

Tools Pharmacists Can Use to Sow the Seed of Deprescribing

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Canadian Pharmacist Association Webinar
October 17, 2024



Learning Objectives

By the end of this presentation the participants will be able to:

1. Describe the role of the pharmacist in medication reassessment and deprescribing.
2. Identify the patient and medication specific factors when medication reassessment and deprescribing should be considered.
3. Efficiently find and use reliable tools to support a brief patient discussion about the potential of deprescribing a medication.

Disclosures – Brenda Schuster

- Canadian Medication Appropriateness and Deprescribing Network (CADeN)
 - Health Care Providers Committee – Co Chair
- Saskatchewan Seniors Mechanism- Social Prescribing Advisory Committee
- Consultant
 - Inno-vatio - CCCEP expert reviewer on Osteoporosis program



Brenda's Experience with Deprescribing



Academic Family Medicine Clinic

- 20 Physicians, 23 Family Medicine Residents
- Complex patients on appointment
 - Medication reviews/reassessments, adjustments & deprescribing
 - promoting deprescribing in daily practice, teaching rounds with physicians

Hospital Pharmacy – Internal Med/Pharmacist Educator

- is it caused by a drug? still indicated? Is it the best medication?
- Special interest gastroenterology – PPI deprescribing

RxFiles Academic Detailing Program

- Evidence informed medication discussions with physicians
- Reassessment/ deprescribing – PPI, benzos, HRT, antidepressants, antihypertensives etc

Canadian Medication Reassessment and Deprescribing Network

- Health Care Provider Committee
- Deprescribing Curriculum Framework for Undergraduate Medicine, Nursing and Pharmacy
- Supportive tools for curriculum change, Health Care Professionals, program evaluation, presentations

Disclosures - Julia Bareham

- Full-time with RxFiles Academic Detailing at the University of Saskatchewan
 - Grant funded by Sask Health Drug Plan and Extended Benefits Branch
 - We do sell our products (at cost recovery)
- Pharmacist with Shoppers Drug Mart - casual
- Committee member of the Drugs and Therapeutics Advisory Committee for Non-Insured Health Benefits (NIHB) of Indigenous Services Canada
- Canada's Drug Agency's Appropriate Use Advisory Committee
- Saskatchewan Health Authority Research Ethics Board Member



Julia's Experience with Deprescribing

Since 2005

Worked in a busy
community pharmacy

- 600+ prescriptions
- Leaves little opportunity to dig into a medication list

LTC project &
Geri-RxFiles

- Less is sometimes more!

Geriatric Evaluation &
Management
(day program for older adults)

- Focus on older adults in a community/primary care setting
- Impact of anticholinergics

Julia's Memorable Patient Story

- GEM pt in his early 60s
- On many meds including opioids, anticholinergics
- Mood & memory issues
 - leading to frustrations, decreased quality of life, relationship challenges with partner
- Systematically deprescribed the anticholinergic meds
 - pt's mood, memory, and cognition changed
- “I got my husband back”

Brenda's Memorable Patient Story

- Physician requested pharmacist “medication review”
 - **Cognitive impairment**
 - **High risk of falls**
- **“You can stop any of my medications but not my lorazepam!”**
- Polypharmacy - major medication related harm was her sleeping pill, over treatment of BP and diabetes (110/70, A1C 6%)
- Patient focussed plan on her main concerns: blood pressure and diabetic medication dose reductions
- A few months later agreed to a lorazepam dose reduction, reduced time in bed, bedside diary
- Significant improvements in sleep hygiene, reduced dose lorazepam 2mg to 0.5mg

Polypharmacy

Polypharmacy (also known as medication overload) means taking a combination of medications that does more harm than good.

Polypharmacy is more complex than just the number of medications; consider whether each medication is indicated and providing benefit.



Why is it important to reassess medications?

Percentage of people **over age 85** that take **10 or more** medications.

36%



Percentage of community-dwelling older adults that take **5 or more** prescription medications.

62%



Percentage of community-dwelling older adults that take **10 or more** prescription medications.

24%



How have we gotten to this point?

- More chronic diseases
- “Medicalization” of health conditions
- Use of more preventive therapies
- Siloed clinical guidelines
- Use of increasing numbers of complementary and alternative medications
- Lack of communication between health professionals
- Lack of regular medication reviews



