Northern Ireland Statistics and Research Agency
Gníomhaireacht Thuaisceart Éireann um Staitisticí agus Taighde

# User Guide to Suicide Statistics in Northern Ireland

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## About this Guide

This user guide contains information on quality characteristics of suicide data in NI. It includes detail on strengths and limitations, methods used to create the statistics and changes to the series over time which should help users decide on suitability of the data for their purposes, while reducing the risk of misusing the data. Users may find the process diagram provided in Annex 1 useful when reading the information contained in this report.

## Definition

Suicide deaths in Northern Ireland are defined using the UK National Statistics definition which includes deaths from Self-inflicted Injury for persons aged 10 and over as well as Events of Undetermined Intent for those aged 15 and over. The codes used to define the suicide figures are shown below:

| ICD 10 | Description | Notes |
|---|---|---|
| **X60-X84, Y87.0** | Self-inflicted Injury | Persons aged 10 years and above |
| **Y10-Y34, Y87.2** | Events of Undetermined Intent | Persons aged 15 years and above |

## Where to go for help

**Minding Your Head** - find out more about mental health and the issues that can affect it; early warning signs that a mental health issue may be developing; tips on how to maintain good mental health.

Website http://www.mindingyourhead.info/

**Lifeline** - A Free 24 hour crisis response helpline for people who are experiencing distress or despair, where trained counsellors will listen and help immediately on the phone and follow up with other support if necessary.

Phone 0808 808 8000 Website http://www.lifelinehelpline.info

**Samaritans** – a registered charity aimed at providing emotional support to anyone in emotional distress, struggling to cope, or at risk of suicide throughout UK and Ireland, often through their telephone helpline or online chat.

Freephone 116 123 Website https://www.samaritans.org/

## Information for the media

There is strong evidence that sensationalist media reports about suicide can lead to subsequent additional suicidal behaviours (suicides and suicide attempts). These time-limited increases in suicides are not simply the early occurrence of suicides that would have happened anyway, they are additional suicides that would not have occurred in the absence of the inappropriate media reporting.

Media professionals should exercise caution in reporting on suicide, balancing the public's "right to know" against the risk of causing harm. It is therefore important that those reporting on suicide statistics adhere to the guidelines of safe reporting from WHO/ IASP and Samaritans.

## Overview

### Users & Uses

Reliable suicide statistics are a prerequisite for suicide monitoring and prevention. Suicide statistics are important for monitoring trends in deaths resulting from intentional (and probable) self-harm and are widely used to inform policy, planning and research in both the public and private sectors and they enable policy makers and support services to target their resources most effectively in relation to preventative strategies. Key users of these data include the Department of Health, Northern Ireland (DoH), the Public Health Agency (PHA), academics, and charitable organisations.

### Strengths & Limitations

*Strengths*

- Suicide deaths are compiled using information supplied when a death is registered, which gives complete population coverage. In addition, 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.

- Coding for cause of death is carried out according to the World Health Organisation (WHO) ICD-9 and ICD-10, based on internationally agreed rules.

- Statistics on suicide are usually presented based on the year these deaths were **registered** rather than the year of their **occurrence.** This method is used because of the requirement for consistent and timely data, despite a potential limitation in data quality caused by registration delays (see below).

- The use of age-standardised mortality rates means these statistics are comparable between local areas and at NI level.

- The use of the national statistics definition of suicide also makes these statistics comparable with the rest of the UK

*Limitations*

- Some breakdowns are not available due to small cell size and the need to ensure confidentiality is maintained. Outputs must therefore be assessed with the aim to balance utility and risk.

- Statistics on suicide are generally presented based on the year these deaths were **registered** rather than the year of **occurrence** (see below)**.** While giving the most complete picture at a given time, a downside to registration based statistics is that they build in time delays and limit analysis of occurrence patterns or clusters. Occurrence data, however, can never be considered as final until a significant period of time has elapsed, as it can take several years for an investigation to conclude, and only then will the death be registered.

- Age-standardised rates need to be compiled for a longer period at sub-NI level to ensure robustness, so small changes year-on-year are harder to identify at local levels.

