

Supplementary Tables

Supplementary Table 1. Cohort (shaded) who have at least one emergency admission for injury between 10 and 19 years old in 1998-2011 (N = 402,916)

1998	1999	2000	2001	2002	...	2007	2008	2009	2010	2011
6	7	8	9	10	...	15	16	17	18	19
7	8	9	10	11	...	16	17	18	19	20
8	9	10	11	12	...	17	18	19	20	21
9	10	11	12	13	...	18	19	20	21	22
10	11	12	13	14	...	19	20	21	22	23

Supplementary Table 2. Definitions and International Classification of Diseases (ICD-10) diagnostic codes used to classify emergency admissions for injury, chronic conditions and types of adversity*

ADMISSIONS AND ADMISSION TYPES	
Admission	
Admissions were defined by linked episodes of inpatient care, including day cases (any case > 4 hours stay). Any admission which occurred within one day or was a hospital transfer from a previous admission was considered to be the same admission. An episode may have up to 20 diagnosis codes entered, but 88% of admissions in this cohort had episodes with four or less diagnoses recorded (data not shown).	
Emergency (acute; unplanned) admission	
An admission was considered to be an emergency if the method of admission variable ('admimeth') was 21-24 or 28.(1)	
Injury	
An admission was considered to be for injury if any of the diagnosis codes in the first episode of the admission were S or T codes (Chapter XIX of the ICD -10).	
CHRONIC CONDITIONS	
ICD-10 codes as per Hardelid et al, 2013,(2) excluding E24.4, F10-F19, G31.2, G40.5, G62.1, G72.1, K29.2, K70, K85.2, K86.0, O35.4, R78.1-R78.5, Z50.2, Z50.3, Z86.4, X64-X84, Y10-Y34, Z91.5, F30.0-F30.2, F30.8-F32.3, F32.8-F334, F33.8-F34.1, F34.8-F34.9, F38.0-F38.1, F38.8, F39-F40.2, F40.8- F41.3, F41.8-F41.9.	
ADVERSITY CLUSTERS AND DESCRIPTIONS*	ICD-10 CODES
Violence	
<i>Maltreatment</i>	
Maltreatment syndromes	T74
Effects of other deprivation (extreme neglect)	T73
Perpetrator of neglect and other maltreatment syndromes	Y06, Y07
<i>Assault</i>	
Assault by bodily force and sexual assault	Y04, Y05
Other types of assault	X85 - Y03, Y08 - Y09
<i>Undetermined cause</i>	
Events of undetermined intent	Y20 - Y34
Examination and observation following other inflicted injury	Z04.5
Examination and observation for other reasons: request for expert evidence	Z04.8
Self-harm	
<i>Intentional self-poisoning by and exposure to...</i>	
...drugs	X60-X63
...other and unspecified drugs, medicaments and biological substances	X64
...alcohol	X65
...organic solvents and halogenated hydrocarbons and their vapours	X66
...other gases and vapours	X67
...pesticides	X68
...other and unspecified chemicals and noxious	X69

substances	
<i>Intentional self-harm by...</i>	
...hanging, strangulation and suffocation	X70
...drowning and submersion	X71
...firearm discharge	X72-X74
...explosive material	X75
...smoke, fire and flames, or steam, hot vapours and hot	X76-X77
objects	
...sharp/blunt objects	X78-X79
...jumping from a high place	X80
...jumping or lying before a moving object, or crashing a	X81-82
motor vehicle	
...other specified means	X83
...unspecified means	X84
<i>Personal history of self-harm</i>	Z91.5
Drug or alcohol misuse	
<i>Drugs, medicaments and biological substances (illicit drugs)</i>	
Mental and behavioural disorders due to psychoactive	F11 - F17, F19
substance use	
Finding of drugs not normally found in blood	R78.1 - R78.5
Poisoning by drugs, medicaments and biological	T36 - T50
substances	(not including T50.6)
Poisoning, undetermined intent	Y10 - Y14
Drug rehabilitation	Z50.3
Drug abuse counselling and surveillance	Z71.5
Drug use	Z72.2
<i>Environmental/ Domestic substances</i>	
Mental and behavioural disorders due to use of volatile	F18
solvents	
Accidental poisoning by and exposure to noxious	X40 – X44, X46 - X49
substances	
Intentional self-poisoning by and exposure to noxious	X69
substances	
Poisoning by chemical or noxious substance,	Y16 - Y19
undetermined intent	
<i>Codes mentioning both alcohol and drugs</i>	
Special epileptic syndromes - (related to alcohol, drugs,	G40.5
etc.)	
Blood-alcohol and blood-drug test	Z04.0
<i>Alcohol</i>	
Alcohol-induced pseudo-Cushing's syndrome	E24.4
Mental and behavioural disorders due to use of alcohol	F10
Degeneration of nervous system due to alcohol	G31.2
Alcoholic polyneuropathy	G62.1
Alcoholic myopathy	G72.1
Alcoholic cardiomyopathy	I42.1
Alcoholic gastritis	K29.2
Alcoholic liver disease	K70
Alcohol-induced acute pancreatitis	K85.2