The Problem(s) with Polypharmacy

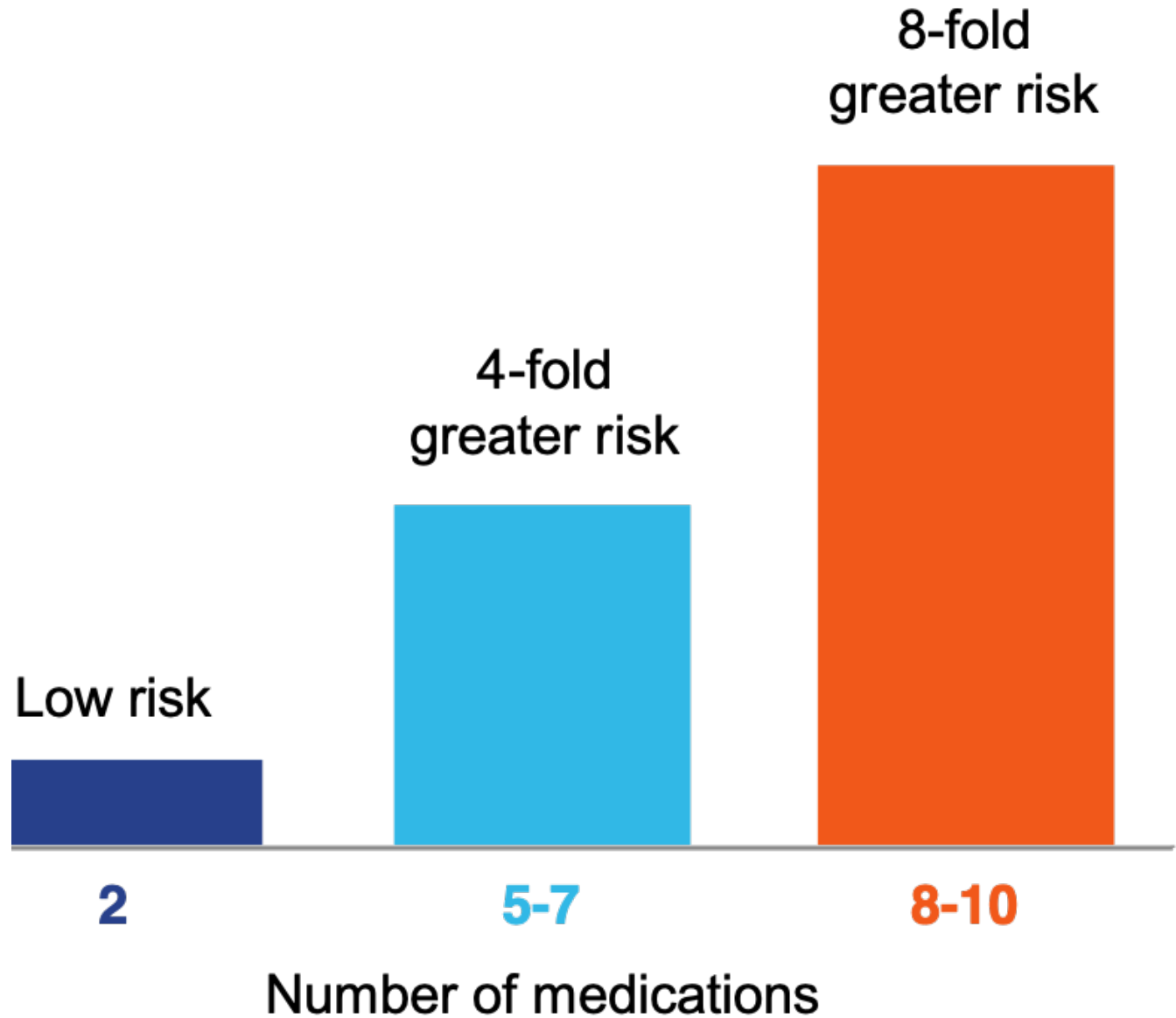
Polypharmacy increases the risk of harmful effects of medications, such as:

- **Drug interactions**
- **Hospitalizations**
- **Falls & fractures**
- **Adherence challenges**
- **Prescribing cascades**
- **Unnecessary costs**



Drug Interactions

More medications means a higher chance of drug-drug interactions.



Adverse Drug Events (ADE)

Polypharmacy ↑ risk for adverse drug events (ADE)

- With 2 medications: 13%
- With 5 medications: 58%
- >7 medications: 82%

ADEs & Hospitalizations

Probability of being hospitalized due to ADEs:

- 1-4 medication classes: 1 in 500
- 5-9 medication classes: 1 in 175
- 10-14 medication classes: 1 in 70
- 15+ medication classes: 1 in 35

ADEs account for 10-30% of hospitalizations in older adults

- 65% considered preventable
- <50% are identified as such on initial assessment in emergency department

Falls

Which medications increase the risk of falls?