Further details on strengths and limitations is available in *Quality Assurance of Administrative Data (QAAD) for Deaths Data in Northern Ireland*

# Quality characteristics of suicides in NI

## Death Registration Process for Suicide Deaths

Death Statistics in Northern Ireland are based on deaths which have been certified and registered by a District Registrar under the Births & Deaths Registration (Northern Ireland) Order, 1976. Deaths must be registered within five days of the death occurring, but there are some situations where the registration of the death can be delayed, specifically where the death has been accidental, unexpected or suspicious. Under the provisions of Section 7 of the Coroner's Act (Northern Ireland) 1959, where a deceased person has died from any cause other than natural illness for which they have been seen and treated by a registered medical practitioner within 28 days prior to the death, the death must be referred to the Coroner. A death which is suspected to be suicide must therefore be referred to the Coroner and can only be registered after the Coroner has completed his/her investigation. The time taken to carry out such an investigation can result in a delay in registration.

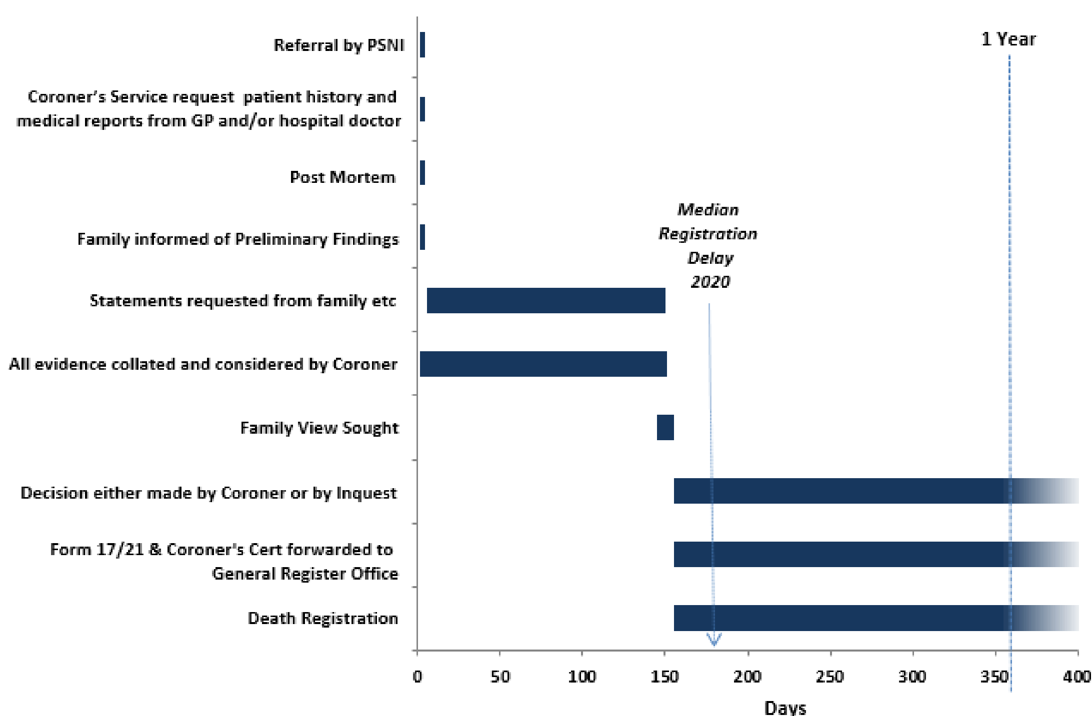
## Impact of Time Taken to Investigate the Death

Suicide death statistics and mortality statistics in general are published by the Northern Ireland Statistics & Research Agency (NISRA) as the number of deaths **registered** within a calendar year, as opposed to the number of deaths that actually **occurred** in that period. This method ensures timely data that is complete at the point of publication, but introduces a limitation to the statistics within a policy context.

## Investigation Process for Suicides

If the Police Service of Northern Ireland, or a registered medical practitioner suspect that a death has occurred from intentional self-harm they are legally required to refer the case to the Coroner. This referral signals the start of a 10-stage process, detailed in Figure 1 below.

