

Supplementary Table 1 Adverse drug reaction related ICD-10 diagnosis codes[‡]

| Code* | Description | Rating [^] |
|-------|--|---------------------|
| A04.7 | Enterocolitis due to <i>Clostridium difficile</i> | C |
| A80.0 | Acute paralytic poliomyelitis, vaccine-associated | Other |
| D50.0 | Iron deficiency anaemia secondary to blood loss (chronic) | Other |
| D52.1 | Drug-induced folate deficiency anaemia | A1 |
| D59.0 | Drug-induced autoimmune haemolytic anaemia | A1 |
| D59.2 | Drug-induced nonautoimmune haemolytic anaemia | A1 |
| D61.1 | Drug-induced aplastic anaemia due to chemotherapy | A1 |
| D61.9 | Aplastic Anemia, unspecified | Other |
| D62 | Acute posthaemorrhagic anaemia | D |
| D64.2 | Secondary sideroblastic anaemia due to drugs and toxins | A2 |
| D65 | Disseminated intravascular coagulation (defibrination syndrome) | Other |
| D68.3 | Hemorrhagic disorder due to circulating anticoagulants | A1 |
| D68.4 | Acquired coagulation factor deficiency | Other |
| D68.8 | Other specified coagulation defects | Other [‡] |
| D68.9 | Coagulation defect, unspecified | Other |
| D69.5 | Secondary thrombocytopenia | D |
| D69.6 | Thrombocytopenia, unspecified | D |
| D69.9 | Hemorrhagic condition, unspecified | Other |
| D70 | Agranulocytosis | D |
| D89.3 | Immune reconstitution syndrome | Other [†] |
| E03.2 | Hypothyroidism due to medicaments and other exogenous substances | A2 |
| E06.4 | Drug-induced thyroiditis | A1 |
| E15 | Nondiabetic hypoglycaemic coma | C |
| E16.0 | Drug-induced hypoglycaemia without coma | A1 |
| E22.1 | Hyperprolactinaemia | Other [†] |
| E23.1 | Drug-induced hypopituitarism | A1 |
| E24.2 | Drug-induced Cushing's syndrome | A1 |
| E27.3 | Drug-induced adrenocortical insufficiency | A1 |
| E28.0 | Estrogen excess | Other [†] |
| E28.1 | Androgen excess | Other [†] |
| E61 | Deficiency of other nutrient elements | Other [†] |
| E66.1 | Drug-induced obesity | A1 |
| E86 | Volume depletion | Other |
| E87 | Hyperosmolality and hypernatremia | Other |
| F05 | Delirium, not induced by alcohol and other psychoactive substances | Other |
| F11 | Mental and behavioural disorders due to use of opioids | A2 |
| F13 | Mental and behavioural disorders due to use of sedatives or hypnotics | A2 |
| F15 | Mental and behavioural disorders due to use of other stimulants, including caffeine | Other |
| F16 | Mental and behavioural disorders due to use of hallucinogens | Other |
| F19 | Mental and behavioural disorders due to multiple drug use and use of other psychoactive substances | Other |

