

Annex F: A consistent series of drug-related death numbers, based on the classification at the end of the latest year covered by the publication

- F1. The 'coverage' of NRS's standard definition of a drug-related death 'widens' every time another drug is added to the list of substances which are controlled under the Misuse of Drugs Act, because all subsequent deaths from poisoning by that drug will be counted as drug-related. Therefore, in order to give more accurate indications of changes and trends, NRS has developed a 'consistent series' which is based on the classification of drugs at the end of the latest year covered by the publication. This Annex is about that series.
- F2. The standard (Drugs Strategy 'baseline') definition of a drug-related death that National Records of Scotland (NRS) uses for its statistics is set out in Section A2 of Annex A. Simplifying slightly, NRS counts a death as 'drug-related' if:
- either (a) the underlying cause of death was coded to one of certain specified categories of mental and behavioural disorders due to psychoactive substance use
 - or (b) the underlying cause was coded to one of certain specified categories of poisoning (or self-poisoning) and a drug listed under the Misuse of Drugs Act (1971) was known to be present in the body at the time of death.

Following the definition, a note in Section A5 adds that:

If a drug's legal status changes, NRS aims to count it on the basis of its classification on the day the person died For example, mephedrone was banned under the Misuse of Drugs Act with effect from 00.01 on 16 April 2010. Therefore, if mephedrone was the only drug found to be present in the body, a death coded to one of the categories listed under (b) would not be counted in NRS's implementation of the Drugs Strategy 'baseline' definition if it occurred before 16 April 2010.

(Other notes explain why a few deaths in the specified categories are excluded.)

- F3. As the 'mephedrone' example indicates, the requirement that a drug listed under the Misuse of Drugs Act must be present for a death to be counted as drug-related (under part [b] of the standard definition) means that whether NRS will count as drug-related a death from poisoning by a drug which is now controlled depends on when the death occurred: pre- or post-control. So the 'coverage' of NRS's standard 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-related. In theory, this could cause a break in the continuity of NRS's figures for drug-related deaths (using the standard [Drugs Strategy 'baseline'] definition) every time that another drug becomes controlled.
- F4. In practice, changes in the classification of drugs that occurred in the years up to and including 2013 had little effect on the figures: in that period, almost all the deaths which involved substances that were uncontrolled then, but are now controlled, also involved drugs that were already controlled, and so were counted as drug-related (in terms of the standard [Drugs Strategy 'baseline'] definition). For example, the foot of Table NPS2 (in the '... in 2013' edition of this publication) showed that almost all the deaths which involved New Psychoactive Substances (as defined for the purposes of that publication) were included in NRS's standard figures for drug-related deaths (in total, over the five years from 2009 to 2013, only 11 'NPS' deaths were not included in the standard figures). This is because (for example) there were few 'mephedrone only' deaths before it was controlled; any deaths from (say) 'mephedrone and diazepam intoxication' were counted as drug-related because (say) diazepam was present.