Diuretics – 36%

Benzodiazepines – 42%

Antipsychotics – 54%

Antiepileptics – 55%

Antidepressants – 57%

Opioids – 60%

Polypharmacy (≥ 4 meds) – 75%

Adherence

Risk factors for nonadherence:

- Use of multiple medications (>5)
- Complicated dosing regimens (such as twice or three times daily dosing)
- Different fill dates for medications



Prescribing Cascades

Drug-induced problems that may be interpreted as a new medical problem that result in a prescribing cascade

- Pantoprazole → hypomagnesemia → magnesium supplement
- Gabapentin / CCB for hypertension → ankle swelling → furosemide → low potassium → potassium supplement
- Acetylcholinesterase inhibitor for dementia → urinary incontinence → oxybutynin → worsening of cognitive function
- Amitriptyline for pain → constipation → laxative
- Cannabis for pain → mood changes → antidepressant → nausea → dimenhydrinate → cognitive impairment & falls



Costs

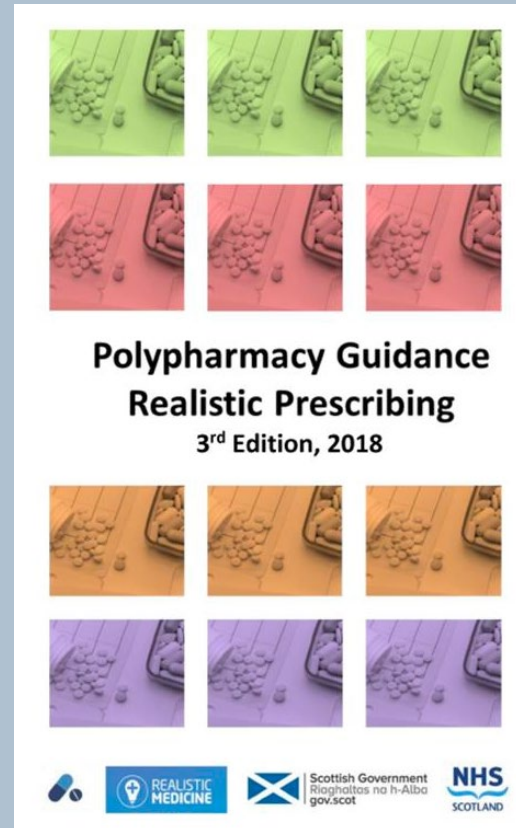
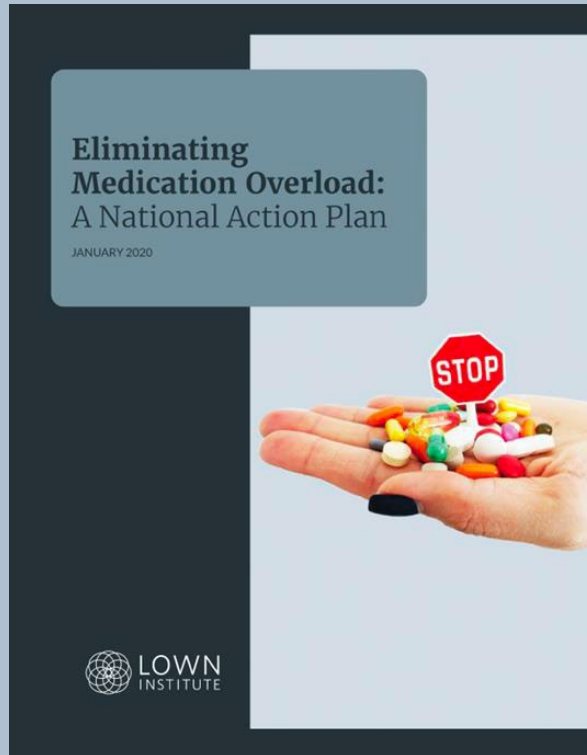
\$419 millions

Canadians spend \$419M per year on potentially harmful prescription medications. This does not include hospital costs.

\$1.4 billion

Canadians spend \$1.4B per year in health care costs to treat harmful effects from medications, including fainting, falls, fractures and hospitalizations.

Polypharmacy: A Call to Action



WHO Technical Report 2019

Education and training to help healthcare professionals and all those conducting polypharmacy reviews to understand the barriers to stopping medicines safely (Royal Pharmaceutical Society)



So, what do we do
about it?

Medication Reassessment
and when appropriate
deprescribe!

Deprescribing

- What is deprescribing?
- What is the evidence for deprescribing?
- What are some of the risks?
- How do I do it?
- Which patients and/or medications should I target?
- How do I engage patients in a busy practice?



What is deprescribing?

A term that first enters Pubmed in 2003, but the concept has existed much longer.

Patient-centred, planned, and supervised process of reducing or stopping medications that may be causing harm or longer providing benefit. → Optimizing all treatments to achieve **individual care goals**.

