



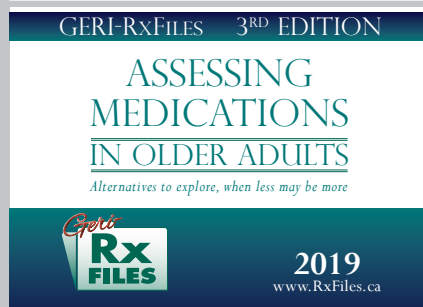
Geriatrics

When Less can be More

June 2019

Inside this Newsletter

- A small taste of what's in our *Geri-RxFiles* book, now in its 3rd Edition.
- How to decrease the risk of medication-related falls
- Principles of medication use in geriatrics



TOP 10 FACTS OUR TEAM WAS INTERESTED TO LEARN IN THE GERI-RXFILES 3RD EDITION:

1. *Paroxetine* is the most anticholinergic SSRI.
2. *Chronically catheterized* residents in long-term care will always grow bacteria in their urine if you culture it (& this doesn't necessarily mean an infection!)
3. *Indomethacin* is usually not preferred in older adults, as it can cause confusion and dizziness in this population.
4. Antimuscarinics for urinary incontinence only prevent on average 1 or 2 leaks per day.
5. At best, *ezetimibe* prevents just 1 cardiovascular event for every 350 individuals taking it per year.
6. Adults >80 years old using *insulin* are twice as likely to visit an emergency department for hypoglycemia compared to adults 45 to 64 years old.
7. The Beers Criteria suggests 0.125mg daily as the max dose of *digoxin* in older adults.
8. Adding an inhaled *corticosteroid* to a COPD regimen can ↑ the absolute risk of pneumonia by about 2% per year.
9. The high-dose *flu shot* is covered in Saskatchewan for long-term care residents over the age of 65, and it can ↓ hospitalizations in this population.
10. *Rosuvastatin* has fewer drug interactions than *atorvastatin* and costs less too!

BACK IN 2014, RxFiles Academic Detailing took on a special project. The goal was to improve medication management in long-term care homes across Saskatchewan. Along the road, we realized there were lists of what not to do, but not much on what to do – so it was proposed that we create a resource specific to medication use in older adults.

NOW IN 2019, our *Geri-RxFiles* book is in its 3rd Edition. We've stuffed it full of tools, tips, and strategies that we hope you'll find useful when caring for older adults.

SOME HIGHLIGHTS INCLUDE:	Go To...
An extensive list of non-pharmacological approaches to managing the behavioural and psychological symptoms of dementia . Evidence suggests that these approaches are <u>more effective</u> than pharmacotherapy.	page 122
A series of Deprescribing Algorithms from deprescribing.org . These describe how to evaluate whether PPIs, antihyperglycemics, cholinesterase inhibitors, antipsychotics in dementia, and hypnotics are still clinically indicated ... and if they are not, then how to taper them. Additional tapering guides are also in the book and marked with a 📌 symbol.	page 65 page 74 page 134 page 136 page 150 page 208
A guide on how to select the best COPD inhaler , focusing on the struggle older adults may have in properly/effectively operating their inhaler devices.	page 159
A validated Clinical Frailty Scale from Dr. Ken Rockwood that can, for example, be used to help determine glycemic targets in an older adult with type 2 diabetes.	page 5 page 57
Tips on assessing for drug interactions in older adults, including a practical long-term care example and a list of common drug interactions in older adults.	page 175 page 167
A Crush List 🚫 and related medication administrative challenges, describing medications that may be crushed, how to go about doing so, and ways to improve the taste of crushed medications.	page 181
A guide to management of anticholinergic side effects including which medications within a class are least likely to cause anticholinergic effects.	page 116 page 117
Integration of the Beers Criteria and STOPP Criteria into our guides for management of various disease states, providing tips for which medications may flag as problematic in older adults.	end of each section
An approach to preventing falls in older adults.	turn the page...

We greatly hope you find this resource useful!

- Alex Crawley, RxFiles Associate Director

www.RxFiles.ca

Assessing Medications in Older Adults



FALLS

See page 99 of the *Geri-RxFiles*

A **FALL** is an event that results in a person coming to rest inadvertently on the ground or floor or other lower level.^{WHO}

