

# Alcohol-specific deaths: Methodology

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# What are alcohol-specific deaths?

The number of deaths that may be due to alcohol can be calculated in various ways. Definitions may be narrow and count only those deaths which are wholly specific to alcohol (e.g. from alcoholic liver disease). Whereas a wider definition may include deaths which may be only partially attributable to alcohol (e.g. from certain types of cancer).

Alcohol-specific deaths is the definition used in these Accredited Official Statistics. These are the number of deaths from causes which are known to be direct consequences of alcohol consumption, meaning they are wholly attributable to alcohol use.

The figures for alcohol deaths are produced based on the underlying cause of death. The underlying cause is the disease or injury which initiated the chain of morbid events leading directly to death. More information of the <u>basis of the cause of death</u> can be found on the NRS website.

# **Definition of alcohol-specific deaths**

The underlying cause of death is one of the following codes from the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10), which has been used by NRS since the start of 2000.

### Causes of death wholly specific to alcohol consumption, 2000 onwards

ICD-10 Code	Description
E24.4	Alcohol-induced pseudo-Cushing's syndrome
F10	Mental and behavioural disorders due to use of alcohol
G31.2	Degeneration of nervous system due to alcohol
G62.1	Alcoholic polyneuropathy
G72.1	Alcoholic myopathy
142.6	Alcoholic cardiomyopathy
K29.2	Alcoholic gastritis
K70	Alcoholic liver disease
K85.2	Alcohol-induced acute pancreatitis
K86.0	Alcohol induced chronic pancreatitis
Q86.0	Fetal induced alcohol syndrome (dysmorphic)
R78.0	Excess alcohol blood levels
X45	Accidental poisoning by and exposure to alcohol
X65	Intentional self-poisoning by and exposure to alcohol
Y15	Poisoning by and exposure to alcohol, undetermined intent

### Causes of death wholly specific to alcohol consumption, 1979 to 1999

The underlying cause of death is one of the following codes from the International Statistical Classification of Diseases and Related Health Problems, Ninth Revision (ICD-9), which NRS used from 1979 to 1999.

ICD-9 Code	Description
291	Alcoholic psychoses
303	Alcohol dependence syndrome

305.0	Nondependent abuse of alcohol
357.5	Alcoholic polyneuropathy
425.5	Alcoholic cardiomyopathy
535.3	Alcoholic gastritis
571.0	Alcoholic fatty liver
571.1	Acute alcoholic hepatitis
571.2	Alcoholic cirrhosis of liver
571.3	Alcoholic liver damage, unspecified
790.3	Excessive blood level of alcohol
E860	Accidental poisoning by alcohol

# Which causes of death which are not covered by the definition?

NRS figures for alcohol deaths do not include all deaths which may be caused by alcohol. For example, they do not include deaths:

- as a result of road accidents, falls, fires, suicide or violence involving people who had been drinking; or
- from some medical conditions which are considered partly attributable to alcohol, such as certain forms of cancer.

The reasons for this include the need to be able to provide reasonably consistent trends over time and for different parts of the UK. The definition only includes causes of death which are regarded as being most directly due to alcohol consumption and for which figures can be obtained from the statistics of registered deaths, due to lack of consistent statistical information about (e.g.) accidental deaths, suicides and homicides which are directly due to the consumption of alcohol.

Including appropriate proportions of deaths from causes such as road accidents and certain forms of cancer would produce considerably higher figures for alcohol-related deaths. Further information about this is available from (e.g.) the Information Services Division (ISD) Scotland paper 'Alcohol attributable mortality and morbidity: alcohol population attributable fractions for Scotland', which was published in June 2009, and the Scotlish Public Health Observatory (ScotPHO) report 'Hospital admissions, deaths and overall burden of disease attributable to alcohol consumption in Scotland', which was published in February 2018.

### Introduction of the alcohol-specific deaths definition

Figures based on the alcohol-specific death definition were first published in 2017. This definition was introduced following a consultation organised by the Office for National Statistics (ONS), more information about which is given below.

