

Deprescribing in Older Adults with Falls using the STOPPFall Tool: A Quality Improvement Project

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Background

One of the most important modifiable risk factors associated with falling is the use of falls-risk inducing drugs (FRIDs). The World Falls Guidelines identified this as a key domain and recommended that a validated screening and assessment tool such as STOPPFall should be used in medication reviews targeted to falls prevention in older adults (1).

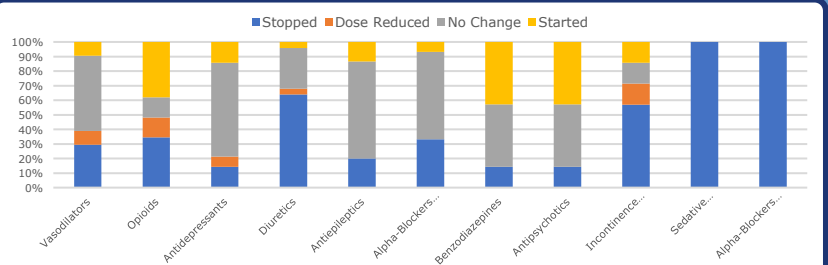
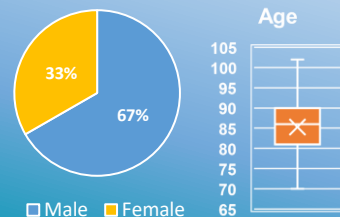
A proforma was created based on the STOPPFall Tool (2) to aid doctors in performing structured medication reviews in patients with falls. The research question was 'in older adult inpatients with falls, does use of the STOPPFall screening tool increase deprescribing of FRIDs?'

Method

The project was carried out on inpatient Geriatric wards. Patients were included if they were inpatients and had been admitted with a fall, had a history of recurrent falls and/or had an inpatient fall. FRID classes were identified using STOPPFall, and FRIDs prescribed on admission and discharge were determined using discharge letters. The primary outcome was the number of FRIDs stopped or dose reduced on discharge. An online survey assessed doctors' confidence in deprescribing.

Audit Results

102 patients were reviewed at baseline. The percentage of patients prescribed at least 1 FRID was reduced from 84.3% on admission to 65.7% on discharge. A total of 162 FRIDs were prescribed on admission; 73 (45.1%) of these were stopped and 12 (7.4%) were dose reduced.



Date: _____ Time: _____ Patient Name: _____ DOB: _____
K Number: _____

Medication Review for Patient with Falls

Please see overview for specific advice on different falls-risk inducing drug (FRID) classes - when to consider stopping, how to withdraw and what to monitor. All advice is based on the STOPPFall Deprescribing Tool.

Step	FRID Class	Stopt/Identified	Reduce Dose	Change to Alternative Drug	Discontinue with Pharmacist/Physiotherapist/Physician	No Change
Step 1	Identify Potential Falls Risk Inducing Drugs (list below including dose and frequency)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Step 2	Consider risks/benefits of each medication (Discuss with patient/relative/senior/pharmacist/specialist)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Step 3	Make plan for each drug (use checkboxes above)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Step 4	Make changes on drug chart	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Step 5	Plan for monitoring (list symptoms/signs to monitor and inform nursing staff)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Step 6	Update TIO and Discharge Letter with medication changes and plan for GP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Deprescribing Decision Tree

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    graph TD
      A[Faller with falls risk inducing drug FRID prescribed] --> B[Match FRID use to an appropriate indication for prescribing]
      B --> C{Indication still exists}
      C -- No --> D[Stop the FRID (either stop outright or taper the dose) (see overview for specific advice for FRID classes - If Stopping Consider...)]
      C -- Yes --> E[Indication still exists]
      E --> F{Check for safer alternative or consider dose reduction (or change in dosing time or interval)}
      F -- No safer alternative to be available --> G[Continue the FRID]
      F -- Yes --> H[Continue with the same dose]
      G --> I[Continue with the same dose]
      H --> I
      I --> J[After withdrawal or dose reduction monitor for: 1) Fall incidents 2) Symptoms depending on FRID (see overview for specific advice for FRID classes - Monitor)]
      J --> K[Refer alternative is available Change to that]
      K --> L[Continue with the same dose]
      L --> I
  
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Falls Risk Inducing Drug Classes and Deprescribing Advice

