Appendix C: Medication Review
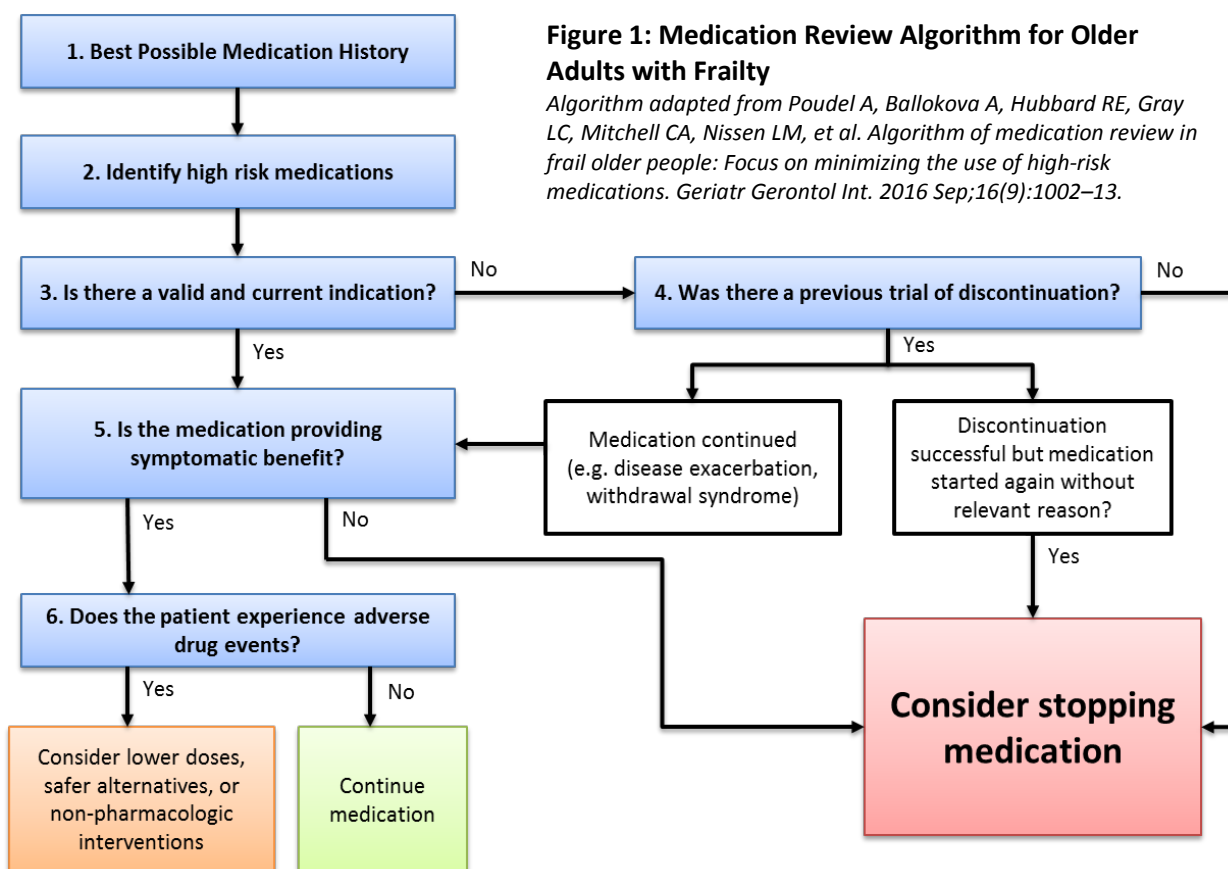
▸ **Be aware of inappropriate medications with potential to harm patients with frailty.** Weigh the benefits and risks of each and all medications. Not all polypharmacy is inappropriate.

▸ **Consider requesting a medication review by a pharmacist when a potential or existing drug-related problem has been identified**. Most community pharmacists can conduct medication reviews.

▸ **BC Pharmacare covers the cost of a medication review by a pharmacist for eligible BC residents**. For information on patient eligibility, see www2.gov.bc.ca: PharmaCare Policy Manual.