In Spring 2017, the ONS initiated discussions with NRS and other government bodies regarding the need to review the Accredited Official Statistics definition of alcohol-related deaths. This led to ONS consulting a range of interested parties on the definition of alcohol deaths that should be used in future. The relevant documents, which were all prepared by ONS (with input from NRS and others, who contributed as appropriate when necessary), are as follows:

- <u>'The impact of using the new definition of alcohol-specific deaths'</u> (published 27 October 2017) compared the numbers of deaths counted by the old and the new definitions, and the resulting age-standardised death rates, for the UK as a whole and for each of its four countries. It also provided several time-series of figures, on the basis of the new definition, for 2001 to 2015. Table 1 of this publication compares the causes of death which are covered by the two definitions.
- 'Alcohol-specific deaths in the UK: registered in 2016' (published 7 November 2017) the first edition of ONS's annual 'alcohol deaths' publication to use the new definition, it included comparisons of the age-standardised death rates for each sex for the four countries of the UK.

#### Coding causes of death for 1979 to 1999

When the alcohol-specific definition was introduced, figures were not available for 1999 or earlier years. This is due to there not being exact equivalents of some of these ICD-10 codes in ICD-9. However, on 16 October 2018, following work by NHS Health Scotland, NRS extended the series available on this website back to 1979.

In June 2018, NHS Health Scotland published a series of rates going back to 1981, which it produced using what it felt was a broadly comparable set of ICD-9 codes, in the 'Monitoring and Evaluating Scotland's Alcohol Strategy (MESAS) monitoring report 2018. NRS subsequently used its data for 1999, which had been 'bridge coded ' using both ICD-9 and ICD-10 (see Appendix 2 of the Registrar General's Annual Report for 2000) to assess the compatibility of NHS Health Scotland's choice of ICD-9 codes with the ICD-10 codes used. NRS found that the figure for 1999 produced using the ICD-10 codes was the larger, but only by 0.9%, so statistics of alcohol-specific deaths would have a very small break in series between 1999 and 2000. NRS therefore used the ICD-9 codes listed below to produce its figures for alcohol-specific deaths for 1979 to 1999.

The ICD-9 codes for alcohol-specific deaths that are listed above are the same as those that were used by NHS Health Scotland, with one exception: ICD-9 code 760.7 "Noxious influences transmitted via placenta or breast milk" is omitted, as it would be used if other types of substance (such as medicines and drugs) were taken by the

mother, and there is no evidence that, in most of the cases for which it was used, the noxious influence was alcohol.

### Old definition: alcohol-related deaths

NRS previously published statistics on the old definition, referred to as alcohol-related deaths. These were deaths from a selection of causes which are related to alcohol consumption. Most of those causes are wholly attributable to alcohol consumption, but some are only partially attributable. This differs to the alcohol-specific definition which is solely based on wholly attributable causes.

The numbers produced using the old and new definitions show broadly similar patterns of change over the period from 2000 to 2016, with the new definition's figures for Scotland tending to be very roughly 10% lower (the difference is between about 7% and around 12%, depending upon the year concerned), as can be seen from the chart which is available on the <u>archived alcohol deaths page</u>. Pre-2000, the two definitions' figures appear to differ more, but still show broadly similar long-term trends.

The alcohol-related deaths definition was introduced in 2006, and figures on this basis are available from 1979 to 2019. The new alcohol-specific deaths definition was introduced in 2017.

### Causes of death related to alcohol consumption, (old definition) 2000 onwards

ICD-10 Code	Description
F10	Mental and behavioural disorders due to use of alcohol
G31.2	Degeneration of nervous system due to alcohol
G62.1	Alcoholic polyneuropathy
142.6	Alcoholic cardiomyopathy
K29.2	Alcoholic gastritis
K70	Alcoholic liver disease
K73	Chronic hepatitis, not elsewhere classified
K74.0	Hepatic fibrosis
K74.1	Hepatic sclerosis
K74.2	Hepatic fibrosis with hepatitic sclerosis
K74.6	Other and unspecified cirrhosis of liver
K86.0	Alcohol induced chronic pancreatitis

X45	Accidental poisoning by and exposure to alcohol
X65	Intentional self-poisoning by and exposure to alcohol
Y15	Poisoning by and exposure to alcohol, undetermined intent

# Causes of death related to alcohol consumption, (old definition) 1979-1999

ICD-9 Code	Description
291	Alcoholic psychoses
303	Alcohol dependence syndrome
305.0	Non-dependent abuse of alcohol
425.5	Alcoholic cardiomyopathy
571.0	Alcoholic fatty liver
571.1	Acute alcoholic hepatitis
571.2	Alcoholic cirrhosis of liver
571.3	Alcoholic liver damage, unspecified
571.4	Chronic hepatitis
571.5	Cirrhosis of liver without mention of alcohol
571.8	Other chronic nonalcoholic liver disease
571.9	Unspecified chronic liver disease without mention of alcohol
E860	Accidental poisoning by alcohol