# Some of the uses of the Vital Events statistics - as at November 2010

This note describes some of the uses which are made of the Vital Events statistics which are produced by the National Records of Scotland (NRS), formerly the General Register Office for Scotland (GROS), whether in the form of figures which are taken from NRS's publications or tables on the NRS web site, or in the form of more detailed tables and data which are produced from NRS's statistical databases.
**Please Note :** This note was produced in November 2010, and therefore reflects the position at that time: so it does not take account of any subsequent changes that may have been made to (e.g.) the documents and links which are referred to below, or the targets and indicators which use NRS statistics.

The uses are grouped under the following headings:

- Developing policy on health-related topics
- For indicators, and to assess progress towards targets
- Other legislation and Parliamentary Questions
- Health Service organisations
- Research studies
- International comparisons
- Estimates of population size and life expectancy
- Selecting samples for surveys

### Developing policy on health-related topics

Vital Events statistics data are used for many purposes. They inform the development of policy on many health-related topics. For example:

- Alcohol-related deaths - in debate about options to reduce the costs of alcohol misuse in Scotland, and the Scottish Government (SG) proposal to introduce a minimum price per unit of alcohol.
- Drug-related deaths - data about the scale of the problem, and the types of people affected, are required by the National Forum on Drug-related Deaths (http://www.scotland.gov.uk/Publications/2010/07/30140320/0), the SG's Drugs Policy Unit, and bodies such as local Alcohol and Drugs Partnerships (http://www.scotland.gov.uk/Topics/Justice/law/Drugs-Strategy/recovery/deliverystrategy/frameworkalcoholdrugs).
- Deaths from healthcare associated infections (e.g. clostridium difficile and MRSA) - tackling Healthcare Associated Infections (HAIs) is a key priority for SG and local health boards (http://www.scotland.gov.uk/Topics/Health/NHS-Scotland/19529/statistics). SG scrutinises the figures for deaths for individual hospitals and health boards, and Health Protection Scotland publishes quarterly reports on HAI infection rates (http://www.hps.scot.nhs.uk/haiic/newsdetail.aspx?id=362).
- Deaths from cancer, cerebrovascular disease (stroke) and ischaemic (coronary) heart disease, which are sometimes described as ‘Scotland's Three Big Killers’. SG has targets for reducing premature mortality from these causes between 1995 and 2010 (http://www.scotland.gov.uk/News/Releases/2009/08/07101203), measured in terms of age-standardised death rates for under 75s.
- Suicides - Choose Life is Scotland’s national suicide prevention strategy and action plan (http://www.scotland.gov.uk/Publications/2002/12/15873/14466), identifying key objectives and target groups for action.
  There is a target to reduce suicides in Scotland by 20% by 2013 (http://www.scotland.gov.uk/About/scotPerforms/partnerstories/NHSScotlandperformance/suicideprevention), measured using an age-sex-standardised rate. The Scottish Public

Health Observatory (ScotPHO) publishes age standardised suicide rates (http://www.scotpho.org.uk/home/Healthwell-beinganddisease/suicide/suicide_data/suicide_nhsboard.asp ) which it calculates from NRS data on suicides.

- Winter increase in mortality - such figures contribute to debate and the development of policy on issues such as 'fuel poverty' and the health of the elderly, winter fuel payments, and programmes for seasonal flu vaccination, central heating installation and home insulation. For example, http://www.jrf.org.uk/publications/cold-comfort-social-and-environmental-determinants-excess-winter-deaths-england-1986-19 , http://www.nea.org.uk/excess-winter-mortality and http://www.access2care.co.uk/huge-spike-in-excess-winter-deaths-sounds- deafening-wake-up-call%E2%80%9A-age-concern-and-help-the-aged-says/2009/11.

**For indicators, and to assess progress towards targets**

Some targets which use figures derived from Vital Events data were mentioned earlier.