The goals of deprescribing:

- to maintain or improve **quality of life**
- to make the **best & safest use of medications** in adults with multiple conditions who may be taking many different medications (polypharmacy)
- improve overall adherence to essential meds **AND** reduce costs **AND** inconvenience

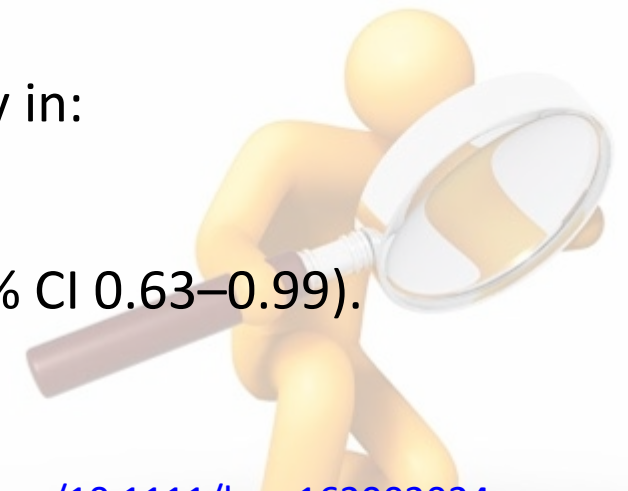


Deprescribing: What Does the Evidence Say?

Impact of deprescribing polypharmacy in older adults : A systematic review & meta-analysis (259 studies)

Impact of polypharmacy reduction on mortality:

- No significant reduction in randomized (OR 0.96, 95% CI 0.84–1.09) and non-randomized trials (OR 0.70, 95% CI 0.36–1.38)
- Subgroup analysis demonstrated a significant reduction in mortality in:
 - The "young old" (65–79 y.o.) (OR 0.71, 95% CI 0.51–0.99), **and**
 - When patient-specific interventions were applied (OR 0.79, 95% CI 0.63–0.99).



Quek, HW et al, 2024 - <https://doi.org/10.1111/bcp.162002024>

Photo source: <https://www.preciseinvestigation.com/what-is-evidence-in-chief/>

Deprescribing: What Does the Evidence Say?

(Continued)

Impact of polypharmacy reduction - secondary outcomes:

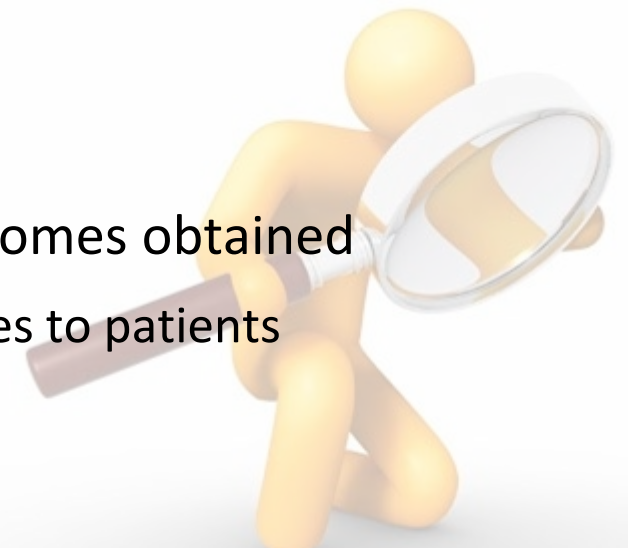
- Reduced pill burden - reduction in # of meds prescribed per participant ☒
- Fewer potentially inappropriate medications ☒
- No significant increase in adverse drug withdrawal effects or exacerbation of underlying conditions ☐
- Health outcomes: no significant change in ADEs - falls, fractures, hospitalizations ☐
- Improved adherence and reduced costs ☒



Deprescribing: What Does the Evidence Say?

Limitations to consider

- Lack of power of studies to measure a clinically significant difference on mortality
 - Often included as a 2° outcome
 - Follow-up time insufficient for such outcome – deprescribing can be lengthy!
- Heterogeneity of interventions - may fall under *deprescribing*
- Insufficient details on the deprescribing processes performed & outcomes obtained
 - May stem from need or desire to individualize deprescribing approaches to patients



Possible Outcomes of Deprescribing

- Withdrawal reactions
 - e.g., GI symptoms & insomnia when stopping SSRIs
- Rebound phenomena
 - e.g., tachycardia when stopping beta-blocker; PPIs and rebound hypersecretion
- Reappearance of symptoms
 - e.g., pain when NSAID/opioid stopped

Once upon a time in a busy pharmacy....

