

Revision to ICD10 codes used for reporting alcohol-related discharges from Scottish hospitals

The Substance Misuse Team at the Information Services Division, NHS Scotland (ISD), routinely reports on the number of discharges from Scottish hospitals that have an alcohol-related diagnosis. This information is published annually, as a National Statistic, on the ISD website¹, and is used to report on alcohol-related hospital activity in local and national publications; to respond to information requests and parliamentary queries; and to support, among others, a wide range of uses from public health intelligence to service planning and the development of national targets.

ISD define alcohol-related discharges with a selected set of ICD10 codes (the World Health Organization International Classification of Diseases 10th Revision)². There is no standardized national or international set of codes that defines alcohol-related hospital discharges. The ISD code set was developed in consultation with experts including clinicians, analysts and clinical coders, and is subject to periodic review and refinement, in consultation with stakeholders. The diagnoses are those where alcohol is considered 100% attributable and do not include conditions where alcohol is a contributory factor, for example, head injuries.

ISD is currently undertaking the development of a separate code set to define those conditions where alcohol is *partly* attributable. This will allow a fuller reporting of the overall burden of alcohol related harm.

In conjunction with that, an **in-depth internal review** of the core alcohol related code set used by ISD has been undertaken. The review has resulted in some proposed changes to the current set of codes. New codes have been added and others removed (and are under consideration for the partly attributable list). The purpose is to define more precisely the set of ICD10 codes that best capture those conditions that are wholly attributable to alcohol. Both current and revised lists are presented below, in Table 1.

The resultant effect of using the revised list to calculate alcohol-related discharges from acute hospitals would be a slight decrease in overall numbers. **Note: this does not equate with a real decline in hospital discharges. Overall, the pattern of trends remains similar** (see Figure 1 and Table 2).

In accordance with the ISD Public Consultation protocols, the **Substance Misuse Team invites comments on the revised list of ICD10 codes**, using the following as guiding principles:

- Diagnoses selected are 100% attributable to alcohol misuse.
- The codes should be applicable for a range of information purposes (i.e. as comprehensive and flexible as possible, rather than a narrow band usable for high-level reporting only).
- Where appropriate, the codes should be comparable with other national and international reporting conventions.

All briefing notes and background documents will be made available on the ISD Alcohol Information website¹ from the end of June 2008, for a period of 12 weeks. Publication of hospital alcohol statistics in February on the ISD website² will be based on the new coding classification, pending agreement/consensus within the consultation group.

Appendix 1 is intended to provide background and context for those contributing to this consultation. **It may provide a basis for reviewers to consider what codes appear elsewhere that perhaps should be included in the ISD codes; or equally, what codes in the ISD code set should be excluded.**

¹ <http://www.alcoholinformation.isdscotland.org>

² <http://www.who.int/classifications/icd/en/>

Table 1: Comparison of currently used ICD-10 codes with proposed revised list of codes

Current ICD 10 Codes	Revised ICD 10 codes
<p>E52 - Niacin deficiency [pellagra] 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 I42.6 - Alcoholic cardiomyopathy K29.2 - Alcoholic gastritis K70 - Alcoholic liver disease K86.0 - Alcohol-induced chronic pancreatitis O35.4 - Maternal care for (suspected) damage to foetus from alcohol P04.3 - Fetus and newborn affected by maternal use of alcohol Q86.0 - Fetal alcohol syndrome (dysmorphic) R78.0 - Finding of alcohol in blood T50.6 - Antidotes and chelating agents, not elsewhere classified T51.0 - Toxic effect of ethanol T51.9 - Toxic effect of alcohol, unspecified 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 Y57.3 - Alcohol deterrents Y90 - Evidence of alcohol involuntary determined by blood alcohol level Y91 - Evidence of alcohol involvement determined by level intoxication Z50.2 - Alcohol rehabilitation Z71.4 - Alcohol abuse counselling and surveillance Z72.1 - Alcohol use Z81.1 - Family history of alcohol abuse Z13.3 - Special screening exam for mental/behavioural disorders Z63.7 - Other stressful life events affecting family and household Z86.4 - Personal History of psychoactive substance abuse</p>	<p>E24.4 - Alcohol induced Pseudo-Cushing's syndrome E51.2 - Wernicke's Encephalopathy T51.1 - Toxic effect of methanol E52 - Niacin deficiency [pellagra] 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 I42.6 - Alcoholic cardiomyopathy K29.2 - Alcoholic gastritis K70 - Alcoholic liver disease K86.0 - Alcohol-induced chronic pancreatitis O35.4 - Maternal care for (suspected) damage to foetus from alcohol P04.3 - Fetus and newborn affected by maternal use of alcohol Q86.0 - Fetal alcohol syndrome (dysmorphic) R78.0 - Finding of alcohol in blood T50.6 - Antidotes and chelating agents, not elsewhere classified T51.0 - Toxic effect of ethanol T51.9 - Toxic effect of alcohol, unspecified 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 Y57.3 - Alcohol deterrents Y90 - Evidence of alcohol involuntary determined by blood alcohol level Y91 - Evidence of alcohol involvement determined by level intoxication Z50.2 - Alcohol rehabilitation Z71.4 - Alcohol abuse counselling and surveillance Z72.1 - Alcohol use Z81.1 - Family history of alcohol abuse</p>