**Figure 1: Death Registration Process for Suicides, Northern Ireland**



The first four stages are generally completed within 24 – 36 hours of the death. In most cases of suspected suicide, the Coroner will direct a post mortem examination to ascertain the cause of death. The final post mortem report may take up to five months to complete, particularly if the case is complex e.g. when toxicology is required or if additional specialist input is required (neuropathology, odontology etc).

The PSNI Investigating Officer must then collate an inquest file on behalf of the Coroner. This should include statements from all relevant witnesses, a witness address list, photographs, expert reports, copies of any notes left by the deceased and computers and mobile telephones should all be checked for relevant evidence.

Throughout the process the family is advised of case progression by a named Coroner's Liaison Officer.

Once the inquest file is complete and has been considered fully, the Coroner in certain circumstances may ask for family views regarding the holding of an inquest. The family is also invited to bring any concerns they may have about the circumstances surrounding the death to the Coroner's attention before any decision is made about the holding of an inquest.

Once the details required to register the death have been determined, either through the Coroner's investigation or following an inquest, a Form 14, Form 17 or Form 21 (coroner's certificates containing cause of death) is forwarded along with the Coroner's Certificate to a District Registration Office, hence commencing the death registration process.

Where an inquest has been held the Registrar will register the death on receipt of a Form 21. If there has been no inquest the Registrar will write to the deceased's family (or other informant) to ask them to register the death. However, if the death is not registered within a year of its occurrence, the General Register Office is able to authorise the registration of the death on the authority of the Registrar General. More details on the Coronial process in NI is available in *Quality Assurance of Administrative Data (QAAD) for Deaths Data in Northern Ireland*

### *Time Taken to Register a Suicide Death*

As discussed above, registration of a suicide death can take many months or even years. NISRA is not notified that a death has occurred until it is registered, therefore a significant number of suicide deaths registered in any year have occurred in earlier years. For example, of the 219 such deaths registered in 2020, 101 actually occurred in 2020, 103 occurred in 2019, 10 occurred in 2018, with the remaining 5 occurring in 2017 or earlier.

**Figure 2: Suicide Deaths by Year of Registration and Year of Occurrence[1], 2010-2020**

| Year of Registration | Year of Occurrence: *Prior to 2010* | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018P | 2019P | 2020P | *Total* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | *172* | 141 | | | | | | | | | | | *313* |
| 2011 | *38* | 131 | 120 | | | | | | | | | | *289* |
| 2012 | *13* | 18 | 109 | 138 | | | | | | | | | *278* |
| 2013 | *2* | 7 | 22 | 114 | 158 | | | | | | | | *303* |
| 2014 | *5* | 3 | 0 | 4 | 123 | 133 | | | | | | | *268* |
| 2015 | *1* | 0 | 4 | 10 | 6 | 91 | 112 | | | | | | *224* |
| 2016 | *0* | 0 | 2 | 0 | 5 | 3 | 79 | 121 | | | | | *210* |
| 2017 | *0* | 0 | 0 | 4 | 2 | 1 | 5 | 89 | 113 | | | | *214* |
| 2018 | *1* | 0 | 0 | 0 | 1 | 1 | 2 | 11 | 80 | 140 | | | *236* |
| 2019 | *1* | 0 | 0 | 1 | 2 | 0 | 1 | 13 | 8 | 80 | 99 | | *205* |
| 2020 | *1* | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 10 | 103 | 101 | *219* |
| Total | *234* | *300* | *257* | *271* | *298* | *229* | *200* | *235* | *202* | *230* | *202* | *101* | *2,759* |

