

# Appendix A: Classification of disease and injury

Diseases and injury are classified using the Ninth Revision of the World Health Organization's International Classification of Disease (ICD-9). The disease categories used in this report are defined by groups of ICD-9 codes as shown in Tables A.1, A.2 and A.3. The International Classification of Primary Care (ICPC) codes used in the GP survey and the condition codes used in the 1989–90 National Health Survey (NHS) are mapped across to the ICD-9 codes as shown in these tables.

**Table A.1: Classification of injuries and poisoning by injury type**

Disease category	ICD-9 codes	ICPC codes
1. Fractures	800–829	L72–L76
2. Dislocations	830–839	L80, L96
3. Sprains and strains of joints and adjacent muscles	840–848	L77–L79
4. Intracranial injury, excluding skull fracture	850–854	N79, N80
5. Internal injury of chest, abdomen, pelvis and blood vessels	860–869, 900–904	A81, B76, B77, D80, R88, U80, X82
6. Injury to nerves and spinal cord	950–957	N81
7. Open wound	870–897	F79, H77 <sup>(a)</sup> , S13, S18, Y80 <sup>(b)</sup>
8. Late effects of injury, poisoning, toxic effects, and other external cause	905–909	A82
9. Superficial injury	910–919	F75, H78, S12, S15, S17, S19
10. Contusion with intact skin surface	920–924	S16
11. Crushing injury	925–929	A80 <sup>(b)</sup> , L81 <sup>(b)</sup> , Y80 <sup>(b)</sup>
12. Foreign body entering through orifice	930–939	D79, F76, H76, R87
13. Burns	940–949	S14
14. Certain traumatic complications and unspecified injuries	958–959	A80 <sup>(b)</sup> , H79, L81 <sup>(b)</sup> , Y80 <sup>(b)</sup> , W75
15. Poisoning and toxic effects of substances	960–979, 980–989	A84, A86
16. Other and unspecified effects of external cause	990–995	A12, A13, A85, A88
16.1 Allergy not otherwise specified, anaphylactic shock	995.0, 995.3	A12 <sup>(b)</sup>
16.2 Unspecified adverse effect of drug	995.2	A13, A85
16.3 Other	990–994, 995.1, 995.4–995.9	A88
17. Complications of surgical and medical care	996–999	A87
18. Unspecified injuries, prevention and screening	V14, V15.0, V15.5, V15.6, V66.4, V67.4, V71.3–V71.6, V82.5	

(a) H77 also includes post-inflammatory perforation of eardrum (ICD-9 code 384.2), but all of H77 was assigned here.

(b) Where ICPC codes map to ICD-9 codes in more than one injury group, they are mapped in proportion to hospital separations for the relevant ICD-9 codes for each age–sex group.

The ICD-9 identifies external causes of injury using the so-called E-codes E800–E999. ICPC codes do not similarly identify external causes. In order to map injury costs to external causes, each of the injury types 1–11, 14, 16.1, 16.2 in Table A.1 were mapped to the external cause categories flagged with an (a) in Table A.2 using the age–sex specific distribution by E-code of hospital separations for that injury type. To check whether the hospital separation distribution was a reasonable proxy for the analogous distribution for general practice consultations, data from the 1995 National Health Survey were analysed for persons reporting a visit to a doctor in the last two weeks for an injury. When disaggregated by age, sex, injury type (e.g. fracture) and external cause group, the sample numbers were very low.

**Table A.2: Classification of injuries and poisoning by external cause**

Disease category	ICD-9 codes	ICPC codes
<b>Unintentional injuries</b>		
Road traffic accidents	E810–E819, E826–E829	(a)
Other transport accidents	E800–E807, E820–E825, E830–E848	(a)
Poisoning	E850–E858, E860–E869	A84 <sup>(d)</sup> , A86
Accidental falls	E880–E888	(a)
Fire, burns or scalds	E890–E899, E924.0, E924.2–E924.9	S14
Accidental drowning	E910	(a)
Machine injuries	E919	(a)
Adverse effects of medical treatment <sup>(b)</sup>	E870–E879, E930–E949	A13, A85, A87
Other unintentional injuries		
a. Accidents due to natural and environmental factors	E900–E909	(a)
b. Inhalation and ingestion of food causing obstruction	E911	(a)
c. Accidents caused by other foreign bodies	E912–E915	D79, F76, R87, H76
d. Other accidents	E916–E918, E920–E923, E924.1, E925–E929	(a)
<b>Intentional injuries</b>		
Suicide and self-inflicted injury		
a. Drug caused	E950.0–E950.3	A84 <sup>(d)</sup>
b. Other	E950.4–E959	(a)
Homicide and violence		
<b>Undetermined whether accidental or purposeful<sup>(c)</sup></b>		
Drug poisoning, cause uncertain	E980.0–E980.5	A84 <sup>(d)</sup>
Other	E980.6–E989	(a)
<b>Unspecified injuries, prevention and screening</b>	V14, V15.0, V15.5, V15.6, V66.4, V67.4, V71.3–V71.6, V82.5	

(a) Relevant ICPC codes for each of injury types 1–11, 14, 16.1, 16.2 in Table A.1 were mapped to the external cause categories flagged above with an (a) using the age–sex specific distribution of hospital separations of E-code groups for that injury type. Refer to text.