▸ **Consider a team-based phone call about medication review results.** Physicians may be eligible for conference and telephone management incentive fees – see www.gpscbc.ca: Billing Guides.

Common drug-related problems:
▪ Adverse drug reactions
▪ Drug interactions
▪ Dose too high or too low
▪ Improper drug selection
▪ Unnecessary drug
▪ Omission of necessary drug
▪ Inappropriate adherence

▸ **Communication between care providers is essential for effective medication management.** Prescribers must work with pharmacists, supporting health care providers, and the patient and caregivers to ensure potentially inappropriate medications are avoided; medications and doses are appropriate to goals of care, pill burden is minimized, and side effects are not treated with more medications without considering medication-related causes.

Figure 1: Medication Review Algorithm for Older Adults with Frailty
Algorithm adapted from Poudel A, Ballokova A, Hubbard RE, Gray LC, Mitchell CA, Nissen LM, et al. Algorithm of medication review in frail older people: Focus on minimizing the use of high-risk medications. Geriatr Gerontol Int. 2016 Sep;16(9):1002–13.

1. Best Possible Medication History
2. Identify high risk medications
3. Is there a valid and current indication? — No → 4. Was there a previous trial of discontinuation? — No →
   Yes ↓
5. Is the medication providing symptomatic benefit?
   ← Medication continued (e.g. disease exacerbation, withdrawal syndrome)
   4. Yes → Discontinuation successful but medication started again without relevant reason? — Yes ↓
   Yes ↓ / No →
6. Does the patient experience adverse drug events?
   Yes ↓ / No ↓
Consider lower doses, safer alternatives, or non-pharmacologic interventions
Continue medication
Consider stopping medication

STEP 1: COMPILE BEST POSSIBLE MEDICATION HISTORY – see *Best Possible Medication History*

▶ **Get a list of drugs from the patient's pharmacy or PharmaNet.** Physicians and nurse practitioners licensed in BC can get community access to PharmaNet – see gov.bc.ca: Community Health Practice Access to PharmaNet. Other sources of information include: product labels, medical records; hospital discharge summaries; and interviews with the patient, family or caregivers.

▶ **Collect and document all pertinent information about the patient's current drug regimen and recently discontinued medications,** including prescription and non-prescription drugs and natural health products. If appropriate, have the patient bring all his/her medications into the appointment. Information to be collected includes:

- Medication name
- Strength and dosage form
- Directions
- Name of prescriber
- Indication
- Date started and stopped
- How medication actually taken
- Adverse drug events
- Other relevant information (e.g., lipid profile, HbA1C levels, INR)

▶ **Assess adherence to medication regimen (prescribed vs. actual use).** Consider patient-specific factors (e.g. cognition, beliefs, vision, swallowing, manual dexterity); lack of patient adherence may be due to sensory or cognitive deficits. Encourage the use of medication organizers/packaging, including medication blister packs, dosettes and pouch strips to improve adherence.

STEP 2: IDENTIFY HIGH RISK MEDICATIONS

▶ **Consider if any medications are contributing to medical problems.** Potentially inappropriate medications may cause adverse drug events in patients with frailty due to pharmacological properties interacting with physiological changes of aging and/or existing medical conditions.

▶ **Be aware of "prescribing cascades":** an adverse reaction interpreted as a new medical condition, and additional drug therapy ordered to treat this problem.

▶ **Deprescribing tools can be used to identify potentially inappropriate medications,** but are not intended to replace clinical judgement or individualization of care.

Deprescribing Tools[1]	Online Resources	
- **Beers Criteria**[2] - **STOPP/START**[3]	- **www.MedStopper.com** - **Deprescribing.org** - **UIowa.edu: Drugs with Anticholinergic Effects**	- **Polypharmacy.ca** - **SharedCareBC.ca: Polypharmacy Risk Reduction Initiative**

STEP 3: VALIDATE INDICATIONS FOR EACH HIGH RISK MEDICATION

▶ **Match each medication with an established medical problem.** Validation involves two steps:

1) verify the diagnosis against formal diagnostic criteria; and then

2) verify the evidence supporting the benefits of using the medication in patients with frailty (improvement of symptoms, function, quality of life, and risk of future adverse drug events.