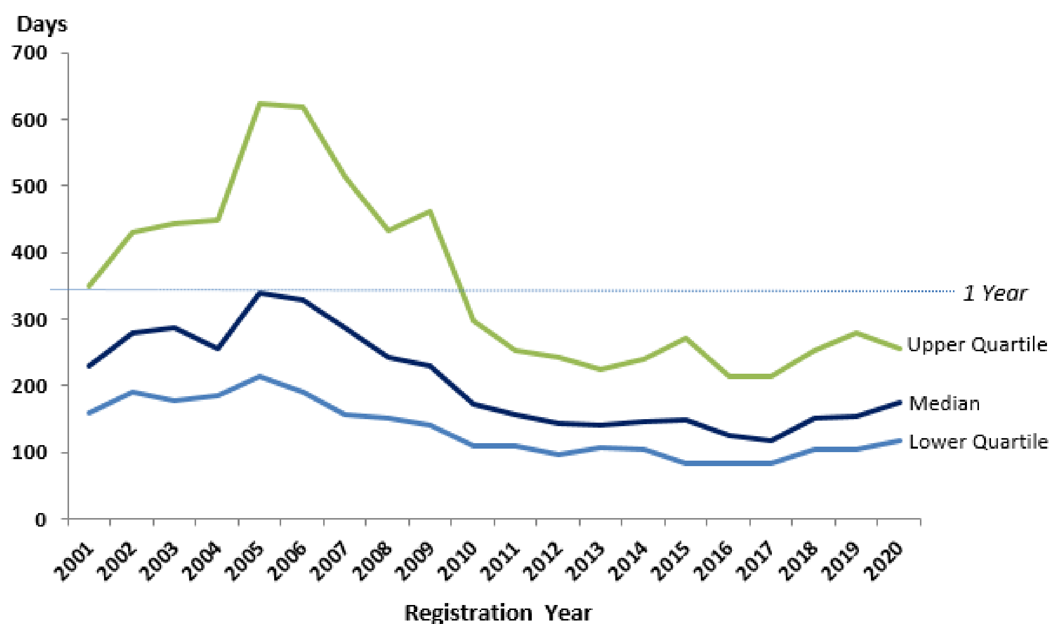
**Notes:**

*1. Occurrence data for 2018, 2019 and 2020 should be treated with caution as they may be subject to significant change as more cases referred to the Coroner are investigated and registered.*

Figure 2 shows a breakdown of registered suicide deaths by the year they occurred from 2010. For those registered in 2020, 55 per cent were registered within six months and 86 per cent were registered within one year of the date of death.

Figure 3 shows that median registration delay (the middle value if the delays were sorted by length of delay), for suicides peaked in 2005 at 339 days, but this number has been declining since, reaching 174 days in 2020. Prior to April 2006, there were seven Coroner's districts in Northern Ireland. Following a review of the Coroners Service, the separate districts were amalgamated into one centralised Coroners Service which coincides with the reduction in registration delays illustrated in Figure 3.

**Figure 3: Registration Delays for Suicide Deaths**



NISRA also publish headline suicide statistics based on the date the suicide **occurred**. This series is published to provide context to the suicide statistics series, but the figures cannot be considered final until a significant period of time has elapsed and are subject to ongoing revisions. Figure 4 demonstrates how closely aligned the two series are. NISRA advises users that registration-based series should be used for most recent years. The occurrence-based series may be used for longer time series analysis with the caveat that more recent years will be subject to significant change (highlighted below).

**Figure 4 NI Suicide Series: Registration Year vs Occurrence Year**

**Notes:**

*1. Occurrence data for 2018, 2019 and 2020 should be treated with caution as they may be subject to significant change as more cases referred to the Coroner are investigated and registered.*