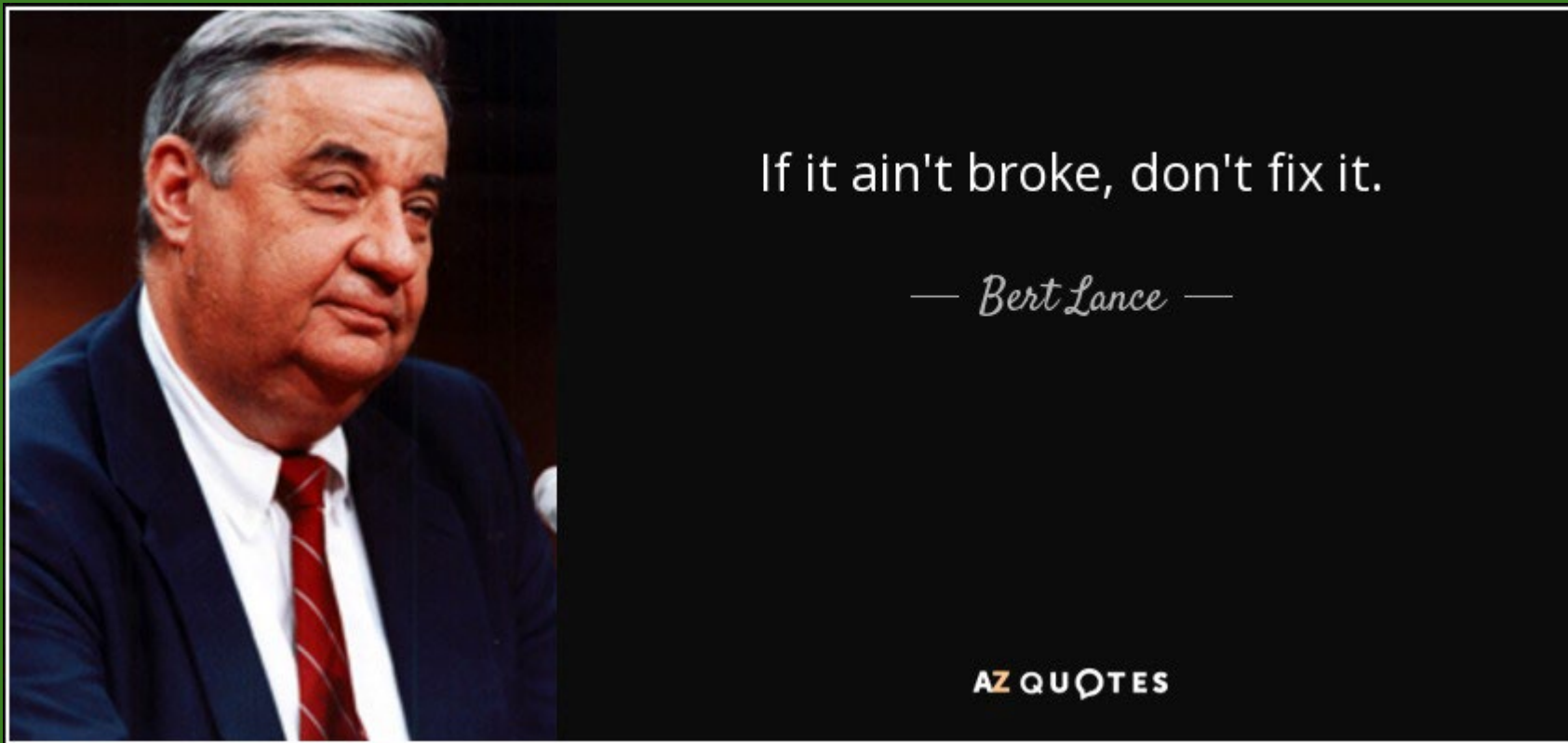
- The phones are ringing, it's flu season & a family of 5 with two children who are terrified of needles are waiting for their shots, there are 100+ meds in the cue, your tech called in sick, someone is at the counter waiting to ask you a question, you need to submit the order, the printer is out of paper, someone is yelling at the assistant because their prescription isn't ready...
- You are verifying/checking prescriptions, and your “spidey senses” are tingling...do they still need this?

What do you do?!?!

Challenges in doing this important work

- So many patients, so little time
- Patients may be hesitant
- Sometimes it is an easy win and other times it is a journey
- The prescribers never listen to me anyway!

**When it comes to medications,
don't be a Bert, be a Colin!!**



Tools to Help Identify Opportunities for Reassessment & Possible Deprescribing



When to consider deprescribing?

- With each new prescription
- When refilling a medication
- During a medication review
- Hospital discharge



Flags for Deprescribing



Medication Factors

- Explicit criteria (i.e. consensus list of drugs to avoid)
- High risk medications or combinations
 - CNS depressants (opioids, benzos)
 - Anticoagulants
- Lack of evidence to *continue* a drug (based on indication or duration)
 - Medications for sleep
- Providing no or little benefit
- Drug-drug interaction
- Causing a prescribing cascade
- Availability of safer drug or non-drug alternatives

Patient Factors

- Presenting with a new symptom or clinical syndrome suggestive of ADEs
- Polypharmacy
- Cognitive impairment
- Multiple comorbidities, complexity
- Substance use
- Multiple prescribers
- Past or current nonadherence
- Ineffective treatment
- Age >80 yr, but all ages, frailty
- Limited life expectancy/ End of Life (bisphosphonates, statins)


