



Quality Assessment for Northern Ireland Deaths Statistics

Introduction

The purpose of this assessment paper is to inform users about the quality of Death Statistics in Northern Ireland and associated outputs. This document provides a range of information that describes the quality of the data and details any points that should be noted when using the outputs.

Background to Vital Events Data

The Northern Ireland Statistics and Research Agency (NISRA) produce statistics on births, deaths, marriages, civil partnerships and adoptions from civil registration events which are registered with the General Register Office (GRO). Figures on divorces and civil partnership dissolutions are compiled from returns of 'Decrees made Absolute' supplied by the Northern Ireland Courts and Tribunals Service. Vital Event data is produced on a daily, weekly, monthly, quarterly and annual basis depending on user requirements.

Statistics which are produced from vital events registered in Northern Ireland are of a high quality and should have complete population coverage as it is a legal requirement to register any of these events that occur in Northern Ireland.

Contacts

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Dimension	Assessment by the Author
Relevance	<p><i>The degree to which the statistical product meets user needs in both coverage and content.</i></p> <p>Registration of deaths in Northern Ireland is a legal requirement under the Births and Deaths Registration (Northern Ireland) Order 1976. All information recorded at registration is normally provided to a District Registrar in a District Registration Office by a qualified informant and / or the Coroner’s Service for Northern Ireland. During registration all information is entered on to an electronic system called the Registration and Certificate Modernisation System (RCMS).</p> <p>In view of the legal requirement to register all deaths, the coverage of the data is complete for the population of Northern Ireland. The content of the information collected reflects what is possible legally and the ongoing needs of users.</p> <p>Published figures relate only to deaths which occurred in Northern Ireland. As such, this includes deaths of individuals whose usual residence is outside Northern Ireland and excludes deaths of usual residents where the death occurred while outside Northern Ireland.</p> <p>Key users of mortality statistics include NISRA in the production of population (and in turn household) estimates/projections and the Office for National Statistics (ONS) in the production of life expectancy estimates.</p> <p>The Department of Health is also a key user of mortality statistics to help plan health services and to monitor mortality from particular causes of death such as suicide, drug and alcohol deaths or healthcare-associated infections. Mortality data also inform pensions policy and the social welfare system.</p> <p>Public Health England (PHE) use the weekly death figures for influenza surveillance and for monitoring the impact of cold weather and heat waves. Monthly death figures assist local authorities in public health monitoring and civil contingency planning. Funeral directors also use these figures to monitor their market share.</p> <p>Other users include academics, demographers and health researchers, who conduct research into mortality trends and characteristics. Much of this research is carried out using the Northern Ireland Mortality Study (NIMS); a large-scale data linkage study linking 100 per cent of deaths data to 2001 Census returns.</p> <p>Lobby groups also use mortality statistics to support their cause, for example, alcohol misuse or suicide. Organisations such as Eurostat and the United Nations use death statistics to make international comparisons.</p>



Accuracy

The proximity between an estimate and the unknown true value.

Data Collection

All deaths in Northern Ireland should be registered within 5 days from the date of death. There are some situations where the registration of a death can be delayed, specifically where the death has been accidental, unexpected or suspicious. These deaths must be referred to the Coroner and can result in a delay in registration. Deaths from suspected suicide are particularly affected by this. See *SUICIDE STATISTICS IN NORTHERN IRELAND: Impact of Time Taken to Investigate the Death* for further details:

[Impact of Registration Delays on Suicide Statistics in Northern Ireland](#)

For deaths not referred to the Coroner, 90 per cent are registered within a week of the date of death, with 100 per cent normally registered within six weeks.

Where a death has been referred to the Coroner and an inquest has been held the Registrar will register the death on receipt of Form 21 from the Coroner. If there has been no inquest and on receipt of Form 17 from the Coroner, the Registrar will write to the deceased's family (or other informant) to ask them to register the death. On average, 74 per cent of Coroner's Cases are registered within 90 days of the death occurring. This figure increases to 94 per cent by one year. If the death is not registered within one year of its occurrence, the General Register Office is able to authorise the registration of the death on the authority of the Registrar General.

During the registration a provisional copy of the information is printed out before the registration is finalised and the informant is asked to check the information supplied and verify that it is both complete and accurate (e.g. to check that all spellings/dates are correct). Any further errors can be addressed at this stage, before being finalised on GRO's electronic system (RCMS).

For around three quarters of deaths, a doctor involved in the care of a person during their last 28 days of life completes a Medical Certificate of Cause of Death (MCCD). In these cases, the Registrar must receive a MCCD form from the informant before the death can be registered. The Registrar records the cause of death directly from the MCCD. Thousands of practising doctors complete MCCDs and the nature and amount of training they have had in death certification varies. 'Issuing death certificates' is included as a competency that newly-qualified doctors should be able to demonstrate during their training. Doctors are required to ensure their knowledge and skills, in the area, are up to date, but keeping abreast of constant changes in clinical knowledge, practice and guidelines can, in some instances, take a higher priority.