Blue - ICD10 codes added

Red - ICD10 codes removed

Impact of proposed changes

Figure 1 below shows trends in acute hospital admissions using both current and revised codesets. Although overall numbers are slightly lower, the overall pattern of an upward trend remains the same.

Figure 1: General acute inpatient discharges¹ with an alcohol-related diagnosis in any position^{2,3}: Scotland 1997/98 to 2006/07^P

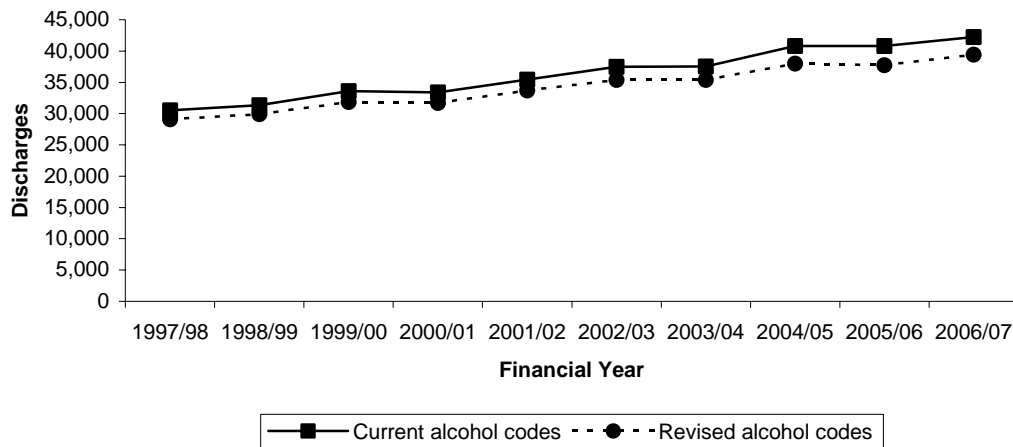


Table 2: General acute inpatient discharges¹ with an alcohol-related diagnosis in any position^{2,3}: Scotland 1997/98 to 2006/07^P: percentage decline in discharges

YEAR	Current alcohol codes	Revised alcohol codes	% decline in discharges
1997/98	30,538	29,096	-5%
1998/99	31,346	29,935	-5%
1999/00	33,574	31,863	-5%
2000/01	33,411	31,723	-5%
2001/02	35,446	33,709	-5%
2002/03	37,489	35,361	-6%
2003/04	37,556	35,407	-6%
2004/05	40,788	37,990	-7%
2005/06	40,796	37,744	-7%
2006/07 ^P	42,222	39,440	-7%

1. Excludes mental illness hospitals, psychiatric units and maternity hospitals, transfer cases have also been excluded.

2. Diseases recorded using the World Health Organisation's International Classification of Diseases 10th Revision (ICD10).

Current alcohol codes: F10, R78.0, Y90, Y91, Z63.7, Z81.1, Z86.4, Z71.4, Z50.2, T50.6, Y57.3, T51.0, T51.9, X4.5, X65, Y15, O35.4, Q86.0, P04.3, Z72.1, Z13.3, G62.1, G72.1, K86.0, I42.6, K70, K29.2, G31.2, E52.

Revised alcohol codes: F10, R78.0, Y90, Y91, Z63.7, Z81.1, Z71.4, Z50.2, T50.6, Y57.3, T51, X45, X65, Y15, O35.4, Q86.0, P04.3, Z72.1, G62.1, G72.1, K86.0, I42.6, K70, K29.2, G31.2, E52, E24.4, E51.2.

3. Caution is necessary when interpreting these figures. The recording of alcohol misuse may vary from hospital to hospital.

