

Available data on the nature of drug-related hospitalisations

	Most common drugs (or groups) involved in drug-related hospital admissions	Most common clinical manifestations
1a. Buajordet 2002 ¹	Cytotoxic drugs, vaccination	Haematological reactions after treatment with cytotoxic drugs (22 / 53); complications to vaccination (9 / 53)
Easton 2004 ²	Beclomethasone; flucloxacillin; insulin-isophane; paracetamol; sodium valproate; insulin-neutral; budesonide; fluticasone; diazepam; theophylline; sodium cromoglycate; dothiepin; oxazepam; and triple antigen vaccine	NR
1b. Jonville-Béra 2002 ⁴	Antiepileptic drug, analgesic drug, acetyl salicylic acid, methadone (total: 4 drugs involved in 4 ADRs)	1x convulsion, 1x myoclonia, 1x melaena, 1x neonatal withdrawal syndrome (total: 4 ADRs)
Lamabadusuriya 2003 ⁵	Ampicillin and amoxicillin (20.6%, n=13), cotrimoxazole (11.1%, n=7), metoclopramide (11.1%, n=7), amoxicillin/clavulanic acid (3.2%, n=2), aspirin (3.2%, n=2), penicillin (9.5%, n=6), flucloxacillin (1.6%, n=1), erythromycin (4.8%, n=3), nalidixic acid (9.5%, n=6), diclofenac sodium suppository (4.8%, n=3), sodium valproate (3.2%, n=2) nalidixic acid (9.5%, n=6), diclofenac sodium suppository (4.8%, n=3), sodium valproate (3.2%, n=2), lamotrigine (1.6%, n=1), carbamazepine (1.6%, n=1), JE vaccine (9.5%, n=6), DPR vaccine (4.8%, n=3)	The nervous system was involved in 17 (27%), respiratory system in 6 (10%), gastrointestinal system in 8 (12%), and skin in 33 (52%). There were no renal or cardiovascular adverse reactions. ... When mechanism of action was examined 42 (67%) were pharmacological, 14 (22%) allergic manifestations, and 7 (11%) idiosyncratic.
Oshikoya 2011 ⁶	Co-trimoxazole (6x), ampicillin (4x), sulfadoxine/pyrimethamine (3x), albendazole, amodiaquine / artesunate, cefixime, loperamide, phenobarbitone, prednisolone (total: 19 drugs involved in 12 ADRs)	Erythema multiforme (5x), Stevens-Johnson syndrome (2x), macular and morbilliform rash (2x), ileus (1x), dystonia + hypothermia (1x), electrolyte disturbance + hyperglycaemia (1x) (total 12 ADRs)
Gallagher 2011 ⁷	Anti-neoplastic drugs, immunosuppressants, antibiotics and analgesics	Neutropenia, vomiting, diarrhoea, rash, immunosuppression, thrombocytopenia, irritability, altered conscious level, anaemia, rash, constipation, haematemesis, impaired renal function, anaphylaxis, fever, infection (cellulitis)
Posthumus 2012 ⁸	Anti-neoplastic and immunomodulating agents, vaccinations, anti-infectives for systemic use, immunomodulating agents, drugs for the nervous system	Neutropenic fever, fever (+refusal of food or tachycardia + abdominal pain or vomiting), vomiting, (retinal) haemorrhage, ataxia and diarrhoea, constipation, thrombopenia / petechiae, anaemia, drowsiness, dyspnoea, leucopenia, pancreatitis, sickness, syncope, urticaria
Gallagher 2012 ⁹ / Bellis 2014 ¹⁰	Cytotoxic drugs, corticosteroids, non-steroidal anti-inflammatory drugs (NSAIDs), vaccines, immunosuppressants	Oncology related including neutropenia, thrombocytopenia and anaemia; immunosuppression, occurring in both oncology and non-oncology patients; post-operative bleeding, linked to peri-operative corticosteroid administration and/or NSAIDs; vomiting, diarrhoea; rash; constipation; hypoglycaemia in diabetic patients treated with regular insulin; respiratory depression following treatment for status epilepticus
Langerová 2014 ¹¹	Anticancer chemotherapy 35%, antibiotics 18%, antipyretic drugs 6%, hormonal contraception 6%, vaccines 9%, immunosuppressants 9%, glucocorticoids 5%, biologic therapy 3%, others 9%	Febrile neutropenia and mucositis (anticancer chemotherapy); vomiting and allergic reactions (exanthema) (antibiotics)
Gholami 2015 ¹²	Anti-infective agents (e.g. cefixime) (37%), central nervous system agents (e.g. phenobarbital) (22.2%) serums, toxoids, and vaccines (18.5%), antineoplastic agents (11.2%), miscellaneous therapeutic agents (7.4%) antihistamine drugs (3.7%)	Maculopapular rashes (12.5%), diarrhoea (12.5%), and vomiting (10.4%)
Mouton 2020 ¹³	Remifentanyl, fentanyl, benzathine benzylpenicillin, furosemide + spironolactone, phenoxymethylpenicillin, carvedilol, prednisone, metoclopramide, ceftriaxone, zidovudine, co-trimoxazole, isoniazid, amoxicillin, ferrous gluconate, amikacin + paracetamol, clozapine, prednisone, metoclopramide, amitriptyline, enalapril, tacrolimus, mycophenolic acid, erythropoietin	Neonatal respiratory depression, cardio-respiratory arrest, respiratory arrest, cardiogenic shock, urticaria, cardiac failure congestive, lower respiratory tract infection, dystonia, urticaria, agranulocytosis, convulsion, thrombocytopenia, constipation, metabolic acidosis, delirium, upper respiratory tract infection, dystonia, somnolence, hyperkalaemia, anaemia macrocytic
Nasso 2020 ¹⁴	Vaccines (51.6%) antibacterials for systemic use (28.6%) anti-inflammatory and antirheumatic products (12.1%) analgesics (5.5%) drugs for obstructive airway diseases (2.2%) antiepileptics (4.4%) corticosteroids for systemic use (2.2%) antitussives (1.1%) antihistamines for systemic use (1.1%) psycholeptics (1.1%) agents acting on the renin-angiotensin system (1.1%) antineoplastic and immunomodulating agents (1.1%)	NR
1c. Duczmal 2006 ^{15 a,b}	Semisynthetic penicillin, cephalosporin and non-steroid anti-inflammatory drugs	Allergic reaction, intolerance of non-steroid anti-inflammatory drugs, photoallergic reactions, Hoigné syndrome
Le 2006 ¹⁶	Anticonvulsants (valproic acid, phenobarbital, and phenytoin)	NR
Mendoza 2015 ^{17 b}	Antineoplastic drugs (65.0%), drugs active on the central nervous system (8.6%) and anti-infective agents (5.8%)	NR
Morales-Ríos 2020 ¹⁸	NR	Febrile neutropenia, sepsis, pancytopenia, septic shock, mucositis

- 1a. Available data on the nature of drug-related hospitalisations – Studies with a broader concept of ‘adverse drug events’, ‘with intensive monitoring’ (yellow background)
 1b. Available data on the nature of drug-related hospitalisations – Studies with a narrower concept of ‘adverse drug reactions’, ‘with intensive monitoring’ (green background)
 1c. Available data on the nature of drug-related hospitalisations – Studies with a narrower concept of ‘adverse drug reactions’, ‘based on routine monitoring’ (blue background)

^a study identified via citation search; ^b just abstract of the study available

Abbreviations: NR Not reported (not reported at all or not reported separately for drug-related hospitalisations), ADR Adverse drug reaction

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