(b) Surgical and medical misadventure, adverse effects of drugs in therapeutic use

(c) In tables in this report, this category has been added to 'Suicide and self-inflicted injury' apart from 10% of 'Drug poisoning, cause uncertain' which has been added to 'Accidental poisoning'.

(d) Distributed across injury categories in proportion to inpatient episodes for these categories.

For this reason they were not used as the basis of the mapping of ICPC codes to E-codes in Table A.2. For the injury types where the numbers were largest, the hospital separation distribution was remarkably similar to the distribution obtained from the National Health Survey data. For this reason, the hospital-based mapping was considered likely to give a reasonable approximation to the external cause distribution by injury type seen in general practice. Note that the age–sex–injury type distribution is determined wholly by the GP survey data; it is only the distribution of external cause within injury type that is approximated by the inpatient distributions.

The categories for musculoskeletal disorders used in this report are defined as shown in Table A.3.

**Table A.3: Classification of musculoskeletal disorders**

Disease category	ICD-9 codes	ICPC codes	NHS codes
Systemic lupus erythematosus (SLE)	710.0, V13.5 <sup>(h)</sup> , V54 <sup>(h)</sup>	L99 <sup>(e)</sup>	42 <sup>(f)</sup>
Rheumatoid arthritis <sup>(a)</sup>	714, V54 <sup>(h)</sup>	L88 <sup>(d)</sup>	70 <sup>(f)</sup>
Osteoarthritis <sup>(a)</sup>	715, V54 <sup>(h)</sup>	L89–L91	70 <sup>(f)</sup>
Internal derangement of knee	717, V13.5 <sup>(h)</sup> , V54 <sup>(h)</sup>	L97	42 <sup>(f)</sup>
Other joint derangement and disorders	718–719, V13.5 <sup>(h)</sup> , V54 <sup>(h)</sup>	L08, L10, L11, L12(50%), L13, L15, L16, L17(50%), L20, L28, L99 <sup>(e)</sup>	42 <sup>(f)</sup>
Back problems			
Arthritis (spondylosis and spondylitis)	720, 721.2–721.9, V54 <sup>(h)</sup>	L84, L88 <sup>(d)</sup>	70 <sup>(f)</sup>
Intervertebral disc disorders	722.1–722.3, 722.5–722.9, V13.5 <sup>(h)</sup> , V54 <sup>(h)</sup>	L86	38, 39
Chronic back pain	724, V13.5 <sup>(h)</sup> , V54 <sup>(h)</sup>	L02, L03	40 <sup>(f)</sup>
Neck problems	721.0–721.1, 722.0, 722.4, 723, V13.5 <sup>(h)</sup> , V54 <sup>(h)</sup>	L01, L83	40 <sup>(f)</sup> , 70 <sup>(f)</sup>
Disorders of muscles, tendons and soft tissue <sup>(b)</sup>	725–729, V54 <sup>(h)</sup>	L09, L12(50%), L14, L17(50%), L18, L19, L29(50%), L70 <sup>(c)</sup> , L87, L92, L93, L99 <sup>(e)</sup>	42 <sup>(f)</sup> , 89
Osteopathies, chondropathies and other bone disorders	730–732, V54 <sup>(h)</sup>	L70 <sup>(c)</sup> , L94, L99 <sup>(e)</sup>	42 <sup>(f)</sup>
Osteoporosis	733.0, V54 <sup>(h)</sup>	L95	42 <sup>(f)</sup>
Acquired musculoskeletal deformities	734–738, V54 <sup>(h)</sup>	L85, L98, L99 <sup>(e)</sup>	42 <sup>(f)</sup> , 111, 112
Other	710, 711–713, 716, 733.1–733.9, 739, V13.5 <sup>(h)</sup> , V54 <sup>(h)</sup>	L29(50%), L99 <sup>(e)</sup>	42 <sup>(f)</sup>
Prevention	V17.7, V17.8, V82.1, V82.2	L27	74 <sup>(g)</sup> , 97 <sup>(g)</sup>

(a) Excluding spine.

(b) Includes rheumatism, aches of muscles/tendons, ganglions, bunions, bursitis, cramps, tenosynovitis, tennis elbow, etc.

(c) Distributed according to hospital inpatients for 728.0 (disorders of muscles etc.) and 730 (osteopathies etc.).

(d) Distributed according to hospital inpatients for 714 and 720.0, 720.2 (back).

(e) Distributed according to hospital inpatients for 710.0 (lupus), 718–719 (other joint), 725–728 (disorders of muscles etc.).

(f) Distributed across all relevant categories using number of consultations in the GP survey.

(g) Distributed across all chapters of ICD-9 in proportion to treatment costs.

(h) Distributed across musculoskeletal categories according to hospital separations for non-V codes.