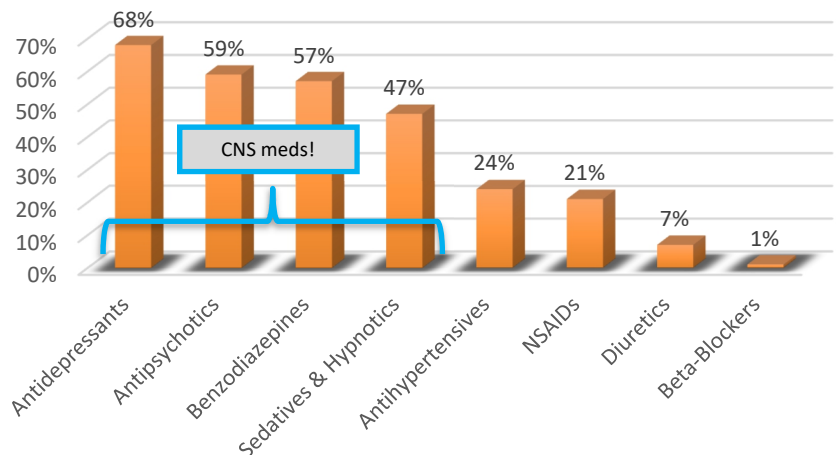
Falls Matter

- 1 in 5 people over the age of 65 fall each year.³
- Falls cause 9% of all emergency room visits.⁴
- Falls cause 95% of all hip fractures.⁵
- 20-30% of hip fracture patients die within 1 year of the fracture.⁶

Falls Can Be Prevented

- Any medication that can cause hypotension, sedation, dizziness, vision changes, cognition changes, or movement disorders ... can contribute to a fall.
- The more medications a patient is on, the higher the risk of a fall.⁷

% ↑ in risk of a fall, by medication



(results from a 2009 meta-analysis; pooled odds ratios^{Woolcott})

Note: Opioids have been associated with falls in other studies
ISMP²⁰¹⁵ Top Meds Associated with Falls: opioids 25%, psychotropics 21%,
CV meds 17%, hypoglycemics 14%

What can be done to help reduce the risk of falls?

1. Use non-pharmacologic approaches.

- **Exercise** has been shown to reduce the risk of fractures related to falls by up to 66%.¹⁰
- **Optimize eyesight** – cataract surgery can reduce the risk of falls by up to 37%.¹⁰ Ensure individuals wear glasses if indicated. Vision in older adults should regularly be assessed by an optometrist.

2. Consult occupational therapy to do a home visit.

- **Remove clutter** from around the house, and other tripping hazards.
- **Consider wearing shoes around the house**, instead of slippery socks.
- **Recommend canes or walkers** if indicated.
- **Ensure sufficient lighting** in the home.
- **Secure mats & carpets** to prevent slippage. Examine the height of thresholds between rooms; **add a ramp** if needed.

3. Target medications that increase fall risk.

- Withdrawing psychotropic medications has been shown to decrease the risk of falls.^{11,12}
- BEERS Criteria suggests limiting patients to 2 or less CNS-affecting medications.¹³ Ensure all CNS-affecting medications are still clinically indicated.
- See the next page of this newsletter for more.

4. Consider Vitamin D supplementation & adequate calcium intake.

- Vitamin D has only mixed evidence at best in fall prevention, but may decrease the risk of a fracture if a fall does occur (5 fewer fractures per 1000 patients treated).¹⁴

5. Educate patients.

- A guide to fall prevention: www.saskatoonhealthregion.ca/locations_services/Services/Falls-Prevention/providers/Documents/Community%20Tools/A%20guide%20to%20fall%20prevention.pdf
- Fall prevention Discussion Guide for HCPs: https://effectivepractice.org/wp-content/uploads/2016/06/CEP_FallsPrevention_2016.pdf
- A handout of exercises that can be done around the home: www.in-motion.ca/uploads/tools/Exercises_for_fridge.pdf

