Medication and the Risk of Falls in Older People

NHS
Bedfordshire, Luton and Milton Keynes
Integrated Care Board

Falls and fall-related injuries are a common and a serious problem for older people. Whilst there can be many contributing factors, the use of certain medications is recognised as a major and modifiable risk factor for falls. Therefore, **a full medication review** should form part of the assessment for people with a history of falls.
A medication review should include modification or withdrawal of **Fall-Risk-Increasing Drugs (FRIDs)**, where possible. One of the prominent risk factors is the use of FRIDs.

To support clinicians in the management of FRIDs when performing a medication review, and to facilitate the deprescribing process, the **STOPPFall (Screening Tool of Older Persons Prescriptions in older adults with high fall risk)** and a **deprescribing tool** have been developed by a European expert group (see table below).

For any medication, withdrawal should always be considered where there is no indication for prescribing or if a safer alternative is available. In addition, the deprescribing guidance for the STOPPFall medication classes outlines in which cases to consider withdrawal, whether stepwise withdrawal is needed and whether monitoring is advised after deprescribing. Withdrawal of medication should ALWAYS be done under the supervision of a suitable clinician.

The table below includes the STOPPFall medication classes and deprescribing guidance.

Medication class	Commonly used medications within the class	Consider withdrawal if any of the following occur	Stepwise withdrawal needed?	Monitoring after deprescribing?
Benzodiazepines and benzodiazepine-related drugs*	Chlordiazepoxide, clonazepam, diazepam, flurazepam, lorazepam, lormetazepam, nitrazepam, oxazepam, temazepam, zolpidem, zopiclone.	Daytime sedation, cognitive impairment, or psychomotor impairments. If given for both indications: sleep and anxiety disorder.	In general, stepwise withdrawal needed.	Monitor: anxiety, insomnia, agitation. Consider monitoring: delirium, seizures, confusion.
Antipsychotics*	Amisulpiride, aripiprazole, chlorpromazine, fluphenazine, haloperidol, olanzapine, quetiapine, risperidone, sulpiride, trifluoperazine.	Extrapyramidal or cardiac side effects, sedation, signs of sedation, dizziness, or blurred vision. If given for behavioural and psychosocial symptoms of dementia (BPSD) or sleep disorder, possibly if given for bipolar disorder.	In general, stepwise / gradual withdrawal needed.	Monitor: recurrence of symptoms (e.g. psychosis, aggression, agitation, delusion, hallucination) Consider monitoring: insomnia
Opioids	Buprenorphine, codeine (including co-codamol, co-dydramol, dihydrocodeine), fentanyl, methadone, morphine, oxycodone, tramadol.	Slow reactions, impaired balance, or sedative symptoms. If given for chronic pain, and possibly if given for acute pain.	In general, stepwise / gradual withdrawal needed.	Monitor: recurrence of pain Consider monitoring: musculoskeletal symptoms, restlessness, gastrointestinal symptoms, anxiety, insomnia, diaphoresis, anger, chills
Antidepressants*	Amitriptyline, citalopram, clomipramine, dosulepin, doxepin, duloxetine, fluoxetine, imipramine, isocarboxazid, lofepramine, mianserin, mirtazapine, nortriptyline, paroxetine, phenelzine, promazine, sertraline, tranylcypromine, trazodone, trimipramine, venlafaxine.	Hyponatremia, orthostatic hypotension (OH), dizziness, sedative symptoms, or tachycardia/arrhythmia If given for depression (depends on symptom-free time and history of symptoms), or if given for sleep disorder, and possibly if given for neuropathic pain or anxiety disorder.	In general, stepwise / gradual withdrawal needed.	Monitor: recurrence of depression, anxiety, irritability and insomnia Consider monitoring: headache, malaise, gastrointestinal symptoms

Medication class	Commonly used medications within the class	Consider withdrawal if any of the following occur	Stepwise withdrawal needed?	Monitoring after deprescribing?
Antiepileptics	Carbamazepine, gabapentin, lamotrigine, levetiracetam, phenobarbitone, phenytoin, pregabalin, sodium valproate, topiramate.	Ataxia, somnolence, impaired balance, or possibly dizziness. If given for anxiety disorder or neuropathic pain.	Consider stepwise / gradual withdrawal	Monitor: recurrence of seizures (seek immediate medical advice). Consider monitoring: anxiety, restlessness, insomnia, headache.
Diuretics (including caffeine)	Bendroflumethiazide, bumetanide, chlorthalidone, furosemide, indapamide, metolazone.	OH, hypotension, or electrolyte disturbance and possibly urinary incontinence. Possibly if given for hypertension. Consider decaffeinated drinks where possible.	Consider stepwise / gradual withdrawal	Monitor: symptoms of heart failure, hypertension (monitor blood pressure), signs of fluid retention.
Alpha blockers used as antihypertensives or for prostate hyperplasia	Alfluzosin, doxazosin, indoramin, prazosin, tamsulosin, terazosin.	Hypotension, OH, or dizziness.	Consider for if used for blood pressure. Generally, not needed for prostate hyperplasia	Antihypertensive: Monitor: hypertension Consider monitoring: palpitations, headache. Prostate: Monitor: return of symptoms.
Centrally acting antihypertensives	Clonidine, methyldopa, moxonidine.	Hypotension, OH, or sedative symptoms.	Consider stepwise / gradual withdrawal	Monitor: hypertension.
Sedative antihistamines	Chlorphenamine, hydroxyzine, promethazine, alimemazine (trimeprazine).	Confusion, drowsiness, dizziness, or blurred vision. If given for all indications: hypnotic/ sedative, chronic itch, allergic symptoms.	Consider stepwise / gradual withdrawal	Monitor: return of symptoms. Consider monitoring: insomnia, anxiety.
Vasodilators in cardiac disease	ACE inhibitors (including captopril, enalapril, fosinopril, imidapril, lisinopril, perindopril, quinapril, ramipril), glyceryl trinitrate, hydralazine, isosorbide mononitrate, minoxidil.	Hypotension, OH, or dizziness.	Consider stepwise / gradual withdrawal	Monitor: symptoms of Angina Pectoris (e.g. chest pain, nausea, shortness of breath etc.)
Overactive bladder and incontinence medications	Oxybutynin, solifenacin, tolterodine.	Dizziness, confusion, blurred vision, drowsiness, or increased QT-interval.	Consider stepwise / gradual withdrawal	Monitor: return of symptoms.

*Support for prescribing for mental health conditions in older people can be found at: https://www.england.nhs.uk/wp-content/uploads/2017/09/practice-primer.pdf

References used:

- PrescQIPP C.I.C. Medication and falls, Bulletin 300, February 2022
- Overview | Falls: assessment and prevention in older people and in people 50 and over at higher risk | Guidance | NICE
- Decaffeination and Falls Prevention (online upload)

Other references to support with reviews:

- Decision trees to support review - https://kik.amc.nl/falls/ decision-tree/
- Relevant deprescribing algorithms can also be found at: https://www.prescqipp.info/our-resources/webkits/polypharmacy-and-deprescribing/
- PrescQIPP IMPACT bulletin provides additional advice on clinical risk, deprescribing priority and withdrawing and/or tapering medicines.