Class	Examples	Consider Stopping If...	Monitor...
Vasodilators/Antihypertensives	e.g. Ramipril, Amlodipine, Nifedipine	- Hypotension, Postural Drop, Dizziness - Dose reduction of 25-50% every week	Blood pressure (L+5), Dizziness, Signs of heart failure, Angina
Opioids	e.g. Morphine, Buprenorphine	- Consider Stopping If... - Dose reduction to 50% every 1-4 wks or taper if stopping for adverse effects	Recurrence of pain, MSK and GI symptoms, Restlessness, Anxiety
Antidepressants	e.g. Sertraline, Tricyclones, Fluoxetine	- Consider Stopping If... - Dose reduction of 25% every 1-4 wks	Recurrence of depression, anxiety, irritability or insomnia
Diuretics	e.g. Furosemide, Bendroflumethiazide	- Consider Stopping If... - Hypotension, Postural Drop, Electrolyte Abnormality, Incontinence	Blood pressure (L+5), Signs of HF, Loop diuretics have a higher falls risk
Antiepileptics	e.g. Valproic Acid, Carbamazepine, Levetiracetam	- Consider Stopping If... - Dose reduction (offers depending on drug, consult pharmacist/neurologist)	Recurrence of seizures, anxiety, restlessness, insomnia, headache
Alpha-Blockers	e.g. Prazosin, Tamsulosin	- Consider Stopping If... - Dose reduction (offers depending on drug, consult pharmacist)	Blood pressure (L+5), Dizziness, Return of Urinary Symptoms
Benzodiazepines	e.g. Lorazepam, Diazepam, Zopiclone	- Consider Stopping If... - Daytime sedation, Cognitive Impairment, Psychomotor Impairment	Anxiety, Insomnia, Agitation, Delirium, Seizures, Confusion
Antipsychotics	e.g. Risperidone, Aripiprazole	- Consider Stopping If... - Dose reduction (offers depending on drug, consult pharmacist/neurologist)	Recurrence of Symptoms (Psychosis, Aggression, Agitation, Delusion)
Incontinence Medications	e.g. Oxybutynin, Solifenacin	- Consider Stopping If... - Dose reduction (offers depending on drug, consult pharmacist)	Recurrence of Incontinence Symptoms
Sedative Antihistamines	e.g. Chlorpheniramine, Promethazine	- Consider Stopping If... - Dose reduction (offers depending on drug, consult pharmacist)	Blood pressure (L+5)
Alpha-Blockers	e.g. Doxazosin, Prazosin	- Consider Stopping If... - Dose reduction (offers depending on drug, consult pharmacist)	Blood pressure (L+5)
Centrally Acting Antihypertensives	e.g. Clonidine	- Consider Stopping If... - Dose reduction (offers depending on drug, consult pharmacist)	Blood pressure (L+5)

Other drug classes to consider stopping depending on patient presentation/symptoms:
Antipsychotics (e.g. Clozapine, Mirtazapine, Quetiapine), Cardiac glycosides (e.g. Digoxin), Oral hypoglycaemics (e.g. Gliclazide).
Also consider stopping Anti-coagulants (e.g. Apixaban, Warfarin) in patients with high falls risk due to risk of head injury and intracranial bleed.

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Survey Results

19 prescribers responded to the online survey. Self-assessment of confidence in deprescribing averaged at 7.74 (1-10 'not confident at all' to 'very confident'). Confidence increased with seniority; from 6.5 in foundation doctors to 9.0 in consultants.

Grade	Reponses	Average 'Confidence'
Foundation Doctor	6	6.50
Junior Middle Grade	4	6.75
Senior Middle Grade	1	9.00
Consultant	8	9.00

Conclusion

52.5% of FRIDs prescribed in older adult inpatients with falls were stopped or reduced. The STOPPFall proforma is currently being trialled on Geriatric wards and shows potential in encouraging deprescribing of FRIDs.

References

- Montero-Odasso, M. et al. (2022). World guidelines for falls prevention and management for older adults: a global initiative. *Age and Ageing*, 51(9), 1-36
- Seppala, L. et al. (2021). STOPPFall (Screening Tool of Older Persons Prescriptions) in older adults with high fall risk: a Delphi study by the EuGMS Task and Finish Group on Fall-Risk-Increasing Drugs. *Age and Ageing* 50(4), 1189-1199