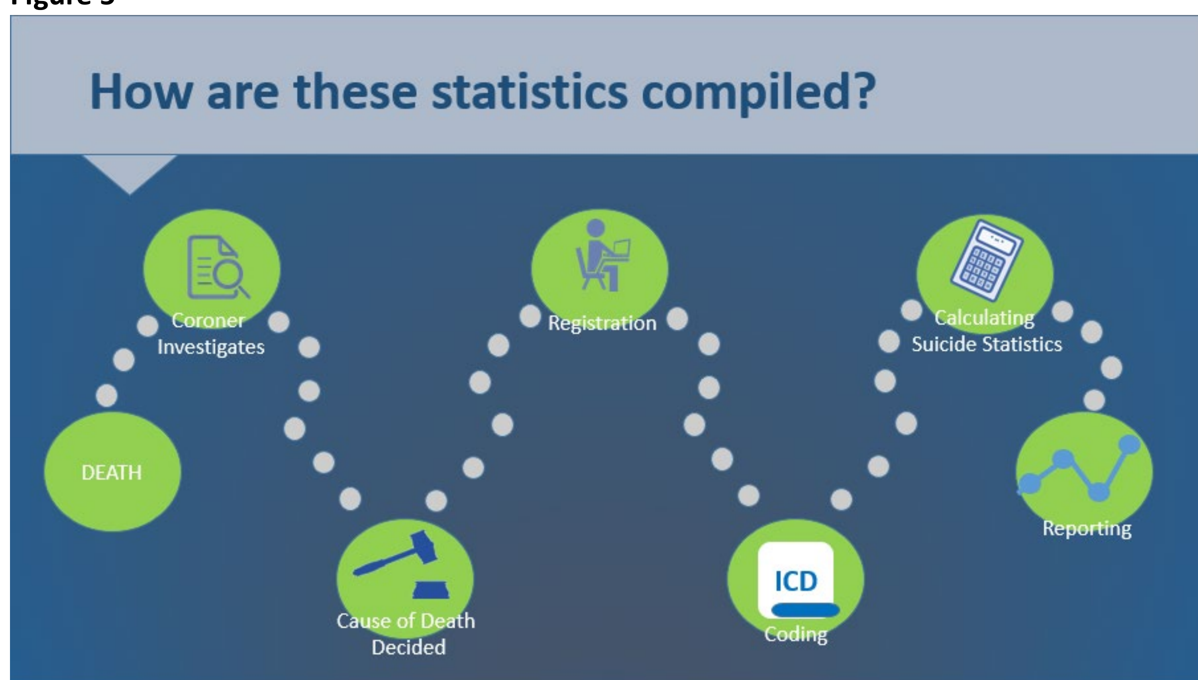
## Methods used to produce suicide statistics in NI

### How we collect & process the data

NI deaths statistics are compiled using information supplied when a death is registered with the General Registrar Office for Northern Ireland (GRONI). During registration all information is entered to an electronic system called the Northern Ireland Registration Office System (NIROS), which is managed by GRONI. Statisticians within NISRA's Vital Statistics Unit (VSU) have access to the data contained within NIROS for analysis on behalf of the Registrar General for Northern Ireland.

Suicides, like all deaths in NI, are coded by the Office for National Statistics (ONS) according to the International Classification of Diseases, 10th Revision (ICD-10) produced by the World Health Organisation. Deaths caused by suicide are manually coded by a team of expert mortality coders based on information provided by the coroner.

**Figure 5**




For more information on the collection and processing of deaths data in NI please see the Quality Assurance of Administrative Data (QAAD) for Deaths. The Samaritans also produce a useful explanation of Understanding Suicide Statistics across the UK and in Ireland.

# Rates

While the number of deaths occurring in a population is useful for determining the magnitude of a public health problem, mortality rates are used when making comparisons between population groups (for example, comparing males and females or geographies) or when comparing trends over time. Mortality rates are a measure of the frequency of occurrence of death in a particular population at risk during a particular time period.

## Crude Rates

Crude rate is the total number of deaths occurring in a population over a period of time, without reference to any of the individuals or subgroups within the population.

They are calculated per 100,000 people, to adjust for the underlying population size. An area or group with a larger population may have a higher number of suicides than an area or group with a smaller population, but the rate per 100,000 may be lower.

## Age-Specific Mortality Rate (ASMR) definition

Mortality rates generally increase with age. A population with a greater proportion of older people is expected to have more deaths per population. To adjust for different age profiles in different populations (e.g. different regions or countries), statistical techniques are used to adjust or 'standardize' mortality rates among populations to be compared.

The age-standardised rate for suicide deaths is that which would have occurred if the observed age-specific rates for suicides had applied in the given standard population.