Medication Class	Fall risk, and what to do
Antidepressants e.g.: citalopram sertraline *paroxetine duloxetine venlafaxine bupropion amitriptyline nortriptyline <i>*particularly problematic</i> ^{BEERS}	<ul style="list-style-type: none"> • Risk: In general, antidepressants may increase the risk of a fall by up to 68%.⁸ • Mechanism: Antidepressants can cause sedation, dizziness, and anticholinergic effects. Even SSRIs & SNRIs are implicated in falls. • Are some antidepressants safer than others? This is unclear. However, it may be prudent to avoid paroxetine in older adults, as this is the most anticholinergic SSRI. • What can be done? <ul style="list-style-type: none"> → Ensure an antidepressant is still indicated (e.g. has the patient been on therapy for a long time without reassessment?). → Use the lowest effective dose (e.g. a particular antidepressant dose may be appropriate for a 60-year-old, but 15 years later be inappropriate for a 75-year-old). → Avoid paroxetine in older adults.¹³ → Try to avoid combining more than 2 CNS-affecting drugs ^{Beers: QE=moderate/high; SR=strong} (e.g. an antidepressant alone may be OK, but risk increases if also combined with an opioid & an antipsychotic).¹³ → Consider non-pharmacological therapy (e.g. cognitive behavioural therapy as offered through Regina's Online Therapy Unit www.onlinetherapyuser.ca).
Hypnotics e.g.: lorazepam temazepam diazepam clonazepam zopiclone	<ul style="list-style-type: none"> • Risk: Hypnotics (e.g. benzodiazepines, zopiclone) may increase the risk of a fall by up to 57%.⁸ Risk may be highest in the first few weeks after a dose increase or new initiation. • Mechanism: Hypnotics commonly cause sedation and dizziness. • Are some hypnotics safer than others? This is unclear. Previous guidance was to favour short-acting benzodiazepines in order to limit exposure, but new evidence suggests that even short-acting agents increase fall risk. • What can be done? <ul style="list-style-type: none"> → Offer non-pharmacological approaches for difficulty sleeping (see page 146 of the <i>Geri-RxFiles</i>). → If considering medications for sleep, an alternative to a benzodiazepine or zopiclone, such as melatonin, may have less fall risk. → Use PRN dosing and the lowest effective dose. (Note: zopiclone now comes in a 2.5mg tab.) → Increase monitoring in the period after a dose increase. → Try to avoid combining more than 2 CNS-affecting drugs (especially when one of the CNS drugs is a benzodiazepine or zopiclone). ^{Beers: QE=high; SR=strong} → See the BZRA deprescribing algorithm on page 151 of the <i>Geri-RxFiles</i>. → A patient handout is available: www.criugm.qc.ca/fichier/pdf/BENZOeng.pdf
Antipsychotics e.g.: risperidone haloperidol *olanzapine quetiapine <i>*particularly problematic</i> ^{BEERS}	<ul style="list-style-type: none"> • Risk: Antipsychotics may increase the risk of a fall by up to 59%.⁸ • Mechanism: Antipsychotics can cause movement disorders, sedation, and dizziness. • Are some antipsychotics safer than others? All appear to connote some risk. However, olanzapine may have a greater risk than risperidone, haloperidol, or quetiapine. • What can be done? <ul style="list-style-type: none"> → Use non-pharmacological approaches for dementia behaviours (see page 124 of the <i>Geri-RxFiles</i>). → If using an antipsychotic in older adults, use the lowest effective dose & titrate slowly. → Avoid olanzapine in older adults.¹³ → Evidence supports attempting a taper of antipsychotics for behavioural and psychological symptoms of dementia after ≤3 months of therapy.¹⁷ In many cases, dementia behaviours may have resolved after a therapy course, and a lower dose (or discontinuation) may be possible. → See the antipsychotic deprescribing algorithm on page 136 of the <i>Geri-RxFiles</i>. → A patient handout is available: www.criugm.qc.ca/fichier/pdf/ANTIPSYCHOTIC.pdf

Note: Opioids are also associated with falls and fractures.⁹ Optimize suitable non-opioid approaches to pain, and if using an opioid, be cautious in dosing and vigilant in monitoring for fall risk after initiation or dose adjustment. See previous RxFiles Pain & Opioid Newsletters.

Older adults are DIFFERENT

Polypharmacy is common.

Up to 25% of adults > 65 years old take more than 10 medications.¹⁵ There are several implications to this:

- Drug interactions become more likely.
- Adverse effects can be additive (e.g. cognitive impairment from multiple CNS-affecting drugs).
- Financial burden can escalate.

Tool: *Geri-RxFiles* Drug Interactions [page 166](#)

Tool: BEERS Criteria, STOPP Criteria, & Deprescribing Algorithms [throughout the book](#)

Prescribing cascades can occur.

A prescribing cascade means that the adverse effects of one drug are being treated by a second drug. For example, calcium channel blockers can cause ankle swelling, so furosemide is added, which causes low potassium levels, requiring a potassium supplement. The solution is often to change or adjust a suspected medication, rather than adding on an additional one.

Tool: Common prescribing cascades [page 2](#)

Therapeutic momentum can occur.

For better or worse, adherence rates are often higher among older adults than younger adults.¹⁶ This can be good news when there's adherence to useful, clinically indicated medications. But sometimes it means that older adults don't question their medications, even if those medications may be doing more harm than good. Regular reassessment is valuable.

Tools: BEERS Criteria, STOPP Criteria, & Deprescribing Algorithms [throughout the book](#)

Consider life expectancy and patient values & priorities.

Some medications have a long "time-to-benefit" – for example, bisphosphonates or statins. This means in adults with a limited life expectancy, it may not make sense to start/continue these medications.

Consider whether the therapeutic goal should be to "comfort" or to "cure".

Tool: Treatment Considerations [page 249](#)

Renal function is often impaired.

Kidney function declines with increasing age. This means that medication doses should be regularly reassessed and potentially adjusted. For example, digoxin, apixaban, gabapentin, tramadol, and many antibiotics require dose adjustments in renal impairment.

Tool: *Geri-RxFiles* Renal Insufficiency [page 82](#)

Consider frailty.

Older adults who are "frail" are more likely to experience adverse effects from medications. This means an extra-cautious approach should be taken to prescribing (see "start low and go slow" below). It also means that **targets can sometimes be relaxed**. For example, it is reasonable to only target an A1c of <8.5% in frail adults with diabetes (see [page 57](#)).

Tool: Clinical Frailty Scale [page 5](#)

Start low and go slow.

Since older adults are more likely to have impaired kidneys, reduced liver function, less lean muscle mass, frailty, and other age-related changes, drug dosing should often be less aggressive. For example, in older adults, opioids should be started at half the usual dose to help minimize harmful adverse effects.

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