In addition, for its 'Healthier' Strategic Objective (http://www.scotland.gov.uk/About/scotPerforms/objectives/healthier), and its 'longer, healthier lives' National Outcome (http://www.scotland.gov.uk/About/scotPerforms/outcomes/healthierlives),

SG has two National Indicators which are derived from Vital Events data:

- Reduce mortality from coronary heart disease among the under 75s in deprived areas http://www.scotland.gov.uk/About/scotPerforms/indicators/heartDisease
- Increase healthy life expectancy at birth in the most deprived areas http://www.scotland.gov.uk/About/scotPerforms/indicators/lifeExpectancy

Similarly, some NHS HEAT (Health Improvement, Efficiency, Access and Treatment) targets have used figures derived from Vital Events data - those for 2008-09 http://www.scotland.gov.uk/About/scotPerforms/partnerstories/NHSScotlandperformance) included:

- reduce mortality from coronary heart disease among the under 75s in deprived areas
- reduce suicide rate between 2002 and 2013 by 20% (SG Ministerial briefing indicates that this would be measured using an age-sex standardised rate).

SG also has a specific target on population growth (to match average European [EU15] population growth over the period from 2007 to 2017) and an associated target to increase healthy life expectancy - for both of these http://www.scotland.gov.uk/About/scotPerforms/purposes/population .
Vital Events data are required to estimate both the size of the population and people's life expectancy.

Reporting on whether there has been progress towards such targets has been done by the body which 'owns' the target (rather than NRS). Because of the ways in which such targets/indicators are defined, their owners must use numbers which are produced using special data which are extracted for those purposes from the Vital Events statistical data records, along with (where appropriate) the relevant population estimates (rather than using figures which appear in a Vital Events publication).

**Other legislation and Parliamentary Questions**

The Vital Events statistics were used to assess the effect of some of the changes which were introduced by the Local Electoral Administration and Registration Services (Scotland) Act 2006. An analysis in Chapter 9 of 'Scotland's Population 2008 …' (http://www.gro-scotland.gov.uk/files2/stats/scotlands-population-2008-the-registrar-generals-annual-review-of-demographic-trends-154th-edition/j1103012.htm ) used the statistics to assess the extent to which people had taken advantage of the opportunity to register births and deaths anywhere in Scotland (rather than in the Local Authority(LA) of residence or the LA of occurrence, which were the only options before the Act).

More recently, the development of the proposals for the Certification of Death (Scotland) Bill (http://www.scottish.parliament.uk/s3/bills/58-CertDeath/ ) has been informed by statistics about deaths.

NRS Vital Events statistics are used to answer many Parliamentary Questions each year. Some answers refer to material which has already been published on this web site; other answers use figures which are specially extracted from the Vital Events databases. Examples of the topics which were the subject of questions include: births in two particular hospitals; pre-, peri- and post-natal infant death rates; deaths as a result of pressure ulcers or sores, or for which they were mentioned on the death certificate, by NHS Board; suicides among farmers; stillbirths by local authority; deaths aged 8 to 18, inclusive, in July and August; child and adult deaths from leukaemia.

**Health Service organisations**

The Information Services Division (ISD) of NHS National Services Scotland uses Vital Events data in many of its publications, such as 'Cancer Mortality' (http://www.scotland.gov.uk/News/Releases/2010/10/26094105 and http://www.isdscotland.org/isd/6453.html ),

'Drug Misuse Statistics Scotland' (http://www.drugmisuse.isdscotland.org/publications/09dmss/09dmss-000.htm)

'Alcohol Statistics Scotland' (http://www.alcoholinformation.isdscotland.org/alcohol_misuse/files/alcohol_bulletin09.pdf), which includes age-standardised alcohol-related death rates for NHS Board and Council areas.

Vital Events data are used in the calculation of standardised mortality ratios for individual hospitals (http://www.isdscotland.org/isd/6360.html ), and Health Protection Scotland uses them for detecting any unusual increase in the number of deaths, while monitoring the effects of (e.g.) H1N1/swine flu (e.g. Figure 4 in HPS's 'Influenza Update' published on 21 October 2010, available via http://www.hps.scot.nhs.uk/resp/publications.aspx ).