An **age-specific mortality rate** allows comparison between specified age groups; it is expressed as the number of new deaths per 100,000 population at risk. Five-year age or ten year age group categories are commonly used.

**Age standardised mortality rates (ASMRs)** are presented per 100,000 people and are standardised to the 2013 European Standard Population. These allow direct comparisons with other countries for example.

# Trends

Suicide Rates can fluctuate each year. These fluctuations may not indicate 'real' change and may be misleading. To look for patterns or find where real changes are taking place users should look at the data over a longer period. For guidance on looking at trends in currently available suicide data, see below.

# Local or Regional Variations

Rates for a whole country tell us about the scale of suicide in the country but can mask local and regional variations. It is important to note that within countries there are significant regional and local differences in suicide rates. These differences indicate who is most at risk and where they are.

Be careful of small groups/populations. The size of populations should be considered when looking at suicide rates. Smaller populations often produce rates that are less reliable as the rates per 100,000 are based on small numbers. Therefore, differences in the number of suicides may have a bigger impact on the rate than in a larger population. An example of this might be suicide in older age groups (e.g. over 80 years), as the population size is lower than in younger age groups.

## How we review and maintain the data processes

The National Statistics definition of suicide was recently reviewed. In 2016, the suicide definition was revised to include deaths from intentional self-harm in children aged 10 to 14 years. Previously, suicides in young children were not included due to the very small numbers involved. However, after discussions with the constituent countries of the UK and public health agencies, it was decided that it was appropriate to include them.

Deaths from an event of undetermined intent in 10 to 14-year-olds are not included in the UK definition of suicide statistics, because although for older teenagers and adults we assume that in these deaths the harm was self-inflicted, for younger children it is not clear whether this assumption is appropriate.

NISRA also consult with an expert stakeholder group made up of health experts from across government and academia to identify evidence gaps, gather feedback, and scope out and test new ideas for inclusion in our outputs. We will also collaborate with this expert group as an overseeing body to scrutinise suicide trends going forward.

Details on the specific data processes involved in the production of suicide statistics are available in *Quality Assurance of Administrative Data (QAAD) for Deaths Data in Northern Ireland*

## Changes to the Series

### Cause of Death Coding Changes

In 2011, NISRA, the National Records of Scotland (NRS) and the Office for National Statistics (ONS) adopted a change in the classification of deaths in line with the new coding rules of the World Health Organisation. The change resulted in some deaths previously coded under "mental and behavioural disorders" now being classified as "self-poisoning of undetermined intent" and therefore included in the suicide figures. Theoretically, this could mean that more deaths could be coded with an underlying cause of "event of undetermined intent", which is included in the National Statistics definition of suicide.

### Change of ICD Coding from GRONI to ONS

Prior to 2015, ICD 10 coding of deaths was carried out within GRONI by a dedicated coder which allowed for case by case scrutiny, including a process by which further information could be sought from the Coroner to clarify whether certain deaths should be classed as being of undetermined intent.

ICD 10 coding was transferred to ONS in 2015, working in conjunction with the NISRA Vital Statistics Unit. As a result, direct contact between the ICD Coders and CSNI ceased and these deaths were subsequently auto-coded by ONS as 'accidental' in the absence of any other indication of intent; however, these were then overwritten by NISRA as 'undetermined' based on GRONI experience that the majority (around 99 per cent) of previous checks had resulted in the cases being agreed with the Coroner as 'undetermined'. This was not an unreasonable assumption at the time, however the increasing trend in drug related deaths from around the same time disrupted the previous trend in ratio of undetermined to accidental deaths. As the change in the ratio was unknown to NISRA at that point, this then led to an overestimation of deaths of undetermined intent.

As a result, the time series for 2015 – 2020 needed to be revisited for data quality purposes. The resulting 2020-2021 review of suicide statistics<insert link to report> introduced revisions to the suicide series in NI and highlighted the need for streamlined collaboration between NISRA, CSNI and ONS. Lessons learned from this review have been incorporated into the routine production and validation of death statistics in NI.

