Annex C: Data sources

Death registration records

C1. The National Records of Scotland (NRS) holds details of all deaths which are registered in Scotland. By convention, deaths are counted on the basis of the calendar year in which they are registered rather than the year of occurrence (as the latter might not be known). NRS usually closes its statistical database for a calendar year about four months after the end of the calendar year, the statistics for 2021 are based upon the information which NRS had obtained by mid May 2022. NRS classifies the underlying cause of each death using International Statistical Classification of Diseases and Related Health Problems (ICD) codes, based on what appears in the medical certificate of the cause of death together with any additional information which is provided subsequently by (for example) certifying doctors, pathologists and Procurators Fiscal.

Obtaining information about the substances that were involved in the death

C2. Drug misuse deaths are identified using details from death registrations supplemented by information from a specially-designed questionnaire, which is completed by forensic pathologists and lists the drugs and solvents that were found. NRS requests this information for all deaths involving drugs or persons known, or suspected, to be drug-dependent. Additionally, NRS follows up all cases of deaths of people where the information on the death certificate is vague or suggests that there might be a background of drug abuse. This enhancement to the data collection system was described in a paper published by NRS in June 1995 (which is referred to in the References at the end of Annex A). A copy of the questionnaire that was used from 2008 to 2013 appears in those years' editions of this publication. A new version of the questionnaire was introduced at the start of 2014, a copy of which is at the end of this Annex. The new questionnaire did not change greatly what was collected in respect of each death, but covers a wider range of deaths than before. This does not alter the definition of drug misuse deaths used for these statistics, but allows NRS to produce information about a wider range of deaths than that covered by the standard definition. (The form was revised slightly in July 2017, to include a bit more guidance on how to answer a few questions, but this did not change the kinds of information provided.)

C3. It should be noted that, in the case of deaths which involved drugs which are available on prescription, NRS does not know whether those drugs had been prescribed to the deceased: such information is not collected by the death registration process nor by the pathologists' questionnaires. Therefore, NRS does not know how many of the deaths which involved methadone (for example) were of people who had been prescribed the drug (some information about this is available from the NHS reports referred to in paragraph B9 of Annex B).

Changed collection of information about, and basis of figures on, substances

C4. The questionnaire was revised for 2008, in order to collect more complete information about the substances present in the body. This caused a break in the series of figures for 'drugs reported' because:

- pre-2008, the form asked about the 'principal drug or solvent found in a fatal dose' and about 'any other drugs or solvents involved in this death' - so some pathologists reported only the substances which, they believed, contributed directly to each death; and

- the form now asks about the drugs or solvents ‘implicated in, or which potentially contributed to, the cause of death’ and about ‘any other[s] which were present, but which were not considered to have had any direct contribution to this death’- so some pathologists now report substances which they would not have mentioned previously.

C5. NRS's data from the questionnaires for 2008 onwards distinguish between (a) drugs which were implicated in, or which potentially contributed to, the cause of death and (b) any other drugs which were present, but which were not considered to have had any direct contribution to the death. As a result, NRS can produce figures for 2008 onwards:

- on the ‘drugs which were implicated in, or which potentially contributed to, the cause of death’ basis – that is, counting only drugs which were reported under (a); and
- on the ‘all drugs which were found to be present in the body’ basis – that is, covering drugs which were reported under either (a) or (b).

Following consultation with the National Forum on Drug-related Deaths, ‘drugs which were implicated in, or which potentially contributed to, the cause of death’ became the normal basis for the figures for 2008 onwards that NRS produces for individual drugs, with effect from the 2009 edition.

C6. It should be noted that, although the old questionnaire referred to the ‘principal drug …’ and ‘other drugs … involved’, the figures for 2007 and earlier years are not directly comparable to the figures for 2008 onwards on the new normal basis. This is because, in 2007 and earlier years, some pathologists reported, in the old questionnaire, all the drugs that they found (that is, not just the drugs that they believed were implicated in, or contributed to, the cause of death) - so they provided information on the ‘all drugs which were found to be present in the body’ basis (that is, not on the new normal basis). More information about the change (including why NRS cannot produce figures on the normal basis for 2007 or earlier years) is available in the 2009 edition.

Changed classification of the underlying cause of death

C7. At the start of 2011, NRS implemented a number of World Health Organisation (WHO) updates to the ICD rules for identifying the underlying cause of death. This caused a break in the series of figures for the underlying cause of death. ‘Drug abuse’ deaths from ‘acute intoxication’, which would previously have been counted under ‘mental and behavioural disorders due to psychoactive substance use’, are now counted under the appropriate ‘poisoning’ category. Examples are the deaths of known or suspected habitual drug abusers, for whom the cause of death was certified as ‘adverse effects of heroin’, ‘methadone toxicity’ or ‘morphine intoxication’. Under the old coding rules, the underlying cause of those deaths would have been ‘mental and behavioural disorders due to use of opioids’ (unless NRS had been informed that the deaths were due to intentional self-harm, or assault, in which case the underlying cause would have been ‘intentional self-poisoning …’ or ‘assault by drugs …’, whichever was appropriate).