- F5. However, changes in the classification of drugs that occurred in 2014 could have caused a noticeable break in the continuity of NRS's figures (based on the standard definition). Tramadol became a controlled substance with effect from 10 June 2014, along with some other substances. In 2013, there were over two dozen 'poisoning' deaths which involved only tramadol, or only tramadol and one or more other substances which were not controlled at that time. Using NRS's standard (Drugs Strategy 'baseline') definition, such deaths (and those like them in the first part of 2014) are not counted as drug-related, but their equivalents from 10 June 2014 are counted as drug-related. So tramadol being controlled with effect from 10 June 2014 could have increased the number of deaths in 2014 counted as drug-related by a few percent (compared to what would have happened without that change), and there could, in due course, have been a similar effect on the figure for 2015 (because that was the first year for which tramadol was controlled throughout). It follows that NRS's standard figures could give a misleading impression of changes and any trends in drug-related deaths between 2013 and 2014, and between 2014 and 2015.
- F6. Therefore, in order to give more accurate indications of changes and trends, NRS developed a 'consistent series' of numbers of drug-related deaths in previous years, which is based upon the classification of each substance at the end of the latest year covered by the publication. This 'consistent series' includes all the deaths involving tramadol, mephedrone and the other substances which have become controlled in recent years, regardless of their status at the time of death. It should show changes and trends which would be unaffected by the reclassification of substances. The consistent series goes back to 2000, as that is the first year of NRS's current drug-related deaths database.
- F7. For simplicity, the consistent series is based on the classification of drugs at the end of the latest year covered by the publication (rather than, say, at the time the publication was prepared), so it does not take account of any reclassifications after the final year for which the publication gives figures. The basis of the consistent series was therefore 'as at 31 December 2014' for the 'in 2014' edition, 'as at 31 December 2015' for the 'in 2015' edition, 'as at 31 December 2016' for the 'in 2016' edition, and so on. In consequence, the consistent series' figures for previous years may be revised retrospectively every year, following more substances becoming controlled, if those substances had been involved in deaths (registered in earlier years) which had not been counted in the consistent series before because none of the substances involved were controlled at the end of the previous year.
- F8. The consistent series appears in Table 1 in order to show the underlying trends for Scotland. The rightmost three columns of Table 1 show the consistent series' number of drug-related deaths, and the 'extra' deaths (number and percentage) in earlier years that would have been counted as drug-related on the basis of the latest year's list of controlled substances. As will be seen, the consistent series' figures have never been much more than 6% above the number of drug-related deaths on the standard (Drugs Strategy 'baseline') definition (they were 5.6% higher in 2010, and 6.1% more in 2013). It follows that the changes in the classification of drugs have not had a great effect on the overall total number of drug-related deaths. The year-to-year variation in the number of 'extra' deaths has not been large, so the consistent series' patterns (of rises and falls, and of 'peaks' and 'troughs') are similar to those of the numbers produced by the standard definition.
- F9. The most noticeable break in the continuity of the number of drug-related deaths was caused by tramadol and zopiclone becoming controlled under the Misuse of Drugs Act

with effect from 10 June 2014. The numbers for 2014 and changes from 2013 are as follows:

- standard definition: 614 deaths in 2014, compared with 527 in 2013 – implying a rise of 87 or 17%; and
- consistent series: 624 deaths in 2014, compared with 559 in 2013 – implying a rise of 65 or 12%

Using the consistent series, between 2010 and 2020, the number of drug-related deaths increased from 512 to 1,339 – i.e. a rise of 827, or 162%. That is not much less than the standard definition's increase from 485 to 1,339 – i.e. a rise of 854 or 176%.

- F10. It should be noted that the consistent series' figures for 2013 and 2014 (and all the other years) also include deaths which involved other substances that subsequently became controlled under the Misuse of Drugs Act (such as gabapentin and pregabalin, which have been controlled with effect from 1 April 2019). So the figures given above do not show the precise scale of the break in the continuity of the number of drug-related deaths that was caused by tramadol and zopiclone becoming controlled.
- F11. Tables CS1 and CS2 provide the consistent series' numbers of 'extra' deaths in each year (i.e. the deaths which have been added retrospectively to the numbers that were originally produced using the standard [Drugs Strategy 'baseline'] definition), broken down by the names of the relevant drugs (i.e. the drugs for which the change in classification has caused deaths which were not counted as drug-related at the time to be included in the consistent series) and by sex and age-group.
- F12. Table CS1 shows how the number of 'extra' deaths, based on the classification of drugs at the end of the latest year covered by this edition, varied from year to year. It should be noted that the total number of 'extra' deaths could be less than the sum of the figures for the individual drugs, due to deaths which involved more than one of the drugs. For example, a death in (say) 2013 for which the cause was given as 'tramadol and zopiclone intoxication' would be counted in the figures for both of those drugs, but only once in the total number of 'extra' deaths.
- F13. The number of 'extra' deaths for 2014 (10) is not on the same basis as the figure for 2013 (32), because the figure for 2014 includes (e.g.) 'tramadol only' deaths only for the period up to 9 June 2014 whereas the figure for 2013 includes such deaths for the whole of the year. 'Tramadol only' deaths in the rest of 2014 are included in the standard (Drugs Strategy 'baseline') definition (and are therefore not counted as 'extra' deaths) because tramadol became a controlled substance with effect from 10 June 2014.
- F14. The fact that the consistent series has only 10 'extra' deaths for 2014 indicates that the drug classification changes in 2014 (and later years) had slightly less effect on the figures than one would have expected from the previous years' numbers of (e.g.) 'tramadol only' deaths. With between 25 and 32 'extra' deaths (involving any of the substances) in each of the previous five years, one would have expected a dozen or so between 1 January and 9 June 2014 (assuming that, say, 'tramadol only' deaths continued at the same rate, a dozen or so would be the 'pro rata' number for the part of 2014 for which they would not be counted in the standard definition). However, as it turned out, 1 January to 9 June 2014 had few (e.g.) 'tramadol only' deaths, so the consistent series has only 10 'extra' deaths for 2014. (It will be seen from Table Y that tramadol was implicated in, or potentially contributed to, the cause of 38 deaths in 2014: markedly fewer than the 64 in 2013. Note: these figures cover both 'tramadol only' deaths and those for which tramadol and one or more other drugs were implicated in, or potentially contributed to, the cause of death.)

