011 results based on the old and new coding rules. Explanation of EASRs and confidence intervals is given at the bottom of this page and in the downloadable spreadsheet.

Based on estimates using the old coding rules for 2011, between 2002-2006 and 2007-2011 the age-sex-standardised suicide rate per 100,000 population decreased in 9 of the 14 NHS boards. Increases were seen in Dumfries & Galloway, Lanarkshire, Lothian, Shetland and the Western Isles.

Chart 1 (in excel file) shows that during 2007-11 suicide rates were significantly higher in Greater Glasgow & Clyde NHS Board when compared to rates across Scotland as a whole.

For males (chart 2 in excel file), suicide rates during 2007-11 were significantly higher in Greater Glasgow & Clyde and Shetland NHS Boards, and significantly lower in Forth Valley NHS Board, than in Scotland as a whole. For females (chart 3 in excel file), suicide rates in 2011 were significantly higher in Greater Glasgow & Clyde NHS Board and significantly lower in Fife and Forth Valley NHS Boards, than in Scotland as a whole.

Further NHS Board data (5-year moving averages) are available from the vital events reference tables on the National Records of Scotland (NRS, formerly GROS) website.

Note: In 2011 the National Records of Scotland (NRS) changed its coding practice to take account of changes made by the World Health Organisation (WHO) to coding rules for certain causes of death. As a result there is a difference in how death data were coded for 2011 compared to previous years data, with some deaths previously coded under 'mental and behavioural disorders' now being classed as 'self-poisoning of undetermined intent' and consequently as suicides. Full details on Changes to the coding of causes of death between 2010 and 2011 can be found on the NRS website.

Explanation of EASRs and confidence intervals

European age-standardised rates (EASR) are presented for each NHS board area. In order to compare rates in populations with different age structures (i.e. different areas or over time), rates can be age-standardised by applying a 'standard population' structure. The standardised rate is calculated by multiplying each crude age-specific rate by the corresponding age group weight from the standard population (in this case the hypothetical European Standard population) and then summing up these values over all ages. The rate per 100,000 population is then displayed.

The vertical lines represent 95% confidence intervals. These confidence intervals describe the degree of uncertainty around the EASR. The width of the confidence interval depends on the sample size from which the estimate is derived and the underlying variability in the data. A 95% confidence interval implies that 95 times out of 100 the interval will include the true underlying rate.

If the confidence interval around an NHS board rate does not include the Scotland rate it can be said that the suicide rate in the NHS board is significantly higher or lower than the rate across Scotland as a whole.

Suicide: by local authority

This page provides breakdowns of suicide (deaths from intentional self harm and events of undetermined intent) by local authority.

The Suicide local authority overview (125Kb) spreadsheet contains numbers, crude rates and European age-standardised rates (EASRs) for persons (see Persons Trend), males (see Male Trend) and females (see Female Trend) from 1987-1991 to 2007-2011 (based on estimates of the old coding rules for 2011). The EASRs are also charted (see Charts 1-3 in excel file). An annual breakdown of suicides is also available from 1982 to 2011 (see Annual Deaths) which presents the 2011 results based on the old and new coding rules. Explanation of EASRs and confidence intervals is given at the bottom of this page and in the downloadable spreadsheet.

Using estimates based on the old coding rules for 2011, between 2002-2006 and 2007-2011 the suicide age-sex-standardised rate per 100,000 population decreased in 15 of the 32 local authorities and increased in the remainder, namely Aberdeenshire, Argyll & Bute, Dumfries & Galloway, Dundee City, East Lothian, East Renfrewshire, City of Edinburgh, Falkirk, Moray, North Lanarkshire, Renfrewshire, Shetland Islands, South Ayrshire, South Lanarkshire, West Dunbartonshire, West Lothian and the Western Isles.

Chart 1 (in excel file) shows that in 2007-2011 the suicide rate was significantly higher in Glasgow City and West Dunbartonshire than in Scotland as a whole, and significantly lower in Perth & Kinross, than in Scotland as a whole.

For males (chart 2 in excel file), the suicide rates in 2007-11 were significantly higher in Glasgow City, Inverclyde, Renfrewshire, Shetland Islands and West Dunbartonshire, and significantly lower in Aberdeen City, East Renfrewshire and Perth & Kinross, than in Scotland as a whole.