### Standard of Proof

On 26 July 2018, as a result of an English case in the High Court, the standard of proof – the evidence threshold – used by coroners to determine whether a death was caused by suicide was changed from the criminal standard of "beyond all reasonable doubt" to the civil standard of "on the balance of probabilities". In NI confirmation of the civil standard of proof for suicide was delivered in November 2018. This means that when examining the evidence, it must be shown on the balance of probability that:

- the death occurred because of a deliberate act by the deceased
- that in doing so and at all relevant times, the deceased intended the consequence would be death

For all deaths given a conclusion of suicide, a coroner makes this decision having ruled out all other possible explanations. NISRA will monitor and report the impact of this change on our data; given

the registration delays described above and the additional impact of the Review of Suicide Statistics, it will take time to gather enough data to assess the impact of the change.

Users may find the following ONS report useful: [Change in the standard of proof used by coroners and the impact on suicide death registrations data in England and Wales]

## Revision of Suicide Statistical Series in NI

The 2019 suicide total (provisional figure of 209 and later finalised at 205 following the Review of Suicide Statistics) showed a significant fall on the 2018 total of 307 (revised to 236 as result of the Review). The decrease was primarily driven by improvements in the statistical collection and collation process, and in particular the re-classification of ‘drug related’ deaths from being undetermined (and within the suicide definition) to accidental (and outside of the suicide definition).

In light of this, NISRA, working with the Coroners Service, began to review and revise individual undetermined drug related deaths from 2015 to 2018. This review was later extended to include 2020 data as well as some non-drug related cases from 2015-2019.

As a result, the suicide series in NI was revised downwards and a break in series between 2014 and 2015 was introduced due to the impact of both the classification correction and the change in the standard of proof already discussed.

In its later stages, the review also broadened its coverage to include 83 non-drug related deaths of undetermined intent during 2015-2019 which had been coded in absence of intent information. The majority of these (69) related to the years 2016 and 2017. Currently cases between 2015 and 2017 are not yet finalised; however, a sensitivity assessment is available to show the possible and most likely impacts these cases will have on final figures for 2015-2017.

Full details of the review are contained in the report published on the NISRA website

## Guidance for Use of Suicide Statistical Series following Review

NISRA recommends that until the remainder of the non-drug related deaths of undetermined intent have been reviewed the following use guidelines should be followed

| **User Need** | **Use** | **ICD Codes** | **Available at** |
|---|---|---|---|
| Trend/Time Series 2018 onwards only | Full UK definition | X60-X84, Y87.0 *(Persons aged 10 years +)*<br><br>Y10-Y34, Y87.2 *(Persons aged 15 years +)* | Current suicide statistics |
| Trend/Time Series including years prior to 2018 | Sub-series relating to intentional self-harm only | X60-X84, Y87.0 *(Persons aged 10 years+)* | Historical Suicide statistics |

## Other information

Here are some useful links to other sources of data on suicide:

- Who is most at risk of suicide?
- Protect Life 2 – Department of Health NI
- Suicide Facts and Figures - Samaritans
- Suicides – National Records of Scotland
- Suicides – Office for National Statistics
- Suicide death statistics – Eurostat
- Deaths registered in Northern Ireland

# Annex 1

## Suicide Death Statistics High Level Process Map

DEATH

**Collect**

Coroner's Service NI / General Register Office NI (GRO)

| Referral to Coroner | Coroner's Investigation | Coroner's Certificate Issued | Registration of Death |
|---|---|---|---|

**Process**

Vital Statistics Unit, NISRA

| Download Deaths data from GRO | Quality Assurance checks & updates | ICD-10 Coding by ONS |
|---|---|---|

**Analyse**

Vital Statistics Unit, NISRA

| Quarterly Deaths Database (Provisional Data) | Annual Deaths Database (Finalised Data) |
|---|---|

**Disseminate**

Outputs

| Registrar General Quarterly Tables | Registrar General Annual Report | Annual Suicide Tables |
|---|---|---|

**Evaluate**

User Engagement

| Vital Statistics User Group | Expert Users Consultations | Vital Statistics Unit User Surveys |
|---|---|---|