C8. Under the new coding rules, the underlying cause of such deaths is the appropriate type of poisoning. For example, if NRS is informed that the overdose is believed to have been accidental, the underlying cause will be coded as ‘accidental poisoning by and exposure to narcotics and psychodysleptics (hallucinogens)’. A note on the changes to the way in which NRS has coded the underlying cause of death with effect from the start of 2011 is available within the Death Certificates and Coding Cause of Death section of its website.

C9. NRS has estimated what the figures for 2011 onwards would have been, had the data been coded using the old rules. This makes it possible to see the changes between 2010 and 2011, and the longer-term trends, without a break in the series. NRS hopes to continue to estimate the breakdown by underlying cause of death on the basis of the old coding rules for at least a few more years.

Are the total numbers of drug misuse deaths affected?

C10. The overall total number of drug misuse deaths has not been affected by the changes to (i) the basis of the figures for individual drugs and (ii) how the underlying cause of death is coded. The first change has just reduced the number of drugs that are counted, for the purpose of the normal figures, for some deaths; the second has just altered the categories for the underlying cause of death against which many deaths are counted.

C11. However, the total number of drug misuse deaths has been affected by changes in the list of drugs which are controlled under the Misuse of Drugs Act. Annex F explains that the 'coverage' of NRS's standard (Drugs Strategy 'baseline') definition 'widens' every time another drug is added to the list of controlled substances, because all subsequent deaths from poisoning by that drug will be counted as drug misuse. In practice, changes in the classification of drugs that occurred in the years up to and including 2013 had little effect on the figures (refer to paragraph F4 of Annex F), but the change in the classification of tramadol and zopiclone in 2014 could have caused a noticeable break in the continuity of NRS's figures (as explained in paragraph F5 of Annex F). Therefore, in order to give more accurate indications of changes and trends, NRS developed a 'consistent series' of numbers of drug misuse deaths in previous years, which is based on the classification of each substance at the end of the latest year covered by the publication. In this edition, the consistent series shows that gabapentin and pregabalin becoming controlled under the Misuse of Drugs Act with effect from 1 April 2019 had very little effect on the continuity of the drug-death statistics.

C12. The statistics of drug misuse deaths may be affected by other differences, between years and/or between areas, in the way in which the information was produced. For example:

- technical advances may enable the detection of small quantities of substances that could not have been found in the post-mortems that were performed several years ago;
- the range of substances for which tests are conducted may change – for example for a number of years, a laboratory did not routinely test for the presence of cannabis (because the view was that, in general, it did not contribute to causing deaths), but now does so more often, because Procurators Fiscal are now more likely to want to know whether the deceased had been using it. More generally, advice is that there is a demand to obtain more complete and thorough toxicology on all cases tested for drugs, which includes fuller examinations for, and hence a greater possibility of finding, more drugs;
- if pathologists in one area report any findings of benzodiazepines by referring to that group of drugs unless they are sure that only one particular benzodiazepine (for example diazepam) was used, the areas which they serve will appear to have low proportions of deaths for which diazepam is mentioned (compared to areas where diazepam is more likely to be named specifically, and where there are proportionately fewer reports of benzodiazepines as a group);
- pathologists may decide not to describe a drug as being 'implicated in, or potentially contributing to, the cause of death' if it is found at what they would regard as within the levels that one might expect for the therapeutic use of a drug, and may change what they regard as the minimum level for reporting a substance.

For example, in one part of Scotland, diazepam used to be reported if its level was at least 0.4 mg/litre, but the 'cut-off' was raised to about 1 mg/litre. All else being equal, the area would then have fewer deaths in which diazepam was implicated, because cases with levels of between 0.4 and 1 mg/litre would no longer be counted; and

- there may be cases where different pathologists could have different views on whether a particular drug should be described as 'implicated in, or potentially contributing to, a death' - for example, because they have different views on what would have been a fatal dose of the drug for the person concerned, or (if the person had also taken other substances) on the level of harm that would be caused by the combination of the drug and one or more of the other substances taken.

The basis of the statistics for areas within Scotland

C13. Deaths are normally classified by geographical area on the basis of the usual place of residence of the deceased (or, if that is not known, or is outwith Scotland, on the basis of the location of the place of death).

C14. The statistics for the NHS Board areas are based on the boundaries which apply with effect from 1 April 2014. The figures for earlier years show what the numbers would have been, had the new boundaries applied in those years.

The questionnaire used to obtain further information about drug deaths, with effect from 2014

C15. The questionnaire introduced in 2014 appears on the next page. Different questionnaires were used for 2007 and earlier years, and for 2008 to 2013. Copies of those questionnaires can be found in the relevant editions of this publication. Following consultation with members of the Pathologists sub-group of the National Forum on Drug-related Deaths, the version shown here was used from 2014. In July 2017, the form was revised slightly to include a bit more guidance on how to answer a few questions (but that did not change the kinds of information provided). The notes of guidance for the completion of the form are from the "2017" version.

