Deprescribing for Older Adults

BOTTOM LINE: Polypharmacy is common and poses serious health risks. Older adults prescribed multiple medications are more susceptible to adverse drug reactions, and merit additional attention for deprescribing.

Background:
The prescribing of medications for specified clinical indications is considered usual practice. However, when a medication no longer serves its intended purpose, it may cause harm and unnecessary burden. Polypharmacy in older adults increases risks for negative outcomes such as adverse drug events, disability, morbidity and mortality. Evidence for the benefits of deprescribing in selected older adults is accumulating. Choosing Wisely Canada recommends not to start or renew drug therapy unless there is an appropriate indication and reasonable expectation of benefit in the individual patient. In 2020, Alberta Health Services Provincial Seniors and Continuing Care launched the Appropriate Prescribing & Medication Use Strategy for Older Albertans (APMUSOA).

The Institute for Safe Medication Practices (ISMP) Canada refers to deprescribing as one of the solutions to polypharmacy. Engaging patients in deprescribing is critical, and increases buy-in and discontinuation rates.

According to the 2018 Canadian Institute for Health Information (CIHI) report:

- Nearly two-thirds (65.7%) of older adults are prescribed 5 or more medications.
- More than one-quarter (26.5%) of older adults are prescribed 10 or more medications.
- Almost one-tenth (8.4%) of older adults are prescribed 15 or more medications.

Even for chronic medical conditions, some medications no longer retain their therapeutic effects after prolonged use, with progression of the disease state, or if other patient characteristics have changed. The risks and benefits of all medications should be reviewed at each patient encounter. When initiating new therapies for older adults, time-to-benefit for effectiveness of medications should be considered.

Use this Backgrounder and the Deprescribing Resource Guide to assist with deprescribing efforts.

For safe and effective medication discontinuation, the decision to deprescribe should engage the patient, their family and caregivers, and be shared with the prescriber and the pharmacist.

Efficacy:
Clinical studies and systematic reviews have shown effective deprescribing involves shared decision-making, education, careful planning and follow up, with appropriate patient selection. There are many clinician decision tools, deprescribing algorithms, and patient discussion and education aids to support successful deprescribing, with new tools continuously being developed. Deprescribing.org provides an app, lists of deprescribing networks, research and various resources.

Safety:
Deprescribing provides an opportunity to proactively prevent harmful effects. Studies show most medications can be stopped in older adults without adverse drug withdrawal events, and most discontinuations are associated with a reduction in adverse events (e.g., falls) and improved cognition.

Sustainability:
Adverse drug events are estimated to cost $35.7 million dollars annually in hospital visits alone. Unquantified health system savings include reduced drug utilization, reduced pill burden to patients, and less health care staff time used in drug administration. Safe and appropriate deprescribing contributes to health system sustainability.
## Select Medication Classes Commonly Inappropriately Prescribed in Older Adults

<table>
<thead>
<tr>
<th>Medication / Class</th>
<th>Reason(s) for Concern in Older Adults</th>
<th>Select Deprescribing Tools &amp; Algorithms:</th>
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</thead>
</table>
| Anticholinergics and medications with anticholinergic side effects | Confusion, dry mouth, constipation, urinary retention, sedation, blurred vision, hypotension | GeriRxFiles Tapering Medications in Older Adults*  
NSW Therapeutic Advisory Group - Deprescribing tools |
| Antihyperglycemics (especially long-acting sulfonylureas) | Hypoglycemic events impose high fall/fracture risks, consider a more relaxed glucose target | Deprescribing.org Guidelines and Algorithms  
GeriRxFiles Tapering Medications in Older Adults*  
PHN Tasmania Deprescribing Resources |
| Anthypertensives (especially short acting agents) | Postural hypotension, dizziness, fall risks. | PHN Tasmania Deprescribing Resources |
| Select Antimicrobials (specifically nitrofurantoin and fluoroquinolones) | Nitrofurantoin: pulmonary toxicity, hepatotoxicity, peripheral neuropathy  
Fluoroquinolones: CNS effects (seizures, confusion) and tendon rupture | See Deprescribing Resource Guide for resources on select antibiotics and antimicrobial stewardship |
| Antipsychotics | Increased stroke risk, cognitive impairment, increased mortality, movement disorders, metabolic side effects, sedation | AHS Antipsychotic Use Toolkit  
Deprescribing.org Guidelines and Algorithms  
GeriRxFiles Tapering Medications in Older Adults*  
NSW Therapeutic Advisory Group - Deprescribing tools  
PHN Tasmania Deprescribing Resources |
| ASA (when used for primary prevention) | Gastrointestinal bleeds, questionable evidence for primary prevention in older adults | PHN Tasmania Deprescribing Resources |
| Benzodiazepines & Sedative Hypnotics | Cognitive impairment, physical dependence, dementia, sedation, delirium, falls, fractures | PHN Tasmania Deprescribing Resources |
| Bisphosphonates | Little benefit beyond 5 years, especially if T score is above -2.5 | PHN Tasmania Deprescribing Resources |
| Cholinesterase Inhibitors | Dizziness, confusion, insomnia, agitation, nausea, weight loss, urinary frequency, falls | Deprescribing.org Guidelines and Algorithms  
GeriRxFiles Tapering Medications in Older Adults*  
PHN Tasmania Deprescribing Resources |
| Metoclopramide | Incidence of tardive dyskinesia similar or greater than that of first-generation antipsychotics; maximum duration recommended by Health Canada is 12 weeks | MedStopper** |
| Non-Steroidal Anti-inflammatory Drugs (NSAIDs) | Gastrointestinal bleeds, hypertension, cardiovascular events, renal toxicity | PHN Tasmania Deprescribing Resources |
| Opioids for chronic non-cancer pain | Falls, sedation, constipation, respiratory depression, risk of drug interactions/overdose | CPSA Prescribing Resources and Tools  
Deprescribing.org Guidelines and Algorithms  
Opioid Wisely - Choosing Wisely Canada  
PHN Tasmania Deprescribing Resources |
| Proton Pump Inhibitors | Diarrhea, *Clostridium difficile* infection, micronutrient deficiencies | Digestive Health SCN (Projects tab)  
AHS PPI Deprescribing Backgrounder  
PHN Tasmania Deprescribing Resources |
| Statins for primary prevention of cardiovascular events | Increased myalgias and pill burden, limited time-to-effect benefit seen after 75 years of age | PHN Tasmania Deprescribing Resources |
| Natural Health Products/ Vitamins/Supplements | Many patients take several natural health products and supplements, most of which do not have sufficient evidence for their continued use; some of which could even cause harmful drug interactions or adverse events | MedStopper** |

*may require subscription **also applies to other Medications/Classes

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References:


8. ISMP –Deprescribing: Managing medications to Reduce Polypharmacy – March 28, 2018


10. American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults. JAGS 67:674–694, 2019

11. UptoDate – Tardive Dyskinesia

12. GenRxFiles – Diabetes (subscription required)

13. Deprescribing.org/resources/deprescribing-guidelines-algorithms/