Individual Vital Events data records are sent every week to Health Boards (which may use them for both statistical and administrative purposes, such as identifying people who have died and updating their records accordingly, so that - for example - their families should not receive unnecessary correspondence, and appointments which are no longer required can be offered to other patients).

**Research studies**

The Scottish Longitudinal Study (SLS) (http://www.lscs.ac.uk/sls/ ) receives Vital Events data for the people whom it covers. The data are then made available for use (in an anonymised form), in conjunction with information from some other sources (such as the Census), in many health-

related research projects (the list of SLS projects, can be found via the following link http://www.lscs.ac.uk/sls/projects.htm - this includes some which do not use the SLS's Vital Events data).

Many other research studies use Vital Events data. Two recently-completed examples are:

- http://alcalc.oxfordjournals.org/content/early/2010/09/16/alcalc.agq056.abstract compares alcohol-related mortality for residents of Scotland who were born here and were born in other parts of the world; and
- http://www.publichealthjrnl.com/article/S0033-3506(10)00033-8/abstract looks at death rates in Glasgow, Liverpool and Manchester, after taking account of some potential 'explanatory' factors.

**International comparisons**

Organisations such as the Office for National Statistics (ONS), Eurostat and World Health Organisation (WHO) use Vital Events statistics (e.g.) to produce UK totals and to compare the position in different countries - for example:

- Chapter 7 of 'UK Health Statistics' (available via http://www.statistics.gov.uk/statbase/Product.asp?vlnk=6637) compares various figures for Scotland, the other UK countries and the UK as a whole;
- Eurostat's 'Health statistics - Atlas on mortality in the European Union' (available via http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product code=KS-30-08-357) shows mortality from various causes for Scotland and other parts of Europe, and that Scotland's mortality rates (overall, and from certain causes) are among the worst in Europe;
- a specific report on Scottish mortality in a European context is available via: http://www.scotpho.org.uk/home/Comparativehealth/InternationalComparisons/int_mortality_comparisons.asp; and
- the Scotland and European Health for All database (http://www.scotpho.org.uk/home/Comparativehealth/InternationalComparisons/Scotland_and_European_HfA.asp) provides a lot of indicators based on NRS data, such as various infant/neonatal death rates and standardised death rates for many causes.

**Estimates of population size and life expectancy**

Vital Events data on Births and Deaths are key inputs to the process of estimating the size of the population, and recent years' fertility and mortality rates are key inputs to the procedures for projecting the size and composition of the population. Population estimates and projections are of vital importance to those developing policies on, planning the provision of, and allocating funding for, many types of service.

Deaths data are required in order to estimate life expectancy, which (besides the 'healthy life expectancy' target, mentioned earlier) is the subject of considerable interest (e.g. http://www.scotland.gov.uk/News/Releases/2010/09/16103837 and http://www.heraldscotland.com/news/health/glasgow-has-lowest-life-expectancy-rate-for-men-1.1033650 ). Estimates of life expectancy are used, for example, to assess the scale of inequalities in health between different population sub-groups, and how Scotland compares with other countries - for example, the national indicator mentioned earlier, and the differences between parts of Scotland shown in Chapter 4 of the latest edition of 'Scotland's Population…' (http://www.gro-scotland.gov.uk/files2/stats/annual-review-09/j1201506.htm ), which also includes comparisons with other countries in Figure 4.2.

**Selecting samples for surveys**

A number of surveys have been conducted using samples selected from Vital Events data records. Recent examples include:

- Infant Feeding Survey (http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles-related-surveys/infant-feeding-survey ) - conducted every five years, this covers a sample of mothers, the Scottish part of which is selected using the NRS's records of births which occurred in particular weeks
- Audit Scotland's Review of Palliative Care Services in Scotland (published in August 2008 http://www.audit-scotland.gov.uk/work/health_national.php?year=2008 ) was informed by the results of a survey of bereaved people. From its records, NRS selected a sample of people who had registered deaths of adults from conditions which would potentially have benefitted from palliative care, and wrote to them to ask if they would like to take part in the survey.