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| | | |
|-------|---|--------------------|
| F52 | Sexual dysfunction, not caused by organic disorder or disease | D |
| F55 | Abuse of non-dependence-producing substances | B2 |
| G04.0 | Acute disseminated encephalitis | Other |
| G21.0 | Malignant neuroleptic syndrome | A1 |
| G21.1 | Other drug-induced secondary parkinsonism | A1 |
| G21.2 | Secondary parkinsonism due to other external agents | A2 |
| G24.0 | Drug-induced dystonia | A1 |
| G25.0 | Essential tremor | Other [‡] |
| G25.1 | Drug-induced tremor | A1 |
| G25.3 | Myoclonus | Other |
| G25.4 | Drug-induced chorea | A1 |
| G25.6 | Drug-induced tics and other tics of organic origin | A1 |
| G25.8 | Other specified extrapyramidal and movement disorders | Other [†] |
| G40.5 | Special epileptic syndromes | Other |
| G43 | Migraine | Other [†] |
| G44.4 | Drug-induced headache, not elsewhere classified | A1 |
| G62.0 | Drug-induced polyneuropathy | A1 |
| G70.0 | Myasthenia gravis | Other [†] |
| G71.1 | Myotonic disorders | Other |
| G72.0 | Drug-induced myopathy | A1 |
| G95.8 | Other specified diseases of spinal cord | Other |
| H11.3 | Conjunctival hemorrhage | Other |
| H18.0 | Corneal pigmentations and deposits | Other [†] |
| H21.0 | Hyphaema | Other |
| H26.3 | Drug-induced cataract | A1 |
| H31.3 | Choroidal hemorrhage and rupture | Other |
| H35.3 | Degeneration of macula and posterior pole | Other [†] |
| H35.6 | Retinal hemorrhage | Other |
| H40.6 | Glaucoma secondary to drugs | A1 |
| H43.1 | Vitreous hemorrhage | Other |
| H53 | Visual disturbances | D |
| H91.0 | Ototoxic hearing loss | C |
| H92.2 | Otorrhagia | Other |
| I15.8 | Other secondary hypertension | D |
| I15.9 | Secondary hypertension, unspecified | D |
| I26.0 | Pulmonary embolism with mention of acute cor pulmonale | Other |
| I26.9 | Pulmonary embolism without mention of acute cor pulmonale | Other |
| I31.2 | Haemopericardium, not elsewhere classified | Other |
| I42.7 | Cardiomyopathy due to drugs and other external agents | A2 |
| I44 | Atrioventricular and left bundle-branch block | Other |
| I45.8 | Other specified conduction disorders | Other |
| I46.1 | Sudden cardiac death, so described | Other |
| I47.2 | Ventricular tachycardia | Other |

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| | | |
|-------|--|--------------------|
| I49.0 | Ventricular fibrillation and flutter | Other [‡] |
| I60 | Subarachnoid hemorrhage | Other |
| I61 | Intracerebral hemorrhage | Other |
| I62 | Other nontraumatic intracranial hemorrhage | Other |
| I80 | Phlebitis and thrombophlebitis | Other |
| I85.0 | Esophageal varices with bleeding | Other [‡] |
| I95.0 | Idiopathic hypotension | Other [†] |
| I95.1 | Orthostatic hypotension | Other [†] |
| I95.2 | Hypotension due to drugs | A1 |
| I95.8 | Other hypotension | Other [†] |
| I95.9 | Hypotension, unspecified | Other [†] |
| J38.5 | Laryngeal spasm | Other |
| J45.0 | Predominantly allergic asthma | Other |
| J45.1 | Nonallergic asthma | D |
| J45.8 | Mixed asthma | Other |
| J46 | Status asthmaticus | Other [‡] |
| J70.2 | Acute drug-induced interstitial lung disorders | A1 |
| J70.3 | Chronic drug-induced interstitial lung disorders | A1 |
| J70.4 | Drug-induced interstitial lung disorders, unspecified | A1 |
| J80 | Adult respiratory distress syndrome | Other [‡] |
| J81 | Pulmonary oedema | Other |
| K10.2 | Inflammatory conditions of jaws | Other [†] |
| K25 | Gastric ulcer | Other |
| K26 | Duodenal ulcer | Other |
| K27 | Peptic ulcer, site unspecified | Other |
| K28 | Gastrojejunal ulcer | D |
| K29.0 | Acute haemorrhagic gastritis | D |
| K52.1 | Toxic gastroenteritis and colitis | C |
| K52.8 | Other specified noninfective gastroenteritis and colitis | Other [‡] |
| K52.9 | Non-infective gastroenteritis and colitis, unspecified | D |
| K62.5 | Hemorrhage of anus and rectum | Other |
| K66.1 | Hemoperitoneum | Other |
| K71 | Toxic liver disease | Other |
| K72.0 | Acute and subacute hepatic failure | Other |
| K72.9 | Hepatic failure, unspecified | Other |
| K76.7 | Hepatorenal syndrome | Other |
| K85.3 | Drug-induced pancreatitis | A1 |
| K92.0 | Hematemesis | Other |
| K92.1 | Melena | Other |
| K92.2 | Gastrointestinal haemorrhage, unspecified | Other |
| L10.5 | Drug-induced pemphigus | A1 |
| L20 | Atopic dermatitis | Other [‡] |
| L21.0 | Seborrhoea capitis | Other |

