

Extended Version

Table 3 Drug classes associated with preventable drug-related admission due to prescribing problems

British National Formulary Class	Adverse drug event	Prescribing problem	Number of cases
Non-steroidal anti-inflammatory drugs	Gastrointestinal toxicity	Prescription in patients with 2 or more risk factors without gastrointestinal prophylaxis*	21
	Renal tubular necrosis	Concurrent prescription of two full dose non-steroidal anti-inflammatory drugs without monitoring renal function	1
Sub-total			22
Antiplatelet drugs	Gastrointestinal toxicity	Prescription in patients with 2 or more risk factors without gastrointestinal prophylaxis*	13
	Thrombotic event	Failure to prescribe in patients needing secondary prevention	4
Sub-total			17
Beta-adrenoceptor blocking drugs	Congestive cardiac failure	Prescription of standard dose beta-blocker in patient with known congestive cardiac failure	2
		Co-prescription of atenolol with verapamil*	1
	Tachycardia	Sudden cessation	1
	Bleeding oesophageal varices	Cessation without prescription of alternative	1
	Chest pain	Failure to maximise anti-anginal therapy despite ongoing symptoms over a period of time*	2
Sub-total			7
Antiepileptics	Fitting	Sub-therapeutic prescription	4
		Inappropriate cessation	2
Sub-total			6
Glucocorticoid therapy	Gastrointestinal toxicity	Co-prescription with non-steroidal anti-inflammatory drug*	2
	Osteoporotic fracture	Long-term prescription without osteoporosis prophylaxis	1
	Immunosuppression	Long-term high dose prednisolone without valid indication	1
Subtotal			4
Nitrates	Chest pain	Failure to maximise anti-anginal therapy despite ongoing symptoms over a period of time*	3
		Cessation of therapy*	1
Subtotal			4
Potassium-channel activators	Chest pain	Failure to maximise anti-anginal therapy despite ongoing symptoms over a period of time*	3
		Cessation of therapy*	1
Subtotal			4
Calcium-channel blockers	Chest pain	Failure to maximise anti-anginal therapy despite ongoing symptoms over a period of time*	2
	Congestive cardiac failure	Co-prescription of verapamil and atenolol*	1
Subtotal			3

British National Formulary Class	Adverse drug event	Prescribing problem	Number of cases
Penicillins	<i>Clostridium difficile</i> diarrhoea	Multiple high risk antibiotics for prolonged periods*	2
	Rash	Previous allergy to antibiotics and Epstein-Barr virus positive	1
		Subtotal	3
Angiotensin-converting enzyme inhibitors	Hyperkalaemia	Co-prescription with amiloride without valid indication*	1
	Pulmonary oedema	Prescription in patient with aortic stenosis	1
		Subtotal	2
Opioid analgesics	Constipation	Failure to co-prescribe stimulant laxative	2
Cephalosporins and cephamycins	<i>Clostridium difficile</i> diarrhoea	Multiple high risk antibiotics for prolonged periods*	2
Loop diuretics	Hyponatraemia and dehydration	Co-prescription with metolazone without valid indication*	1
Thiazide and related diuretics	Hyponatraemia and dehydration	Co-prescription with frusemide without valid indication*	1
Parenteral anticoagulants	Cerebrovascular attack	Substitution of tinzaparin for warfarin in antiphospholipid syndrome without valid indication	1
Potassium-sparing diuretics	Hyperkalaemia	Co-prescription with ACE-inhibitor without valid indication*	1
Sulphonylureas	Hypoglycaemia	Failure to reduce gliclazide dose when hypoglycaemia noted	1
Corticosteroids	Exacerbation of asthma	Failure to prescribe in patient with poorly controlled asthma	1
Serotonin selective re-uptake inhibitors	Fall secondary to postural hypotension	Represcribing sertraline in patient with previous postural hypotension secondary to sertraline two weeks earlier	1
Drugs for arrhythmias	Fast atrial fibrillation	Amiodarone stopped 3 weeks earlier when hypothyroidism diagnosed, no alternative initiated	1
Treatment of glaucoma	Pulmonary oedema	Beta-blocker eye-drops in known congestive cardiac failure	1
Anti-psychotic drugs	Collapse secondary to postural hypotension	Multiple drugs causing postural hypotension without valid indications*	1
Drugs used in essential tremor, chorea and tics	Collapse secondary to postural hypotension	Multiple drugs causing postural hypotension without valid indications*	1
Drugs used for urinary frequency, enuresis and nocturia	Collapse secondary to postural hypotension	Multiple drugs causing postural hypotension without valid indications*	1
Macrolides	<i>Clostridium difficile</i> diarrhoea	Multiple high risk antibiotics for prolonged periods*	1
Drugs used in nausea and vertigo	Extra-pyramidal side effects	Co-prescription of inappropriately high doses of dopamine antagonist anti-emetics	1
Total			90*

*This figure is higher than the total number of drug-related admissions associated with prescribing problems because if a drug related admission involves more than one causative drug it may be recorded more than once in the table.

