# S2 Table

SPPiRE Criteria

| **Drug group** | **PIP** | **Reason** |
| --- | --- | --- |
| **Drug groups frequently associated with preventable drug related morbidity** | | |
| **NSAIDS** | with diuretic and ACEi/ARB (1) | Risk of renal impairment |
| with chronic kidney disease (eGFR <50) (1, 2) |
| for ≥ 12 weeks with no gastroprotection (1) | Risk of GI bleed |
| that is not COX 2 selective, with a history of PUD with no gastroprotection (2) |
| and antiplatelet with no gastroprotection (2) |
| with an anticoagulant (2, 3) |
| with severe hypertension or heart failure (2) | Risk of hypertension/ heart failure exacerbation |
| COX-2 selective with concurrent cardiovascular disease (2) | Increased risk of MI/CVA |
| **Antiplatelets** | and history of PUD with no gastroprotection (1, 3) | Risk of GI bleed |
| and anticoagulant with no gastroprotection (1, 3) |
| dual antiplatelet therapy with no gastroprotection (1) |
| consider intended duration of treatment if taking dual anti-platelet therapy for over one year post PCI (2) | Not usually indicated |
| **Anticoagulants** | for first uncomplicated DVT for >6 months duration (2) | Not indicated |
| for first uncomplicated PE for >12 months duration (2) |
| dabigatran (Pradaxa) if eGFR <30 ml/min/ 1.73m2 or if renal function is unknown (2) | Risk of bleeding |
| rivaroxaban (Xarelto)or apixaban (Eliquis) if eGFR <15 ml/min/ 1.73m2 or if renal function is unknown (2) |
| **Diuretics** | and no U&E check in the last 48 weeks (1) | Risk of renal impairment and electrolyte abnormality |
| loop diuretic and thiazide diuretic and no U&E in the last 24 weeks (1) |
| loop diuretic for dependent oedema and no heart failure, liver failure or nephrotic syndrome (2) | Risks usually out-weigh benefits |
|  | thiazide diuretic with a history of gout (2) | Risk of precipitating gout |
| **Drugs groups associated with morbidity in the elderly** | | | |
| **Anticholinergic drugs** | With comorbidities (3)  Dementia  Narrow angle glaucoma  Cardiac conduction abnormalities  Chronic prostatism | Exacerbation of co-morbidity | |
| Concomitant use of two or more drugs with anticholinergic properties (2) | Risk of anticholinergic toxicity | |
| tricyclic antidepressant as first line antidepressant (2) | Increased risk of adverse effects in older patients and alternatives available | |
| antimuscarinic antihistamine (2) |
| **Benzodiazepines OR Z drugs** | for longer than 4 weeks (2) (1) | Risk of sedation, confusion, impaired balance, falls.  NNT 13 and NNH 6 when used for insomnia (4) | |
| **Antipsychotics** | with dementia and no psychosis (1, 2) | Increased risk of stroke, only use when all other means have failed and shortest possible dose for shortest duration (5) | |
| **Miscellaneous drug groups; included because of prevalence or high risk** | | |
| **Methotrexate** | not prescribed as weekly (1) | Increased risk of potentially fatal medication errors |
| prescribed > 1 strength tablet (1) |
| **Opioids** | used regularly with no laxative (2) | Risk of severe constipation |
| **Corticosteroids** | use ≥ 12 weeks with no bone protection (2) | Risk of fracture |
| **PPI** | for uncomplicated PUD/erosive peptic oesophagitis at full therapeutic dose ≥ 8 weeks (2) | Not indicated |
| **Metformin** | with eGFR < 30 ml/min/ 1.73m2 (2) | Risk of lactic acidosis |

*Abbreviations: NSAID; non-steroidal anti-inflammatory drug, ACEi; angiotensin converting enzyme inhibitor, ARB; aldosterone receptor blocker, eGFR; estimated glomerular filtration rate, PUD; peptic ulcer disease, GI; gastro-intestinal, MI; myocardial infarction, CVA; cerebrovascular accident, COX-2; cyclooxygenase-2, DVT; deep vein thrombosis, PCI; percutaneous coronary intervention, PE; pulmonary embolism, NNT; number needed to treat, NNH; number needed to harm*

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