

Prescribing Safety Indicators

Prescribing safety indicators describe scenarios where there is potentially inappropriate (and unsafe) prescribing. Based on a project commissioned by the RCGP a set of prescribing safety indicators has been developed for use in general practices based on the consensus of a varied sample of GPs in the UK. Practices can use these indicators to develop their own computer searches to identify patients at risk. The most up-to-date list of these indicators is shown below. Further details about how the indicators were developed can be found on the BJGP website: <http://bjgp.org/content/64/621/e181>

Indicators rated as appropriate for assessing the safety of prescribing of individual GPs and of general practices

A: Cardiovascular and respiratory disease

- 1) Aspirin or clopidogrel prescribed to people with previous peptic ulcer or GI bleed without gastro-protection
- 2) Prescription of aspirin at a dose >75mg daily for \geq one month in a patient aged >65yrs
- 3) Prescription of digoxin at a dose > 125 micrograms daily in a patient with renal impairment (e.g. CKD 3 or worse)
- 4) Prescription of digoxin at a dose of greater than 125 micrograms daily for a patient with heart failure who is in sinus rhythm
- 5) Prescription of diltiazem or verapamil in a patient with heart failure
- 6) Prescription of a beta-blocker to a patient with asthma (*excluding patients who also have a cardiac condition, where the benefits of beta-blockers may outweigh the risks*)
- 7) Prescription of a long-acting beta-2 agonist inhaler to a patient with asthma who is not also prescribed an inhaled corticosteroid

B: Central nervous system (including analgesics)

- 1) Prescription of a benzodiazepine or Z drug for more \geq 21 days, in a patient aged >65yrs, who is not receiving benzodiazepines or Z drugs on a long-term basis
- 2) Initiation of prescription of benzodiazepine or Z drugs for \geq 21 days in a patient >65yrs with depression
- 3) Antipsychotics prescribed for >6weeks in the over 65's with dementia but not psychosis
- 4) Amitriptyline at dose >75mg prescribed to a patient with heart failure, arrhythmia, heart block or postural hypotension
- 5) Prescription of aspirin to a child aged \leq 16yrs
- 6) Bupropion prescribed to a patient with epilepsy

C: Anti-infective agents

- 1) Prescription of mefloquine to a patient with a history of convulsions

D: Endocrine and metabolic

- 1) Glitazone prescribed to patient with heart failure
- 2) Metformin prescribed to a patient with renal impairment where the eGFR is ≤ 30 ml/min.
- 3) Oral prednisolone prescribed at a dose ≥ 7.5 mg daily for more than 3 months to the over 65's without co-prescription of osteoporosis preventing treatments.
- 4) Modified release potassium supplements prescribed to a patient with a history of peptic ulcer disease.

E: Women's health and urinary disorders

- 1) Prescription of a combined hormonal contraceptive to a woman with a history of venous or arterial thromboembolism
- 2) Prescription of oral or transdermal oestrogens to a woman with a history of breast cancer
- 3) Prescription of oral or transdermal oestrogen without a progestogen in a woman with an intact uterus
- 4) Prescription of a combined hormonal contraceptive to a woman aged 35 years or older who is a current smoker
- 5) Prescription of a combined hormonal contraceptive to a woman with a body mass index of ≥ 40

F: Immunosuppression

- 1) Methotrexate prescriptions should state 'weekly'
- 2) Methotrexate 2.5/10mg co-prescription
- 3) Methotrexate prescribed without folic acid.

G: Musculoskeletal

- 1) Concurrent use of two NSAIDS for more than two weeks (not including low dose aspirin).
- 2) Prescription of an NSAID, without co-prescription of an ulcer healing drug, to a patient with a history of peptic ulceration
- 3) Prescription of an NSAID in a patient with heart failure
- 4) Prescription of an NSAID in a patient with chronic renal failure with an eGFR < 45
- 5) Allopurinol prescribed at a dose of > 200 mg per day to patients with renal impairment (eGFR < 30 or CKD4)

H: Hazardous co-prescriptions and allergy

- 1) Prescription of warfarin and aspirin in combination (**without** co-prescription of gastroprotection)
- 2) Concurrent use of warfarin and any antibiotic without monitoring the INR within 5 days*
- 3) Prescription of warfarin in combination with an oral NSAID
- 4) Prescription of a phosphodiesterase type-5 inhibitor, e.g. sildenafil, to a patient who is also receiving a nitrate or nicorandil**
- 5) Co-prescription of lithium with thiazide diuretic

- 6) Prescription of a potassium salt or potassium sparing diuretic (excluding aldosterone antagonists) to a patient who is also receiving an ACE inhibitor or angiotensin II receptor antagonist
- 7) Prescription of verapamil to a patient who is also receiving a beta-blocker drug
- 8) Co-prescription of itraconazole with simvastatin, or with atorvastatin at a dose $\geq 80\text{mg}^{**}$
- 9) Co-prescription of trimethoprim with methotrexate for >7 days
- 10) Prescription of clarithromycin or erythromycin to a patient who is also receiving simvastatin, with no evidence that the patient has been advised to stop the simvastatin whilst taking the antibiotic
- 11) Prescription of a penicillin-containing preparation to a patient with a history of allergy to penicillin

I: Laboratory test monitoring

- 1) Patients aged >75 years on loop diuretics who have not had a U+E in the previous 15 months
- 2) Prescription of amiodarone without a record of liver function being measured in the previous nine months
- 3) Prescription of amiodarone without a record of thyroid function being measured within the previous nine months
- 4) Prescription of an ACE inhibitor or angiotensin II receptor antagonist without a record of renal function and electrolytes being measured prior to starting therapy
- 5) Patients on an ACEI or angiotensin II receptor antagonist who have not had a U+E in the previous 15 months
- 6) Prescription of warfarin to a patient without a record of INR having been measured within the previous 12 weeks (excluding patients who self monitor)
- 7) Prescription of a statin without an ALT taken prior to starting treatment
- 8) Prescription of a statin without an ALT taken prior to starting treatment and within 3 months of starting treatment
- 9) Prescription of lithium without a record of a lithium level being measured within the previous six months
- 10) Metformin without yearly serum creatinine
- 11) Use of a hypo-thyroid agent without monitoring relevant thyroid function tests within 2-4 months of initiation or dosage change and at least every 15 months thereafter
- 12) Prescription of methotrexate without a record of a full blood count within the previous three months
- 13) Prescription of methotrexate without a record of liver function having been measured within the previous three months.
- 14) Allopurinol without baseline urea, electrolytes, creatinine and eGFR

Notes

*Consensus reached for assessing the safety of prescribing of practices, but not individual GPs

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ACEI = angiotensin-converting enzyme inhibitor CKD = chronic kidney disease.

NSAID = non-steroidal anti-inflammatory drug.

INR = International Normalised Ratio; U+E = Urea and electrolytes ALT = Alanine transferase; and eGFR = estimated glomerular filtration rate