

TTP DEMOGRAPHIC DATA QUALITY REPORT

DATA SOURCE

DATA SUPPLIER:	General Register Office (GRO)
DESCRIPTION:	All deaths which have been registered in Northern Ireland since 1997
COVERAGE:	Northern Ireland
NUMBER OF RECORDS:	Approximately 14,000 deaths each year http://www.nisra.gov.uk/archive/demography/vital/deaths/deaths1887_2014.xlsx

DATA BACKGROUND

Registration of deaths in Northern Ireland is a legal requirement under the Births and Death 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 information is entered onto an electronic system called the Registration and Certificate Modernisation System (RCMS). There are some validation checks built in to 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. Additional Quality assurance checks are carried out by statisticians within NISRA.

Published figures relate 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.

In view of the legal requirement to register all deaths, the coverage of data is complete for the population of Northern Ireland. Checks are also made to ensure that the data does not contain duplicates as a death should only appear once. The content of the information collected reflects what is possible legally and the ongoing needs of users.

Further information on the quality and background of death registration data is available on the NISRA website at: http://www.nisra.gov.uk/archive/demography/publications/Northern_Ireland_Death_Statistics_Quality_Assessment.pdf

DEMOGRAPHIC INFORMATION

Information available to the TTP for linkage purposes -

- Name information which includes Forename, Midname, Surname and Maiden Name
- Address information of the deceased for both their usual address and place of death address
- Gender
- Date of birth
- Date of death
- UPRN

Name and address information is also held for the individual that registered the death (informant), however, it is not standardised or of the same level of quality as the information relating to the deceased. UPRN, DOB and Gender are not recorded for the informant.

DATA QUALITY & PRE-PROCESSING

Record linkage is highly dependent on the quality of the data being linked. Many key variables can be presented quite differently between datasets as the information has been collected and recorded using different methods. This can greatly complicate record linkage unless understood ahead of time. Pre-processing can be used to standardise these variables into a consistent format prior to linkage.

NAME INFORMATION- This is required to register a death and therefore Forename and Surname is available for all records. Midname and Maiden Name are populated where applicable.

- In some instances multiple names will be recorded as the Forename. This can be edited to leave the first name that appears as the Forename and any additional names as the Midname;
- Punctuation and characters which do not appear in the English alphabet (e.g. Á , %, \$...) can also appear in the name information. A function can be used to replace these with usable characters;

ADDRESS INFORMATION- All records have address information available. If the usual address is missing then the place of death address can be used. It should be noted that for individuals who are usually resident outside of Northern Ireland, it may be unlikely to match these to another data set as the usual address will be outside Northern Ireland.

- In some instances, no information is available for the usual address of the deceased. The place of death information address is used instead;
- Postcode information is standardised prior to linkage.

GENDER- All records contain the gender of the deceased.

- Gender information should be standardised prior to linkage.

DATE OF BIRTH- All records contain the Date of Birth of the deceased

- Date of birth is provided in date-time format. It can be parsed into its constituent parts (day, month and year) prior to linkage

DATE OF DEATH- This is required to register the death and therefore is available for all records.

- Date of death is provided in date-time format. No pre-processing should be necessary.

UPRN¹- This information is not held for all deaths registered between 1997 and 2006. However, from 2007 onwards UPRN is provided for an average of 94% of records.

1. UPRN (Unique property reference number) is the NI Government's definitive address register's unique number.

MATCHING METHODS

Using the demographic information provided the following matching can be undertaken-

- Person matching
- Address matching

There is also limited potential to perform matching using the informant name and address, however, as the information is not standardised and key variables are unavailable, the resulting match rates may be lower than expected. The informant information could be used to verify matches made for deceased persons.

PREVIOUS LINKAGE MATCH RATES

The death information provided by GRO has previously been matched to health data as part of the Northern Ireland Longitudinal Study (NILS). This typically produces a raw match rate of approximately 98%; More information can be found on the [NILS Metadata](#).

The deaths data has also been matched to Census 2001 and Census 2011 information as part of the Northern Ireland Mortality Study (NIMS) and previous ADRC-NI projects. This typically produces an adjusted match rate of approximately 90%. More information can be found on the [NIMS Metadata](#).

EVALUATION

The demographic data from the deaths registration provided by GRO is of very good quality and can be used for matching without extensive pre-processing.

It should be noted however that for a small number of deaths it will not be possible to match to another Northern Ireland dataset. These records will relate to individuals whose usual residence is outside Northern Ireland but who died within Northern Ireland.