Around one out of every four deaths in Northern Ireland are referred to the Coroner. These include deaths where the cause is unknown; the deceased was not seen by the certifying doctor either after death or within the 28 days before the death; or the death was accidental, unexpected or suspicious. Coroners have a number of possible courses of action once a death has been referred. If the reason why a doctor cannot certify the death is simply because they have not treated the patient in the last 28 days, then the Coroner will discuss the cause of death with the doctor. If the Coroner is satisfied that the death was from natural causes and no further investigation is necessary, then the Coroner may accept the medical cause of death that the doctor

gives and issue a Coroners notification to enable the death to be registered. Alternatively, coroners will certify the cause of death following a post-mortem by a pathologist, an inquest or both. In these cases the coroner sends information to the registrar and this is used instead of the MCCD.

Following a consultation on administrative re-design for the Coroner Service in Northern Ireland¹ in 2004, the Coroner's Service was reduced from seven jurisdictions to one in order to achieve uniformity of practice across Northern Ireland. Annually, there are around 160 coroner's inquests held in Northern Ireland that conclude with a verdict.

Cause of Death Coding

Coding for cause of death in Northern Ireland is carried out according to the World Health Organisation (WHO) International Classification of Diseases (ICD tenth revision)².

Part I of the MCCD used gives the condition or sequence of conditions leading directly to the death, while Part II gives details of any associated conditions that contributed to the death but which were not part of the causal sequence.

The selection of the underlying cause of death is generally made from the conditions entered in the lowest line Part I of the MCCD. If there is more than one cause per line with no indication of sequence, or the conditions entered are not an acceptable causal sequence, selection rules are applied, based on the ICD. Modification rules are also used for particular conditions, combinations or circumstances to select the correct underlying cause of death, for example, when two or more causes may point to another cause not mentioned directly on the certificate. The purpose behind the selection and modification rules is to uniformly derive the most accurate cause of death information to ensure comparability over time and place, and ensure each death has only one underlying cause.

For the majority of deaths (around 50%) GRONI codes the underlying cause of death using automated cause coding software. The remainder are coded manually by an experienced coder. Manual coding is necessary for deaths involving a coroner's inquest. Using an automated coding tool improves the international and temporal comparability of mortality statistics.

Where the underlying cause of death is assigned to an external cause (for example, a transport accident), at least one code is assigned to define the nature of the injury. If multiple injuries are recorded, one will be selected as the secondary cause code. Again, how this selection is done is based on rules assigned by the WHO to ensure accuracy and comparability of statistics.

¹The Coroners Service of Northern Ireland Proposals for Administrative Redesign, http://www.courtsni.gov.uk/en-gb/publications/public_consultation/documents/the%20coroners%20service%20of%20northern%20ireland%20proposals%20for%20administrative%20redesign/p_pc_thecoronersserviceofnorthernirelandpdf.html#creating

² International Classification of Diseases (ICD) (Tenth Revision) <http://www.who.int/classifications/icd/en/>



Following the Shipman Inquiry and the Luce Review, Northern Ireland embarked on a Review of Death Certification in Northern Ireland. The Death Certification Implementation Group has been established to take forward the recommendations of this Review. Additional scrutiny is being introduced which is expected to improve the quality (precision and completeness) of the cause of death recorded on the MCCD and, consequently, may have an impact on cause of death statistics.

Validation

There are some validation checks built into RCMS to help the Registrar with this process. Information supplied at death registration is generally believed to be correct since wilfully supplying false information may render the informant liable to prosecution for perjury.

Death statistics are extracted directly from RCMS and are subjected to further checks by the Vital Statistics Team in Demography & Methodology Branch. Further details of these checks are available on the NISRA website:

http://www.nisra.gov.uk/archive/demography/publications/vital_stats_QA.pdf



Timeliness and Punctuality

Timeliness refers to the time gap between publication and the reference period. Punctuality refers to the gap between planned and actual publication dates.

Timeliness

In Northern Ireland monthly death registration totals are published on the last day of each month one month in arrears. More detailed breakdowns are published in the Registrar General Quarterly Report, published on the last working day of the quarter, one quarter in arrears. Provisional annual figures for the reference year, including detailed breakdowns, are published within 6 months of the end of the reference year. Finalised figures are published within 11 months of the end of the reporting period through the Registrar General Annual Report. Similar arrangements pertain across the rest of the UK reflecting user needs in the respective territories.

Punctuality

The Vital Statistics Publication Schedule is available on the NISRA Website. This is published at the start of each financial year at the following link:
<http://www.nisra.gov.uk/demography/default.asp.htm>

The UK National Statistics Release Calendar provides 28 days advance notice of releases.

In the unlikely event of a change to the Publication Schedule, the public would be advised of the change via the NISRA website and any pre-announced dates would be updated on the UK National Statistics Release Calendar. A full explanation of the reason(s) for the change would be provided as set out in the Code of Practice for Official Statistics.