Confidential **Form ME4** (deaths reg'd 2014 on)
National Records of Scotland *Crown Office*

Deaths (i) involving or resulting from the use of drugs or solvents (e.g. illicit drugs, controlled substances that had been prescribed, or new psychoactive substances) or (ii) from other causes (e.g. from medical conditions, suicides, accidents, etc) in those cases where the deceased was a known or suspected drug/solvent abuser

***Please return to**:* Vital Events Branch, NRS, Ladywell House, Ladywell Road, Edinburgh EH12 7TF

Name of deceased: ……

Date of birth (*dd/mm/yyyy*)**:** / / **Date of death:** (*dd/mm/yyyy*)**:** / /

1. Was the deceased a known or suspected habitual/problem drug/solvent abuser? Yes ☐ No ☐

2. Did the death involve or result from the use of drugs/solvents? Yes ☐
No ☐ ===> *if "No", go to Question 5*

3. Was the death the result of drug/solvent overdose / intoxication? Yes ☐ No ☐

4(i) Based on the available evidence, what were the main drugs or solvents you believe were implicated in, or which potentially contributed to, the cause of death? *Please write their names clearly (e.g. in CAPITALS)*

a. …… d. ……

b. …… e. ……

c. …… f. ……

4(ii) Please specify any other drug(s)/solvent(s) which were present, but which were not considered to have had any direct contribution to this death. *Please write their names clearly (e.g. in CAPITALS)*

a. …… c. ……

b. …… d. ……

5. Was alcohol present at the time of death? Yes ☐ No ☐

If 'Yes', was it implicated in the cause of death Yes ☐ No ☐

6. Pathologist's view of cause of death *(full details - as would appear on a medical certificate of cause of death Please write clearly. Please do not use abbreviations or symbols):*

I **(a)** ……

(b) ……

(c) ……

(d) ……

II ……

7. Any other comments or information which may help NRS to classify correctly this death ?

……

……

Notes for completion:

General:
The information collected by this form is essential for the correct coding and monitoring of drug-related deaths in Scotland. If you have any queries about the form or its completion, please contact:
Frank Dixon (NRS), telephone: 0131 XXX XXXX.

Coverage:
A form should be completed, by a pathologist following post-mortem/toxicological examinations, if:

(i) the death involved or resulted from the use of drugs or solvents, such as <u>any</u> of the following:

- **illicit drugs**
- **substances controlled under the Misuse of Drugs legislation* which had been prescribed**
- **new psychoactive substances (e.g. so-called "legal highs")**

<u>or</u>

(ii) the death was from other causes, such as:

- **medical conditions**
- **suicides**
- **accidents**

in those cases where the deceased was a known or suspected drug/solvent abuser

Please note that
(a) forms should be completed for all deaths (including suicides) involving drugs or solvents for which the immediate cause of death was ***intoxication, overdose or poisoning***, or was a medical condition that was an ***immediate consequence of the drug toxicity*** - e.g. if the cause of death is: I(a): pneumonia I(b): heroin intoxication .
A form should be completed for every such death, even if the deceased was not a known or suspected drug/solvent abuser and/or it is thought that the drugs were obtained legally. For example, a form should be completed for every death that was the result of an overdose of a prescribed controlled substance.
(b) forms should ***also*** be compled for deaths which were due to medical conditions, chronic infections or diseases (e.g. heart or liver problems, Hepatitis C or HIV), suicide by other means (e.g. hanging, jumping from a height), and accidents (e.g. road accidents, house fires, falls, drownings), ***in those cases where the deceased was a known or suspected drug/solvent abuser***
(c) as requested by the Pathologists sub-group of the National Forum on Drug-Releated Deaths (NFDRD), ***the coverage of the ME4 form is <u>wider</u> than in 2013 and earlier years***. However, ***this should <u>not</u> increase the published number of drug-related deaths***, because NRS has not changed the definition of a drug-related death that is used for that purpose. NRS will use the data from the additional ME4 forms to produce (e.g. for NFDRD) information about a wider range of drug-related deaths than that covered by the standard statistical definition.

Q4 - Drugs/solvents to be recorded:
All drugs/solvents involved should be recorded, not just 'illicit' or 'controlled' drugs. However, it is not necessary to record additional metabolic by-products found by the toxicology.
Please note that, in part (i), the drugs/solvents which were implicated in (or contributed to) the cause of death may be listed in any order: NRS will **<u>not</u>** assume that the first one was the most important.

Q6 - Cause of death:
Please record the full details as they would appear on a medical certificate of cause of death (Form 11).

*** Controlled substances under the Misuse of Drugs legislation**
A detailed list is available from the Home Office Website: see:
http://www.homeoffice.gov.uk/publications/alcohol-drugs/drugs/drug-licences/controlled-drugs-list
and further information is available via: http://www.homeoffice.gov.uk/drugs/drug-law .
When this form was revised, controlled drugs included (e.g.) methadone, morphine, cocaine, ecstasy and heroin (Class A); codeine, dihydrocodeine, amphetamines and cannabis (Class B); diazepam and temazepam (Class C).

Completed forms should be returned to:

Vital Events Branch,
National Records of Scotland,
Ladywell House,
Ladywell Road,
Edinburgh EH12 7TF