Where alcohol misuse is suspected but unconfirmed it may not be recorded by the hospital.

p Provisional.

Appendix 1: ICD10 codes used for reporting on alcohol related hospital discharges (SMR01 & SMR04) in Scotland and England

The Substance Misuse team at ISD (Information Services Division, NHS Scotland) routinely uses a cluster of ICD-10 (International Classification of Diseases Revision 10) codes to extract hospital discharge data from hospital discharge data databases. These data form the basis of the national statistics ISD publishes on alcohol-related discharges. The purpose of this paper is to:

- Describe/outline alcohol related codes used by ISD (Information Services Division, NHS Scotland)
- Describe alcohol related codes used in England
- Illustrate/highlight any discrepancies

This appendix sets out codes used for **alcohol related discharges only**. For reporting mortality, there is a recently revised set of standard codes agreed at UK level across different organisations (ISD, GROS and ONS).

1 Alcohol related codes in Scotland

For the last five years, ISD has used a standard set of alcohol codes developed in house. These codes are used to report on hospital activity in national and local publications. Diagnoses based on ICD10 (International Classification of Diseases Revision 10) coding are given below.

ICD-10 codes currently used by ISD to define alcohol-related hospital discharges

E52 Niacin deficiency (pellagra)
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
I42.6 Alcoholic cardiomyopathy
K29.2 Alcoholic gastritis
K70 Alcoholic liver disease
K86.0 Alcohol-induced chronic pancreatitis
O35.4 Maternal care for (suspected) damage to foetus from alcohol
P04.3 Fetus and newborn affected by maternal use of alcohol
Q86.0 Fetal alcohol syndrome (dysmorphic)
R78.0 Finding of alcohol in blood
T50.6 Antidotes and chelating agents, not elsewhere classified
T51.0 Toxic effect of ethanol
T51.9 Toxic effect of alcohol, unspecified
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
Y57.3 Alcohol deterrents
Y90 Evidence of alcohol involuntary determined by blood alcohol level
Y91 Evidence of alcohol involvement determined by level intoxication
Z13.3 Special screening exam for mental and behavioural disorders
Z50.2 Alcohol rehabilitation
Z63.7 Other stressful life events affecting family and household
Z71.4 Alcohol abuse counselling and surveillance
Z72.1 Alcohol use
Z81.1 Family history of alcohol abuse
Z86.4 Personal history of psychoactive substance abuse

2 Alcohol related codes in England

There appears to be no standard set of alcohol codes for reporting alcohol related morbidity in England; different institutions use different (overlapping) sets of codes to report on alcohol related hospital discharges. Some of these are described below.

2.1 Comparison of Statistics for Alcohol, England (2007and 2008) codes with ISD codes

The lists below show alcohol related codes from HES (Hospital Episode Statistics), the national statistical data warehouse for England of the care provided by NHS hospitals. Codes common to HES & ISD are in **green**, codes **not** currently used by ISD and only used in HES are in **red**.

The most recently published statistics from HES (Statistics on Alcohol, England, May 2008)³ are based on the following set of ICD10 codes:

- F10** Mental and behavioural disorders due to use of alcohol
- K70** Alcoholic liver disease
- T51.0** Toxic effect of ethanol
- T51.1** Toxic effect of methanol
- T51.2** Toxic effect of 2-Propanol
- T51.3** Toxic effect of fusel oil
- T51.8** Toxic effect of other alcohols
- T51.9** Toxic effect of alcohol, unspecified

Additional codes used by ISD but not in Alcohol Statistics England 2008:

- E52** Niacin deficiency (pellagra)
- G31.2** Degeneration of nervous system due to alcohol
- G62.1** Alcoholic polyneuropathy
- G72.1** Alcoholic myopathy
- I42.6** Alcoholic cardiomyopathy
- K29.2** Alcoholic gastritis
- K86.0** Alcohol-induced chronic pancreatitis
- O35.4** Maternal care for (suspected) damage to foetus from alcohol
- P04.3** Fetus and newborn affected by maternal use of alcohol
- Q86.0** Fetal alcohol syndrome (dysmorphic)
- R78.0** Finding of alcohol in blood
- T50.6** Antidotes and chelating agents, not elsewhere classified
- 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
- Y57.3** Alcohol deterrents
- Y90** Evidence of alcohol involuntary determined by blood alcohol level
- Y91** Evidence of alcohol involvement determined by level intoxication
- Z13.3** Special screening exam for mental and behavioural disorders
- Z50.2** Alcohol rehabilitation
- Z63.7** Other stressful life events affecting family and household
- Z71.4** Alcohol abuse counselling and surveillance
- Z72.1** Alcohol use
- Z81.1** Family history of alcohol abuse
- Z86.4** Personal history of psychoactive substance abuse

³ www.ic.nhs.uk/pubs/alcohol08

Prior to this publication HES used the following ICD 10 codes for Statistics on Alcohol, England 2007⁴.