For females (chart 3 in excel file), the suicide rates in 2007-11 were significantly higher in Dundee City, Glasgow City, North Lanarkshire, Moray and West Dunbartonshire, and significantly lower in Aberdeenshire, East Dunbartonshire, Fife, Stirling and Perth & Kinross, than for Scotland as a whole.

Further local authority data (5-year moving averages) are available from the vital events reference tables on the National Records of Scotland (NRS) (formerly GROS) website.

Note: In 2011 the National Records of Scotland (NRS) upgraded the software used to code causes of death to take account of updates made by the World Health Organisation (WHO) to the codes for certain causes of death. As a result there is a difference in how death data was coded for 2011 compared to previous years data, with deaths previously coded under 'mental and behavioural disorders' now being classed as 'self-poisoning of undetermined intent' and consequently as suicides. Full details on Changes to the coding of causes of death between 2010 and 2011 can be found on the NRS website.

Explanation of EASRs and confidence intervals

The European age-standardised rates (EASR) of each local authority area are presented. In order to compare rates in populations with different age structures (i.e. different areas or over

time), rates can be age-standardised by applying a 'standard population'. The standardised rate is calculated by multiplying each crude age-specific rate by the corresponding age group weight from the standard population (in this case the hypothetical European Standard) and then summing up these values over all ages. The rate per 100,000 population is then displayed.

The vertical lines represent 95% confidence intervals. These confidence intervals describe the degree of uncertainty around the EASR. The width of the confidence interval depends on the sample size from which the estimate is derived and the underlying variability in the data. A 95% confidence interval implies that 95 times out of 100 the interval will include the true underlying rate.

If the confidence interval around a local authority rate does not include the Scotland rate it can be said that the suicide rate in the local authority is significantly higher or lower than the rate across Scotland as a whole.

Suicide: deprivation

The risk of death by suicide (intentional self harm and events of undetermined intent combined) has been analysed for areas classified by the Scottish Index of Multiple Deprivation 2009 Version 2 (SIMD 2009 V2). Small areas of Scotland were assigned a deprivation score and grouped into 10 deciles (tenths of the population) where 10 = Least Deprived and 1 = Most Deprived.

The Suicide deprivation overview (45KB) spreadsheet shows suicide numbers, crude rates and European age-standardised rates (EASRs) for the two latest 5-year time periods (2002-2006 & 2007-2011) by deprivation decile presenting at person (see Persons trend), male (see Male Trend) and female (Female trend) level. EASR charts for 2007-2011 are also presented (see Charts 1-3 in excel file). The figures for 2011 are estimates based on the old coding rules for consistency.

For both sexes, chart 1 (in excel file) shows that the age-sex-standardised suicide rate is significantly lower for people living in the least deprived decile of Scotland (EASR=7.7 per 100,000 population) compared to the Scottish average (EASR=15.1 per 100,000 population). The rates are significantly lower than the Scottish average for the four least deprived deciles.

Risk generally increases with increasing deprivation, and those living in areas in the three most deprived deciles of Scotland have a significantly increased risk of suicide compared to Scotland as a whole. Suicide rates in the most deprived decile (EASR=30.4 per 100,000 population) were double the Scotlish average.

A very similar trend is observed when looking at males and females (charts 2 and 3 in excel file) separately.

Note: In 2011 the National Records of Scotland (NRS) changed its coding practice to take account of changes made by the World Health Organisation (WHO) to coding rules for certain causes of death. As a result there is a difference in how death data were coded for 2011 compared to previous years data, with some deaths previously coded under 'mental and behavioural disorders' now being classed as 'self-poisoning of undetermined intent' and consequently as suicides. Full details on Changes to the coding of causes of death between 2010 and 2011 can be found on the NRS website.

Explanation of EASRs and confidence intervals

The European age-standardised rates (EASR) of each deprivation decile are presented. In order to compare rates in populations with different age structures (i.e. different areas or over time), rates can be age-standardised by applying a 'standard population'. The standardised rate is calculated by multiplying each crude age-specific rate by the corresponding age group weight from the standard population (in this case the hypothetical European Standard) and then summing up these values over all age. The rate per 100,000 population is then displayed.

The vertical lines represent 95% confidence intervals. These confidence intervals describe the degree of uncertainty around the EASR. The width of the confidence interval depends on the sample size from which the estimate is derived and the underlying variability in the data. A 95% confidence interval implies that 95 times out of 100 the interval will include the true underlying rate.