Accessibility and Clarity

Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.

Accessibility

The NISRA website is the primary vehicle for the release of Deaths statistics in Northern Ireland. A combination of narrative, charts, graphs and data (specifically tailored to draw out the key findings from the statistics) may be downloaded in PDF and Microsoft Excel. The Vital Statistics Team have commenced production of a suite of micro datasets with pivot table functionality. This allows users the flexibility of producing their own tables. See [Microdata for Deaths in Northern Ireland, 2001-2013](#) for further details. In terms of feedback from users, a recent user satisfaction survey was conducted by the NINIS management team, the results of which can be accessed via this link NINIS User survey: [NINIS Customer Survey 2014](#)

Deaths data by Northern Ireland administrative and statistical (including small area) geographies are available on the Northern Ireland Neighbourhood Information System (NINIS). A combination of interactive maps, charts, graphs and data may be created and downloaded in Microsoft Excel, CSV & PDF formats.

Special extracts of deaths data for Northern Ireland are available free of charge to authorised third parties subject to approval of a Data Sharing Agreement between GRO and the third party.

Clarity

Basic quality information relevant to each release is available in the background notes of the relevant Statistical Bulletin.

See [Deaths in Northern Ireland 2013](#)



Coherence and Comparability

Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain.

The Registration of Births and Deaths (Ireland) Act, 1863 made it a legal requirement for all deaths to be registered from 1 January 1864. Since then legislative changes have allowed for more detailed information to be collected from the informant at registration, but the basic information remains consistent e.g. name, cause of death etc. Registration data is the primary source of death statistics in Northern Ireland

Limited death figures are available back to 1887, with more detailed tables being available in more recent years. Death outputs are produced using the geographic boundaries in place during the year the death was registered. This approach means that changes in boundaries can affect the comparability of statistics over time.

There is a large degree of comparability in death statistics between countries within the UK. Annual death statistics for the United Kingdom and its constituent countries are all based on the details collected when deaths are registered. NISRA, the Office for National Statistics (ONS) and the National Records of Scotland (NRS) quality assure all data enabling detailed death statistics to be published.

In Scotland, a death must be registered within eight days rather than five days as in England, Wales and Northern Ireland. The Procurator Fiscal replaces the coroner system in England, Wales and Northern Ireland and has a duty to investigate all sudden, suspicious, accidental, unexpected and unexplained deaths, and any death occurring in circumstances that give rise to serious public concern.

Throughout the UK, death statistics are based on the number of deaths *registered* in the reference period. Figures for the UK are produced by ONS compiling data for all jurisdictions. In co-ordination with ONS and NRS, NISRA provide data to Eurostat each year to allow publication of UK death figures alongside those for other European countries.

The definitions and classifications used across the UK in the production of death statistics are consistent but there are some differences in the methods used. For example, all jurisdictions use WHO ICD-10 cause of death coding and internationally agreed rules, but Northern Ireland and Scotland use bespoke software to apply these rules and produce ICD10 codes. ONS use IRIS Software³ to apply coding rules. Northern Ireland plan to move to IRIS in the near future. All software has been quality tested to ensure coding rules are being applied consistently.

³ Iris Institute <http://www.dimdi.de/static/en/klassi/irisinstitute/about-iris/index.htm>



Assessment of User Needs and Perceptions	<p><i>The processes for finding out about users and uses, and their views on the statistical products.</i></p> <p>All Vital Statistics publications specifically invite users to provide any feedback they might have in respect of the content, format and relevance of the release. No negative feedback has been received as part of this process.</p> <p>Each year NISRA implements a customer survey with its key and casual customers. Where possible, feedback is incorporated into future outputs where possible. The most recent survey was carried out in 2013 and results specific to Demography & Methodology Branch indicate 98.5 per cent of respondents were either <i>Satisfied</i> or <i>Very Satisfied</i> with the service provided.</p>
Performance, Cost and Respondent Burden	<p><i>The effectiveness, efficiency and economy of the statistical output.</i></p> <p>While there is a legislative requirement to register a death within 5 days, there is no subsequent respondent burden unless of course they fail to fulfil their legal obligations in this respect. The production and quality assurance processes, which are considered to be both cost effective and efficient, have been streamlined wherever possible and are kept under review from a continuous improvement perspective.</p>
Confidentiality, Transparency and Security	<p><i>The procedures and policy use to ensure sound confidentiality, security and transparent practices.</i></p> <p>NISRA adhere to the United Kingdom Statistics Authority (UKSA) <i>Code of Practice for Official Statistics</i> and the <i>National Statistician's Guidance on Confidentiality of Official Statistics</i> in the collection and dissemination of death statistics.</p> <p>Details of Demography & Methodology Branch's approach to data access, physical security and disclosure control are available in the <i>Confidentiality Policy for Population and Vital Statistics</i> available at the following link: http://www.nisra.gov.uk/archive/demography/Confidentiality_Policy.pdf</p>