Alcohol-induced chronic pancreatitis	K86.0
Maternal care for (suspected) damage to fetus from alcohol	O35.4
Finding of alcohol in blood	R78.0
Poisoning: antidotes and chelating agents, not elsewhere classified	T50.6
Toxic effect of alcohol	T51
Accidental poisoning by exposure to alcohol	X45
Poisoning by exposure to alcohol, undetermined intent	Y15
Evidence of alcohol involvement determined by blood alcohol level	Y90
Evidence of alcohol involvement determined by level of intoxication	Y91
Alcohol rehabilitation	Z50.2
Alcohol abuse counselling and surveillance	Z71.4
Alcohol use	Z72.1

Accidents

Transport accidents	V01 - V99
Falls	W00 - W19
Exposure to inanimate mechanical forces	W20 - W49
Exposure to animate mechanical forces	W50 - W64
Accidental drowning and submersion	W65 - W74
Other accidental threats to breathing	W75 - W84
Exposure to electric current, radiation and extreme ambient air temperature and pressure	W85 - W99
Exposure to smoke, fire and flames	X00 - X09
Contact with heat and hot substances	X10 - X19
Contact with venomous animals and plants	X20 - X29
Exposure to forces of nature	X30 - X39
Accidental poisoning by and exposure to noxious substances	X40 - X49
Overexertion, travel and privation	X50 - X57
Accidental exposure to other and unspecified factors	X58 - X59

Supplementary Table 3. Population prevalence* (per 100,000) of emergency admission(s) for injury, by types of adversity within age periods** and sex

	All girls	All boys	Girls			Boys		
Adolescent group**	10-19y	10-19y	10-14y	15-17y	18-19y	10-14y	15-17y	18-19y
All	9,073	16,333‡	4,104	3,260§	2,189§	7,316‡	5,069‡§	3,852‡§
Adversity	4,582	4,108‡	1,240	2,124§	1,329§	669‡	1,458‡§	1,748‡§
Any violence	391	1,970‡	103	152§	110	277‡	731‡§	833‡§
Any self-harm	3,418	1,266‡	777	1,463§	923§	170‡	393‡§	478‡§
Any drug or alcohol misuse	4,194	2,463‡	1,112	1,959§	1,221§	375‡	807‡§	1,077‡§
Single adversity	1,254	2616‡	495	687§	412§	516	991‡§	1,114‡§
Violence only	235	1,496‡	77	99§	75	256‡	609‡§	635‡§
Self-harm only	144	136	48	63§	31§	37‡	39	34
Drug or alcohol misuse only	874	984‡	369	525§	305§	224‡	342‡§	445‡§
Multiple adversity	3,328	1,492‡	745	1,436§	917§	153‡	467‡§	634‡§
V+SH	8	13‡	3	3	1§	1‡	2	2
V+DA	54	361‡	17	37§	26§	19	114‡§	190‡§
SH+DA	3,172	1,018‡	720	1,384§	882§	131‡	345‡§	436‡§
V+SH+DA	93	100‡	6	13§	8	2‡	5‡§	6§
No adversity	4,491	11,417‡	2,676	1,136§	860§	6,648‡	3,611‡	2,171‡§
Accidents only	748	10,466‡	2,221	804§	580§	5,887‡	3,109‡	1,784‡§
Other causes	3,742	951‡	455	332§	279§	761‡	503‡	388‡§

V = Violence, SH = Self-harm, DA = Drug or Alcohol Misuse

*Due to large denominators, confidence intervals for population prevalence were too narrow to provide any meaningful interpretation and so are not shown.

**Each adolescent classified by all adversity/accidents seen at any emergency injury admission(s) at 10-19 years, 10-14 years, 15-17 years and 18-19 years, respectively.

‡Statistically significantly different from girls of the same age (according to 95% confidence intervals).

§Statistically significantly different from 10-14 year olds of the same sex (according to 95% confidence intervals).

REFERENCES

1. Inpatient HES Data Dictionary. Leeds: Health and Social Care Information Centre, 2010.
2. Hardelid P DN, Davey J, Primbramska I, Gilbert R. Overview of child deaths in the four UK countries. London: 2013.