If the confidence interval around a deprivation decile rate does not include the Scotland rate it can be said that the suicide rate in the deprivation decile is significantly higher or lower than the rate across Scotland as a whole.

Suicide: in the UK

Mortality rates from suicides (intentional self harm and events of undetermined intent combined) for males and females (all ages) are compared between: the UK; England, Wales & elsewhere*; Scotland; and Northern Ireland, for 2008 (latest comparable data available for all the countries from United Kingdom Health Statistics 2010 - Chapter 7: Mortality and life expectancy (when excel file opens click on tab "7.2b Full") (319Kb)).

Comparions between Scotland and UK data have not been updated here, as 2008 data remain the most recent comparable figures. The coding changes implemented for 2011 suicide data therefore do not effect this analysis.

Chart 1 (view chart) shows suicide rates for males for these countries. Both the Scotland and Northern Ireland rate, 24.1 and 24.7 per 100,000 population respectively, are approximately double the 'England, Wales & elsewhere' rate.

Chart 2 (view chart) shows the corresponding suicide rates for females. The Scotland rate is highest at 7.7 per 100,000 population, double that of the 'England, Wales & elsewhere' rate (3.8 per 100,000 population).

Important note in relation to chart 1 and 2: Numbers of suicides (and therefore suicide rates) in the smaller nations of the UK are subject to a greater degree of year-on-year fluctuation than is found in England. In making UK comparisons it is therefore preferable to use pooled rates over several years. Pooled rates were not available, however, so caution should be taken when interpreting these data.

A report from ONS reports that the number of suicides in adults aged 15 and over in the UK has fallen during the time period 1991 to 2009. In 2009 there were 5,675 suicides, 31 more than in 2008 (5,706) and 642 less than in 1991 (6,317).

Suicide rates in the UK as a whole in 2009 saw a small decrease from the previous year in both men and women. In 2009 the rate for men was 17.5 per 100,000 population compared to 17.7 the previous year. Male suicide rates reached a peak of 21.1 per 100,000 in 1998. Female suicide rates have been consistently much lower than males and have decreased more steadily. The rate for women in 2009 was 5.2 per 100,000 population compared to 5.4 in 2008.

* 'England, Wales and Elsewhere' covers both Residents and Non-Residents, comparable with Scotland and Northern Ireland data. Separate 'England' and 'Wales' categories cover Residents only.

Suicide: international

International mortality rates from suicide (not including undetermined intent) are published annually by OECD in their Health at a Glance publications for the UK compared to other OECD countries. The UK rate is lower than the OECD average.

International mortality rates from suicide (not including undetermined intent) are also included in the Scotland and European Health for all Database – and compares Scotland and the UK with other European countries. The Scotland rate has generally been lower or around the EU average since the 1980s.

However, when considering suicide data, it is conventional to combine deaths by intentional self harm with deaths of undetermined intent as it is believed that the overwhelming majority of 'undetermined' deaths are probable suicides. This is particularly necessary when comparing data from different countries as differing legal arrangements and social/religious attitudes may lead to different proportions of likely suicides being assigned to these two groups. In England and Wales, for example, all possible suicides are subject to a public inquest in a coroner's court. Before returning a verdict of suicide, the coroner will require proof 'beyond all reasonable doubt'. Many possible suicides end up as 'open' verdicts and are subsequently included in the mortality statistics for England and Wales as 'undetermined' deaths.

Suicide: mental illness

The National Confidential Inquiry (NCI) into Suicides and Homicides by People with Mental Illness collects national data on suicides and homicides by people under psychiatric services (defined as those who have had service contact within the previous year).

The National Confidential Inquiry is a research project funded largely by the National Patient Safety Agency (NPSA). Other funders are the Scottish Executive and Department of Health and Social Services in Northern Ireland.

The NCI reports that approximately one quarter of suicides in England and Wales, Scotland and Northern Ireland had been in contact with mental health services in the year before death. View the most recent reports on the NCI website.

Information on mental health is available on the Mental Health section of the ScotPHO website.

Suicide: key data sources

The National Records of Scotland (NRS) (formally GROS) compiles the official statistics on suicides (i.e. deaths caused by intentional self-harm and events of undetermined intent) in Scotland.