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| | | |
|-------|--|--------------------|
| L21.1 | Seborrhoeic infantile dermatitis | Other |
| L21.8 | Other seborrhoeic dermatitis | Other [†] |
| L21.9 | Seborrhoeic dermatitis, unspecified | Other [†] |
| L23.3 | Allergic contact dermatitis due to drugs in contact with skin | A2 |
| L24.4 | Irritant contact dermatitis due to drugs in contact with skin | A2 |
| L25.1 | Unspecified contact dermatitis due to drugs in contact with skin | A2 |
| L26 | Exfoliative dermatitis | Other |
| L27 | Dermatitis due to substances taken internally | A2 |
| L28 | Lichen simplex chronicus and prurigo | Other |
| L29 | Pruritis | Other [‡] |
| L30 | Other dermatitis | Other |
| L43.2 | Lichenoid drug reaction | A1 |
| L50.0 | Allergic urticaria | D |
| L51.0 | Nonbullous erythema multiforme | C |
| L51.1 | Bullous erythema multiforme | C |
| L51.2 | Toxic epidermal necrolysis [Lyell] | C |
| L51.8 | Other erythema multiforme | C |
| L51.9 | Erythema multiforme, unspecified | C |
| L52 | Erythema nodosum | Other |
| L56.0 | Drug phototoxic response | A1 |
| L56.1 | Drug photoallergic response | A1 |
| L56.2 | Photocontact dermatitis [berloque dermatitis] | C |
| L64.0 | Drug-induced androgenic alopecia | A1 |
| L65 | Other nonscarring hair loss | Other [†] |
| L68.0 | Hirsutism | Other [†] |
| L68.1 | Acquired hypertrichosis lanuginosa | Other [†] |
| L71.0 | Perioral dermatitis | Other |
| M02.2 | Postimmunization arthropathy | Other |
| M10.2 | Drug-induced gout | A1 |
| M25.0 | Hemarthrosis | Other |
| M31.0 | Hypersensitivity angiitis | Other |
| M32.0 | Drug-induced systemic lupus erythematosus | A1 |
| M34.2 | Systemic sclerosis induced by drugs and chemicals | A2 |
| M62.8 | Other specified disorders of muscle | Other |
| M80.4 | Drug-induced osteoporosis with pathological fracture | A1 |
| M81.4 | Drug-induced osteoporosis without pathological fracture | A1 |
| M83.5 | Other drug-induced osteomalacia in adults | A1 |
| M87.1 | Osteonecrosis due to drugs | A1 |
| N14 | Analgesic nephropathy | A2 |
| N17 | Acute renal failure | D |
| N18 | Chronic kidney disease | D |
| N19 | Unspecified renal failure | D |
| N42.1 | Congestion and hemorrhage of prostate | Other |