▶ **Engage the patient in the discussion/decision-making, clarifying the patient's health care goals and willingness to carry out the therapeutic plan.** Older patients often have different therapeutic outcomes/objectives than younger patients. Quality of life rather than therapeutic efficacy is generally more important in patients with short life expectancy.

STEP 4: CONSIDER PREVIOUS DISCONTINUATION TRIALS

▶ **Consider discontinuing a medication where there is either no valid diagnosis or indication of a previous discontinuation trial.** If a previously discontinued medication was restarted due to withdrawal symptoms, disease relapse, or other reasons, further assessment is needed.

STEP 5: ASSESS WHETHER THE MEDICATION IS PROVIDING ONGOING SYMPTOMATIC BENEFIT

▸ Medications used in patients with frailty should be prioritized according to their ability to suppress disabling or troubling symptoms or current active medical conditions, rather than the primary or secondary disease prevention (especially if unlikely to occur during remaining lifespan).

▸ **Medications fall under two categories:**

Medications providing immediate symptomatic benefits (e.g. analgesics) or are essential to preventing rapid symptomatic deterioration (e.g., diuretics and ACE inhibitors for severe heart failure)	Medications having no effect on symptoms and primarily used to prevent disease complications in the medium to long-term
High risk medications in this category <u>need to be assessed</u> based on a balance between the: ▪ magnitude of immediate symptomatic benefit; ▪ magnitude of the risk of short-term harm; and ▪ availability of equally effective non-pharmacological treatments.	High risk medications in this category <u>should be considered for discontinuation</u> unless the risk of a catastrophic disease event in very high and likely to occur within 6 to 12 months.

STEP 6: ASSESS WHETHER THE PATIENT IS EXPERIENCING ADVERSE DRUG EVENTS

▸ A discontinuation trial is warranted where a current high-risk medication is causing or has caused adverse drug events.

STEP 7: CONSIDER WITHDRAWING, ALTERING, OR CONTINUING MEDICATIONS

▸ Any decision on stopping, altering, or continuing medications must be tailored to the clinical status of individual patients – consider patient life expectancy, goals of care, values and preferences, and the medication's likely impact on the patient's quality of life. Consider the following:

- changing to a **safer alternative** from the same or a pharmacologically similar medication class;
- using a **non-pharmacological treatment**, when available and appropriate;
- adjusting medication **dosage or frequency**;
- **withdrawing** the medication; and
- **continuing** the medication, as currently prescribed/used.

STEP 8: CONDUCT REGULAR, ONGOING MEDICATION REVIEWS

▸ Consider monitoring requirements for medications. Medication reviews should be conducted regularly based on clinical judgement, but particularly after changes in care settings, discharge from hospital, significant changes in health status, or changes in medication regimen.

Notes:

1. The STOPP/START tool has been shown to be superior to the Beers Criteria for predicting hospitalization and improving outcomes in the elderly, but is more time consuming to apply than the Beers Criteria. See Boland B, Guignard B, Dalleur O, Lang P-O. Application of STOPP/START and Beers criteria: Compared analysis on identification and relevance of potentially inappropriate prescriptions. European Geriatric Medicine. 2016 Sep;7(5):416–23.

2. American Geriatrics Society 2015 Beers Criteria Update Expert Panel. American Geriatrics Society 2015 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. J Am Geriatr Soc. 2015 Nov;63(11):2227–46. Available at: onlinelibrary.wiley.com/doi/10.1111/jgs.13702/epdf

3. O'Mahony D, O'Sullivan D, Byrne S, O'Connor MN, Ryan C, Gallagher P. STOPP/START criteria for potentially inappropriate prescribing in older people: version 2. Age Ageing. 2015 Mar;44(2):213–8. Available at: www.ncbi.nlm.nih.gov/pmc/articles/PMC4339726/