The Office for National Statistics (ONS) compiles the suicide data for England and Wales.

The Northern Ireland Statistics & Research Agency (NISRA) collects the suicide data for Northern Ireland.

The Central Statistics Office Ireland compiles the data for the Republic of Ireland.

When considering suicide data, it is conventional to combine deaths by intentional self harm with deaths of undetermined intent as it is believed that the overwhelming majority of 'undetermined' deaths are probable suicides. This is particularly necessary when comparing data from different countries as differing legal arrangements and social/religious attitudes may lead to different proportions of likely suicides being assigned to these two groups.

In England and Wales, for example, all possible suicides are subject to a public inquest in a coroner's court. Before returning a verdict of suicide, the coroner will require proof 'beyond all reasonable doubt'. Many possible suicides end up as 'open' verdicts and are subsequently included in the mortality statistics for England and Wales as 'undetermined' deaths.

It is advisable to exclude those data classified as "pending investigation" (i.e ICD-9 E988.8 and ICD-10 Y33.9) as these codes are used in England and Wales in cases where a coroner adjourns an inquest awaiting prosecution of a third party, with a large proportion subsequently found to be homicides.

Suicide: key references and evidence

References

Choose Life: A National Strategy and Action Plan to Prevent Suicide in Scotland. Scottish Government. 2002.

National Programme for improving Mental Health and Well-Being: action plan . Scottish Government, 2003.(289kb)

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, 2007.

Stark C, Hopkins P, Gibbs D, Rapson T, Belbin A, Hay A. Suicide in Scotland: Trends, Occupational Associations and Rurality. *University of Aberdeen*, 2004.

Levin KA. Leyland AH. Urban/rural inequalities in suicide in Scotland, 1981-1999. *Soc Sci Med* 2005; 60: 287790.

Boyle P, Exeter D, Feng Z, Flowerdew R. Suicide gap among young adults in Scotland: population study. *BMJ* 2005; 330: 175-6.

Hawton K (ed). Prevention and treatment of suicidal behaviour: from science to practice. *Oxford University Press*, 2005.

Camidge RD, Stockton DL, Frame S, Wood R, Bain M, Bateman DN. Hospital admissions and deaths relating to deliberate self-harm and accidents within five years of a cancer diagnosis: A national study in Scotland, UK. *BJC* 2007; 96: 752-757.

Risk and Protective Factors for Suicide and Suicidal Behaviour: A systematic international literature review of review-level data on suicide risk factors and primary evidence of protective factors against suicide. Scottish Government, 2008.

Towards a Mentally Flourishing Scotland, 2009-2011: This policy and action plan outlines the Government's plans for mental health improvement for the period 2009-2011. Scottish Government, 2009

A report by Meltzer and others titled Non-fatal suicidal behaviour among adults aged 16 to 74 in Great Britain (631kb) presents the analysis of the data on suicidal thoughts and attempts collected in the 2000 ONS survey of psychiatric morbidity among adults in Great Britain.

Refreshing The National Strategy and Action Plan to Prevent Suicide in Scotland: Report of The National Suicide Prevention Working Group. October 2010.

Effectiveness evidence

ScotPHO's purpose is to describe the pattern of health across the Scottish population. As a supplementary service to users, we include the following links to external sources of quality-assured evidence on effectiveness of interventions which may include relevant material for this topic. These links are provided as an aid to users. They are by no means exhaustive nor should they be necessarily viewed as authoritative.

NHS Health Scotland: Scottish Briefings on NICE public health guidance - Index page

NHS Evidence: Public health evidence - Home page

Centre for Reviews and Dissemination - Home page

Cochrane Reviews - Topic index page

EPPI-Centre: Evidence library - Home page

National Institute for Health and Clinical Excellence (NICE) guidance - Topic index page

Scottish Intercollegiate Guidelines Network (SIGN) - Home page

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Suicide: useful links

The Scottish Suicide Information Database Report 2012 is an ISD publication describing the development of the Scottish Suicide Information Database (ScotSID). It includes expanded information on demographics and occupation and contact with health services.

The Choose Life website is the key suicide prevention portal for Scotland. This website provides details of local and national activity.

The National Records of Scotland (NRS) (formally GROS) publish additional information relating to suicides in Scotland.

Another resource which may be of interest is the National Confidential Inquiry into suicides and homicides by people with mental illness.

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