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| | | |
|-------|--|--------------------|
| N62 | Hypertrophy of breast | Other |
| N83.6 | Hemosalpinx | Other |
| N83.7 | Hematoma of broad ligament | Other |
| N85.7 | Hematometra | Other |
| N89.7 | Hematocolpos | Other |
| N92.1 | Excessive and frequent menstruation with irregular cycle | Other [‡] |
| N92.2 | Excessive menstruation at puberty | Other [‡] |
| N92.3 | Ovulation bleeding | Other [‡] |
| N92.4 | Excessive bleeding in the premenopausal period | Other [‡] |
| N92.6 | Irregular menstruation, unspecified | Other [‡] |
| N93 | Other abnormal uterine and vaginal bleeding | Other [‡] |
| N95.0 | Postmenopausal bleeding | Other [‡] |
| N95.3 | States associated with artificial menopause | Other |
| N99.0 | Postprocedural renal failure | C |
| O26.6 | Liver disorders in pregnancy, childbirth and the puerperium | D |
| O35.5 | Maternal care for (suspected) damage to fetus by drugs | A2 |
| O74.2 | Cardiac complications of anaesthesia during labour and delivery | C |
| O74.3 | Central nervous system complications of anaesthesia during labour and delivery | C |
| O74.4 | Toxic reaction to local anaesthesia during labour and delivery | A1 |
| O74.6 | Other complications of spinal and epidural anaesthesia during labour and delivery | D |
| P04.0 | Fetus and newborn affected by maternal anaesthesia and analgesia in pregnancy, labour and delivery | A1 |
| P04.1 | Fetus and newborn affected by other maternal medication | A1 |
| P04.4 | Fetus and newborn affected by maternal use of drugs of addiction | A2 |
| P58.4 | Neonatal jaundice due to drugs or toxins transmitted from mother or given to newborn | A2 |
| P93 | Reactions and intoxications due to drugs administered to fetus and newborn | A2 |
| P96.1 | Neonatal withdrawal symptoms from maternal use of drugs of addiction | A2 |
| P96.2 | Withdrawal symptoms from therapeutic use of drugs in newborn | A1 |
| Q86.1 | Fetal hydantoin syndrome | A1 |
| Q86.2 | Dysmorphism due to warfarin | A1 |
| R00.1 | Bradycardia, unspecified | Other |
| R04.0 | Epistaxis | Other |
| R04.1 | Hemorrhage from throat | Other |
| R04.8 | Hemorrhage from other sites in respiratory passage | Other |
| R04.9 | Hemorrhage from respiratory passage, unspecified | Other |
| R06.0 | Dyspnoea | Other |
| R11 | Nausea and vomiting | Other |
| R17 | Unspecified jaundice | Other |
| R20 | Disturbances of skin sensation | Other |
| R21 | Rash and other nonspecific skin eruption | Other |
| R23.0 | Cyanosis | Other [†] |
| R23.1 | Pallor | Other [†] |
| R23.2 | Flushing | Other [†] |
| R23.3 | Spontaneous ecchymoses | Other |

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| | | |
|-------|---|--------------------|
| R23.4 | Changes in skin texture | Other [†] |
| R23.8 | Other and unspecified skin changes | Other [†] |
| R31 | Unspecified hematuria | Other |
| R34 | Anuria and oliguria | Other |
| R40.0 | Somnolence | Other [†] |
| R40.1 | Stupor | Other [†] |
| R40.2 | Coma, unspecified | Other [†] |
| R41.0 | Disorientation, unspecified | Other |
| R41.1 | Anterograde amnesia | Other [†] |
| R41.2 | Retrograde amnesia | Other [†] |
| R41.3 | Other amnesia | Other [†] |
| R41.8 | Other and unspecified symptoms and signs involving cognitive functions and awareness | Other [†] |
| R42 | Dizziness and giddiness | Other |
| R44.0 | Auditory hallucinations | Other |
| R44.1 | Visual hallucinations | Other |
| R44.2 | Other hallucinations | Other |
| R44.3 | Hallucinations, unspecified | Other |
| R50.2 | Drug-induced fever | A1 |
| R51 | Headache | Other |
| R55 | Syncope and collapse | Other |
| R58 | Haemorrhage, not elsewhere classified | Other |
| R73.9 | Hyperglycaemia, unspecified | Other |
| R74.0 | Elevation of levels of transaminase and lactic acid dehydrogenase [LDH] | Other |
| S06.4 | Epidural hemorrhage | Other |
| S06.5 | Traumatic subdural hemorrhage | Other [‡] |
| S06.6 | Traumatic subarachnoid hemorrhage | Other [‡] |
| S06.8 | Other intracranial injuries | Other [‡] |
| T36 | Poisoning by systemic antibiotics | B1 |
| T37 | Poisoning by other systemic anti-infectives and anti-parasitics | B1 |
| T38 | Poisoning by hormones and their synthetic substitutes and antagonists, not elsewhere classified | B1 |
| T39 | Poisoning by nonopioid analgesics, antipyretics and antirheumatics | B1 |
| T40 | Poisoning by narcotics and psychodysleptics | B1 |
| T41 | Poisoning by anaesthetics and therapeutic gases | B1 |
| T42 | Poisoning by antiepileptic, sedative-hypnotic and antiparkinsonism drugs | B1 |
| T43 | Poisoning by psychotropic drugs, not elsewhere classified | B1 |
| T44 | Poisoning by drugs primarily affecting the autonomic nervous system | B1 |
| T45 | Poisoning by primarily systemic and haematological agents, not elsewhere classified | B1 |
| T46 | Poisoning by agents primarily affecting the cardiovascular system | B1 |
| T47 | Poisoning by agents primarily affecting the gastrointestinal system | B1 |
| T48 | Poisoning by agents primarily acting on smooth and skeletal muscles and the respiratory system | B1 |
| T49 | Poisoning by topical agents primarily affecting skin and mucous membrane and by ophthalmological, otorhinolaryngological and dental drugs | B1 |
| T50 | Poisoning by diuretics and other unspecified drugs, medicaments and biological | B1 |