Beers & STOPP Lists

Received: 7 March 2023 | Accepted: 29 March 2023
DOI: 10.1111/jgs.18372

SPECIAL ARTICLE

Journal of the
American Geriatrics Society

American Geriatrics Society 2023 updated AGS Beers Criteria® for potentially inappropriate medication use in older adults

By the 2023 American Geriatrics Society Beers Criteria® Update Expert Panel 

Correspondence

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Abstract


The American Geriatrics Society (AGS) Beers Criteria® (AGS Beers Criteria®) for Potentially Inappropriate Medication (PIM) Use in Older Adults is widely used by clinicians, educators, researchers, healthcare administrators, and regulators. Since 2011, the AGS has been the steward of the criteria and has produced updates on a regular cycle. The AGS Beers Criteria® is an explicit list of PIMs that are typically best avoided by older adults in most circumstances or under specific situations, such as in certain diseases or conditions. For the 2023

European Geriatric Medicine
<https://doi.org/10.1007/s41999-023-00777-y>

RESEARCH PAPER



STOPP/START criteria for potentially inappropriate prescribing in older people: version 3

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Received: 10 January 2023 / Accepted: 31 March 2023
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Key summary points

Aim To update and validate STOPP/START criteria for potentially inappropriate prescribing.

Findings STOPP/START version 3 has been expanded and validated by an international European panel of experts in geriatric pharmacotherapy. Version 3, with 190 criteria, is significantly larger than version 2 (114 criteria), reflecting the expansion of the pharmacopeia and clinical trials evidence base relevant to older people since the publication of version 2.

Message STOPP/START version 3 represents an updated explicit list of potentially inappropriate medications and potential

Available:

<https://agsjournals.onlinelibrary.wiley.com/doi/full/10.1111/jgs.18372>

Available:

<https://link.springer.com/article/10.1007/s41999-023-00777-y>

GERI-RxFILES 4th Edition

Assessing Medications with Older Adults

Alternatives to explore, when less may be more

2024
www.RxFiles.ca



Geri-RxFiles

- Incorporates the Beers & STOPP Criteria
- Frail older adults

Anticholinergics

ANTICHOLINERGICS: Reference List of Some Common Medications with Potential Anticholinergic Effects^{8, 12, 13, 14} Both Beers and STOPP recommend to AVOID medications with a moderate to high risk of anticholinergic activity in older adults (>65 years of age), whenever possible. (Risk increases with age, frailty, dosage, and overall anticholinergic burden)									
Sept 2024									
Medications listed in RED have a moderate to high risk of anticholinergic activity.		Antidepressants – TCAs SB		ACB Score	Antipsychotics SB		ACB Score	Gastrointestinal Agents	
Medications listed in BLUE have a possible risk of anticholinergic activity.		Antidepressants – Other		ACB Score	Benzodiazepines SB		ACB Score	Incontinence Agents	
The Anticholinergic Burden (ACB) Calculator: By calculating the anticholinergic burden score, the risk of anticholinergic effects can be estimated. - Numbers listed, when available, beside drug name:		Antihistamines SB 1 st generation		ACB Score	Cardiovascular Agents		ACB Score	Opioids SB with delirium, hx of falls/fractures	
<ul style="list-style-type: none"> 0 = minimal to no anticholinergic burden 1 = possible anticholinergic burden 2 or 3 = definite anticholinergic burden (moderate to high) A score ≥3 is associated with increased cognitive impairment, falls, and mortality. - Available from: https://www.acbcalc.com/		Antiparkinsonian Agents		ACB Score	Skeletal Muscle Relaxants		ACB Score		
Medications highlighted in yellow are possible preferred agents within the medication class. Other possible alternatives may be listed.		Anticonvulsants B		ACB Score	Discontinuation of anticholinergic medications: Information available from <i>Primary Health Tasmania</i> : A Guide to Deprescribing Anticholinergics .		ACB Score		
		amitriptyline ELAVIL	3		atropine LOMOTIL B	3			
		clomipramine ANAFRANIL	3		belladonna AVAILABLE AS GENERIC ONLY	3			
		desipramine NORPRAMIN	3		bisacodyl BISACODYL ^{OTC}	0			
		doxepin esp >6mg SINEQUAN	3		chlordiazepoxide + cildinium LIBRAX B	1 & 3			
		imipramine TOFRANIL	3		cimetidine TAGAMET	1			
		nortriptyline AVENTYL	3*		dicyclomine BENTYLOL B	3			
		*possibly ↓ risk of anticholinergic effects vs amitriptyline & imipramine			dimenhydrinate GRAVOL ^{OTC} B	3			
		trimipramine SURMONTIL	3		diphenoxylate + atropine LOMOTIL	0 & 3			
		bupropion WELLBUTRIN, ZYBAN	1		domperidone MOTILUM	0			
		mirtazapine REMERON	1		famotidine PEPCID ^{OTC}	0/1*			
		moclobemide MANERIX	n/a		loperamide IMODIUM ^{OTC}	1			
		phenelzine NARDIL	1		meclizine BONAMINE B	1			
		trazodone TRAZOREL	0		metoclopramide MAXERAN	0/1*			
		vortioxetine TRINTELLIX	0		nizatidine AXID B	1			
		Antidepressants - Other	ACB Score		ranitidine ZANTAC ^{OTC}	1*			
		brompheniramine COUGH & COLD ^{OTC} B	3		*Low anticholinergic activity if adjusted for renal function.				
		cetirizine REACTINE ^{OTC}	1		Possible alternatives: proton pump inhibitors SB				
		chlorpheniramine CHLOR-TRIPOLON ^{OTC} SB	3						
		cyproheptadine PERIACTIN ^{OTC} B	3						
		desloratadine AERIUS ^{OTC}	1						
		diphenhydramine BENADRYL ^{OTC} SB	3						
		doxylamine UNISOM ^{OTC} B	3						
		fexofenadine ALLEGRA ^{OTC}	0/1*						
		hydroxyzine ATARAX B	1/3*						
		loratadine CLARITIN ^{OTC}	1						
		triprolidine COTRIDIN B	3						
		Antiparkinsonian Agents	ACB Score						
		amantadine SYMMETREL	1						
		benztropine COGENTIN SB	3						
		bromocriptine PARLODEL	1						
		carbidopa/levodopa SINEMET	1						
		entacapone COMTAN	1						
		ethopropazine PARSITAN	n/a						
		Antidepressants – SNRIs B	ACB Score						
		desvenlafaxine PRISTIQ	1						
		duloxetine CYMBALTA B	0						
		venlafaxine EFFEXOR XR	1						
		Antidepressants – SSRIs SB	ACB Score						
		citalopram CELEXA B if >20mg	1						
		escitalopram CIPRALEX B if >10mg	1						