- F15. The table shows that, for most of the years from 2000 to 2014, most of the 'extra' deaths involved tramadol. There were also several involving zopiclone (which has also been controlled from 10 June 2014) or gabapentin or pregabalin. The latter two drugs, which became controlled under the Misuse of Drugs Act with effect from 1 April 2019, were involved in most of the 'extra' deaths for the years from 2015 to 2019. It is clear that gabapentin and pregabalin becoming controlled had little effect on the continuity of the figures. The table also shows that a few of the 'extra' deaths for some years involved other substances, not controlled at the time, which were controlled by the end of the period covered by this edition, for example: mephedrone (with none after 2010, because it has been controlled from 16 April 2010); phenazepam (controlled from 13 June 2012); and etizolam (controlled from 31 May 2017). Some other drugs were involved in 'extra' deaths, but they do not appear individually in the table because each had very few 'extra' deaths.
- F16. Table CS2 shows that women tend to account for a higher proportion of the 'extra' deaths than females do of the deaths which are counted in the standard (Drugs Strategy 'baseline') definition: in some years, there were more 'extra' deaths of women than of men. The table also shows the number of 'extra' deaths in each of five age-groups: in some of the years, this has tended to be highest for the '55 and over' age-group (in contrast to the standard figures for drug-related deaths, which are much higher for '25-34', '35-44' and '45-54' than for '55 and over' – see Table 4).
- F17. The "in 2018" edition of this publication reported that NRS data for the years 2000 to 2013 combined (which do not appear in a table) showed that the vast majority of the 'extra' deaths which involved tramadol were of people who were aged 35 and over, and that, of all the age-groups, 55+ was the one which had the largest number (around a third) of the 'extra' deaths which involved tramadol. This was the case for both males and females. The position was broadly similar for the 'extra' deaths which involved zopiclone. At that time, the numbers of extra deaths involving other substances were too small for such analysis. Little more can be said, following gabapentin and pregabalin becoming controlled under the Misuse of Drugs Act with effect from 1 April 2019. They were involved in totals of 27 (gabapentin) and 15 (pregabalin) 'extra' deaths for the years from 2000 to 2019: numbers which are too small for detailed analysis (in comparison, zopiclone was involved in 46 'extra' deaths, and tramadol in 170, over the same period).
- F18. The numbers of 'extra' deaths counted in the consistent series for NHS Board areas appear in the lower part of in Table HB1, in order to show their scale. As all the figures are relatively small, it is clear that the use of the consistent series would not change markedly the level of, or the trend in, the number of drug-related deaths for any area.
- F19. The consistent series and the numbers of 'extra' deaths do not appear in any other tables, because a proliferation of additional figures could cause confusion – especially as the consistent series figures may, in theory, be revised every year (for the reason given in the paragraph F7).