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| substances | | |
|------------|--|--------------------|
| T78.2 | Anaphylactic shock, unspecified | A2 |
| T78.3 | Angioneurotic oedema | A2 |
| T78.4 | Allergy, unspecified | A2 |
| T78.8 | Other adverse effects, not elsewhere classified | A2 |
| T78.9 | Adverse effect, unspecified | A2 |
| T80.1 | Vascular complications following infusion, transfusion and therapeutic injection | A2 |
| T80.2 | Infections following infusion, transfusion and therapeutic injection | A2 |
| T80.3 | ABO incompatibility reaction | A2 |
| T80.5 | Complications following infusion, transfusion and therapeutic injection: anaphylactic shock due to serum | A2 |
| T80.6 | Complications following infusion, transfusion and therapeutic injection: other serum reactions | A2 |
| T80.8 | Other complications following infusion, transfusion and therapeutic injection | A2 |
| T80.9 | Unspecified complication following infusion, transfusion and therapeutic injection | A2 |
| T81 | Complications of procedures, not elsewhere classified | Other [‡] |
| T88.0 | Infection following immunization | Other |
| T88.1 | Infection complications following immunization | Other |
| T88.2 | Shock due to anaesthesia | Other |
| T88.3 | Malignant hyperthermia due to anaesthesia | A1 |
| T88.5 | Other complications of anaesthesia | D |
| T88.6 | Anaphylactic shock due to adverse effect of correct drug or medicament properly administered | A2 |
| T88.7 | Unspecified adverse event of drug or medicament | A2 |
| T88.8 | Other specified complications of surgical and medical care, not elsewhere classified | Other |
| T88.9 | Complication of surgical and medical care, unspecified | Other |
| T96 | Sequelae of poisoning by drugs, medicaments and biological substances | B2 |
| Z03.6 | Observation for suspected toxic effect from ingested substance | A2 |
| Z88 | Personal history of allergy to drugs, medicaments, and biological substances | Other [‡] |

* Because ICD-10 coding system uses alpha and numeric digits, a parent code has fewer digits with less specific diagnostic description compared to its subordinate codes. When both a parent code and an incomplete list of its subordinate codes were reported in the previous review, we only considered the reported subordinate codes.

[^] Hohl CM, Karpov A, Reddekopp L, Doyle-Waters M, Stausberg J. ICD-10 codes used to identify adverse drug events in administrative data: a systematic review. *J Am Med Inform Assoc.* 2014 May-Jun;21(3):547-57.

[†] The A-D causality ratings were derived from the systematic review conducted by Hohl et al[^]. Causality ratings were assigned with “Other” for ICD codes with causality ratings other than A-D in the review[^], and newly added diagnosis codes with supplementary specification of possible drug-related causality or listed in the adverse drug events chapter of the Classification of Hospital Acquired Diagnoses.

[‡] The original causality ratings were assigned with an “unlikely” category in Hohl et al review[^]

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