“Crush List”

Medication Administration Challenges in Older Adults: To Crush or Not to Crush List






















(Listed alphabetically by chemical name)

RxFiles.ca/Geri

Sept 2024

Medication BRAND	DOSAGE FORM	ALTERATION RECOMMENDATION	Comments, Considerations, & Alternatives
A (CONTINUED)			
Amoxicillin/Clavulanic Acid CLAVULIN, AMOXICLAV	TAB	✓ / A / ☞	<ul style="list-style-type: none"> Consider Δ to liquid formulation (125mg/31.25mg, 200mg/28.5mg, 250mg/62.5mg, 400mg/57mg per 5mL).
Apixaban ELIQUIS	TAB	✓	<ul style="list-style-type: none"> Crushed tablets are stable in water (or similar) for up to 4 hours.
Asenapine SAPHRIS	SL	SL / ☞	<ul style="list-style-type: none"> Tablet dissolves in saliva within seconds. Do not swallow or chew.
Atenolol TENORMIN	TAB	✓ / ♀ / ☞ / ☹	<ul style="list-style-type: none"> Disperse tablet if not film-coated. Crush if film coated or difficulty dispersing.
Atorvastatin LIPITOR	TAB	✓ / ♀ / ! / ☹	–
Azathioprine IMURAN	TAB	♀ / ☞ / ☹ / ☹ / ☹	<ul style="list-style-type: none"> Use immediately (light sensitive). Consider Δ to azathioprine IV or if indicated, mycophenolate CELLCEPT suspension/IV.
Azithromycin ZITHROMAX	TAB	✓ / ☞	<ul style="list-style-type: none"> Consider Δ to azithromycin suspension (100mg/5mL, 200mg/5mL).
B			
Baclofen LIORESAL	TAB	✓ / ♀	–
Bisacodyl CODULAX, DULCOLAX	TAB	EC / ☞	<ul style="list-style-type: none"> Δ to bisacodyl rectal suppository (5,10mg). Δ to sennosides SENNA, SENOKOT or other alternative.
Bismuth Subsalicylate PEPTO-BISMOL	CPL		<ul style="list-style-type: none"> Δ to liquid (17.6mg, 35.2mg/mL) or chewable formulation (bismuth + Ca⁺⁺ carbonate).
Bisoprolol MONOCOR	TAB	✓ / ♀ / ☞	<ul style="list-style-type: none"> Often will disperse in water within 1-2 minutes.
Bosentan TRACLEER	TAB	FC / ☹ / ♀	<ul style="list-style-type: none"> Disperse the tablet in water. The tablet will disperse in 5–25 mL of water. Do not mix with other liquids. Can also crush the tablet and mix with a spoonful of yogurt or apple puree.
Δ=change CAP=capsule CPL= caplet EC=enteric-coated ER=extended-release (includes all sustained, controlled, modified, delayed, etc. delivery systems) FC=film-coated		INJ= injection IR=immediate-release L=liquid filled ODT=orally disintegrating tablet RDT= rapidly dissolving tablet SL=sublingual TAB=tablet	☹= cytotoxic ☹= skin irritant; use handling precautions ☹= teratogenic; not to be handled by women of childbearing age ! = may be an occupational hazard to person preparing the medicine. Protective measures may be required.
		☹= bad taste A=altered absorption GI=gastrointestinal irritant	✓= OK to crush ☹=can open and sprinkle pellets ♀=dispersible in 10-20mL water ☞=manufacturer recommends swallowing whole
Medication BRAND	DOSAGE FORM	ALTERATION RECOMMENDATION	Comments, Considerations, & Alternatives
B (CONTINUED)			
Budesonide ENTOCORT	CAP	ER / ☞	<ul style="list-style-type: none"> Controlled ileal release. Can open and sprinkle pellets in water or orange/apple juice (do not use yogurt or pureed food). Do not crush/chew pellets. Δ to budesonide enema (0.02mg/mL). Consider Δ to prednisone.
Buprenorphine/Naloxone SUBOXONE	SL	SL / ☞	<ul style="list-style-type: none"> Tablet dissolves in saliva within 2-10 minutes. Do not swallow or chew tablet.
Bupropion WELLBUTRIN SR or XL, ZYBAN	TAB	ER / ☞	<ul style="list-style-type: none"> Consider alternative based on indication e.g. depression vs. smoking. Option of 100mg SR given BID-TID.
C			
Calcium Salts (e.g. citrate, carbonate)	TAB	✓	<ul style="list-style-type: none"> Various formulations & strengths available including chewable, effervescent, powder and liquid. Consider increasing dietary Ca⁺⁺.
Candesartan ATACAND	TAB	✓ / ☹	<ul style="list-style-type: none"> Crushed tab has more acceptable taste than other 'sartans'.
Candesartan/ Hydrochlorothiazide ATACAND PLUS	TAB	✓ / ☹	–
Carbamazepine Regular: TEGRETOL ER: TEGRETOL CR	TAB	✓ / ♀ / ! / ☹	<ul style="list-style-type: none"> Δ to chewable (100mg, 200mg) OR suspension (100mg/5mL). *Dose alterations may be required in switching dosage forms. Consult your pharmacist. DO NOT handle if you/your partner is intending to become pregnant.
	CR TAB	ER / ! / ☹ / ☹	
Carvedilol COREG	TAB	✓ / ♀ / ☞	–