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
I42.6 Alcoholic cardiomyopathy
K29.2 Alcoholic gastritis
K70 Alcoholic liver disease
K73 Chronic hepatitis, not elsewhere specified
K74 Fibrosis and cirrhosis of liver
T51.0 Toxic effect of ethanol
T51.1 Toxic effect of methanol
T51.2 Toxic effect of 2-propanol
T51.3 Toxic effect of fusel oil
T51.8 Toxic effect of other alcohols
T51.9 Toxic effect of alcohol, unspecified

Additional codes used by ISD but not in Statistics on Alcohol, England, 2007, are presented below in a separate list for comparison and are in **blue**.

E52 Niacin deficiency [pellagra]
K86.0 Alcohol-induced chronic pancreatitis
O35.4 Maternal care for (suspected) damage to foetus from alcohol
P04.3 Fetus and newborn affected by maternal use of alcohol
Q86.0 Fetal alcohol syndrome (dysmorphic)
R78.0 Finding of alcohol in blood
T50.6 Antidotes and chelating agents, not elsewhere classified
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
Y57.3 Alcohol deterrents
Y90 Evidence of alcohol involuntary determined by blood alcohol level
Y91 Evidence of alcohol involvement determined by level intoxication
Z13.3 Special screening exam for mental and behavioural disorders
Z50.2 Alcohol rehabilitation
Z63.7 Other stressful life events affecting family and household
Z71.4 Alcohol abuse counselling and surveillance
Z72.1 Alcohol use
Z81.1 Family history of alcohol abuse
Z86.4 Personal history of psychoactive substance abuse

The HES output suggests that the most commonly used codes for analysis are F10, K70 and T51 (ISD set includes all of F10 and K70 codes but only the T510 and T519 subset from T51).

In the 2007 publication discharges from patients with a diagnosis of accidental poisoning by and exposure to alcohol (ICD 10 code X45) is also presented, although in a separate table. HES refer to X45 as a 'cause code' and do not include it in any other output or discuss it further elsewhere. The explanation given for this is that in most cases the recording of cause codes coincides with the recording of primary or secondary diagnoses of the alcohol specific ICD 10 codes.

⁴ <http://www.ic.nhs.uk/webfiles/publications/alcoholeng2007/Statistics%20on%20Alcohol-England%202007v6.pdf>

2.2 Comparison of Cabinet Office Strategy Unit codes with Scottish codes

The 'National Alcohol Harm Reduction Strategy' study background notes⁵ (published by the Cabinet Office, Strategy Unit in 2004) used a different set of codes from those used in the English Statistics on Alcohol. Again, codes which are common to the ISD list are in **green**, codes **not** included in the ISD list and only used in this report are in **red**. Codes used by ISD but not in the Cabinet Office report are also given below in a separate list for comparison and are in **blue**.

E24.4 Alcohol-induced pseudo-Cushing's syndrome
F10 Mental and behavioural disorders due to use of alcohol
G62.1 Alcoholic polyneuropathy
G72.1 Alcoholic myopathy
I426 Alcoholic cardiomyopathy
K29.2 Alcoholic gastritis
K70 Alcoholic liver disease
K73 Chronic hepatitis not elsewhere classified
K74 Fibrosis and cirrhosis of liver
K76 Other diseases of the liver
K86.0 Alcohol-induced chronic pancreatitis
T51.0 Toxic effect of ethanol
T51.1 Toxic effect of methanol
T51.2 Toxic effect of 2-Propanol
T51.3 Toxic effect of fusel oil
T51.8 Toxic effect of other alcohols
T51.9 Toxic effect of alcohol, unspecified
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
Y90 Evidence of alcohol involuntary determined by blood alcohol level
Y91 Evidence of alcohol involvement determined by level intoxication
Z50.2 Alcohol rehabilitation
Z72.1 Alcohol use

Codes in the ISD list that are not in the 'National Alcohol Harm Reduction Strategy' study list:

E52 Niacin deficiency [pellagra]
G31.2 Degeneration of nervous system due to alcohol
O35.4 Maternal care for (suspected) damage to foetus from alcohol
P04.3 Fetus and newborn affected by maternal use of alcohol
Q86.0 Fetal alcohol syndrome (dysmorphic)
R78.0 Finding of alcohol in blood
T50.6 Antidotes and chelating agents, not elsewhere classified
Y57.3 Alcohol deterrents
Z13.3 Special screening exam for mental and behavioural disorders
Z63.7 Other stressful life events affecting family and household
Z71.4 Alcohol abuse counselling and surveillance
Z81.1 Family history of alcohol abuse
Z86.4 Personal history of psychoactive substance abuse

⁵ http://www.cabinetoffice.gov.uk/strategy/work_areas/alcohol_misuse.aspx

2.3 Codes used by the North West Public Health Observatory (NWPHO)

The NWPHO have done extensive reporting on alcohol and do so for all Public Health Observatories (PHOs) in England. They have produced both a national report on alcohol in the UK (though not including the Scotland PHO), and also local reports. The eighth in a series of national reports produced for the Chief Medical Officer (CMO) by the Association of Public Health Observatories (APHO) was on alcohol: Indications of Public Health in the English Regions 8 (Alcohol)⁶, published in August 2007. Codes used to report on alcohol-related discharges were described as 'alcohol-specific' and included:

- 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**
- I426 Alcoholic cardiomyopathy**
- K29.2 Alcoholic gastritis**
- K70 Alcoholic liver disease**
- T51.0 Toxic effect of ethanol**
- T51.1 Toxic effect of methanol**
- X45 Accidental poisoning by and exposure to alcohol**

All codes in **green** are in the ISD set. Codes in **red** are not. Codes in **blue**, below, are in the ISD list, but have not been used in the NWPHO report.

- E52 Niacin deficiency (pellagra)**
- K86.0 Alcohol-induced chronic pancreatitis**
- O35.4 Maternal care for (suspected) damage to foetus from alcohol**
- P04.3 Fetus and newborn affected by maternal use of alcohol**
- Q86.0 Fetal alcohol syndrome (dysmorphic)**
- R78.0 Finding of alcohol in blood**
- T50.6 Antidotes and chelating agents, not elsewhere classified**
- T51.9 Toxic effect of alcohol, unspecified**
- X65 Intentional self-poisoning by and exposure to alcohol**
- Y15 Poisoning by and exposure to alcohol undetermined intent**
- Y57.3 Alcohol deterrents**
- Y90 Evidence of alcohol involuntary determined by blood alcohol level**
- Y91 Evidence of alcohol involvement determined by level intoxication**
- Z13.3 Special screening exam for mental and behavioural disorders**
- Z50.2 Alcohol rehabilitation**
- Z63.7 Other stressful life events affecting family and household**
- Z71.4 Alcohol abuse counselling and surveillance**
- Z72.1 Alcohol use**
- Z81.1 Family history of alcohol abuse**
- Z86.4 Personal history of psychoactive substance abuse**

⁶ http://www.nwph.net/nwpho/Publications/Alcohol_Indications.pdf

3 Proposed set of revised ICD10 codes for Scotland

An initial review (within ISD) in 2007/08 resulted in development of the following set of codes for reporting alcohol-related discharges for acute hospitals. It is presented here as a basis for discussion and consultation (see also Table 1).

E24.4 Alcohol-induced pseudo-Cushing's syndrome
E51.2 Wernicke's encephalopathy
E52 Niacin deficiency [pellagra]
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
I42.6 Alcoholic cardiomyopathy
K29.2 Alcoholic gastritis
K70 Alcoholic liver disease
K86.0 Alcohol-induced chronic pancreatitis
O35.4 Maternal care for (suspected) damage to foetus from alcohol
P04.3 Fetus and newborn affected by maternal use of alcohol
Q86.0 Fetal alcohol syndrome (dysmorphic)
R78.0 Finding of alcohol in blood
T50.6 Antidotes and chelating agents, not elsewhere classified
T51.0 Toxic effect of ethanol
T51.1 Toxic effect of methanol
T51.9 Toxic effect of alcohol, unspecified
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
Y57.3 Alcohol deterrents
Y90 Evidence of alcohol involuntary determined by blood alcohol level
Y91 Evidence of alcohol involvement determined by level intoxication
Z50.2 Alcohol rehabilitation
Z71.4 Alcohol abuse counselling and surveillance
Z72.1 Alcohol use
Z81.1 Family history of alcohol abuse