Tapering

ANTIDEPRESSANTS continued ³³	
Suggested Tapering Approach for Antidepressants continued	
<p>Selective Serotonin Reuptake Inhibitors (SSRIs): ^{34, 35}</p> <p>Citalopram CELEXA   (t_{1/2}= 35 hours)</p> <p>Escitalopram CIPRALEX   (t_{1/2}= 27 to 33 hours)</p> <p>Fluoxetine PROZAC  (t_{1/2}= 4 to 6 days, plus active metabolites [norfluoxetine] 4 to 16 days)</p> <p>Fluvoxamine LUVOX  (t_{1/2}= 15 to 26 hours)</p> <p>Paroxetine PAXIL   (t_{1/2}= 21 to 31 hours)</p> <p>Sertraline ZOLOFT  (t_{1/2}= 26 hours, plus desmethyl 66 hours)</p>	<ul style="list-style-type: none"> • If an SSRI has been used for >2 months: <ul style="list-style-type: none"> ◦ All SSRIs, other than fluoxetine: withdrawal symptoms may occur rapidly (after 1-3 days) ◦ Fluoxetine: withdrawal symptoms may occur after 1-14 days up to 21-26 days; however, it is most likely there will be no, or minor, withdrawal symptoms • Withdrawal symptoms usually resolve within 1-3 weeks. • Tapering may not completely eliminate symptoms; educate that symptoms are usually transient and mild. • Taper over at least 4 weeks if taken for ≥ 8 weeks. • Taper by no more than 25% per week (or nearest dose possible); reduce tapering rate if uncomfortable withdrawal symptoms appear. <p>Fluoxetine</p> <ul style="list-style-type: none"> ◦ Withdrawal symptoms least common and milder with fluoxetine because of its long half-life. ◦ Can be tapered more rapidly due to its prolonged half-life (~5-week half-life). ◦ Due to its long half-life, fluoxetine is generally not a suitable SSRI to initiate in older adults. <p>Paroxetine</p> <ul style="list-style-type: none"> ◦ Varying approaches to tapering paroxetine have been suggested: <ol style="list-style-type: none"> 1) A more prudent approach: reduce dose by 25% every 4-6 weeks. 2) Taper by 10mg/day at weekly intervals; when 20mg/day dose is reached, continue for 1 week before treatment is discontinued, or titrate further with 10mg dosage form PRN based on withdrawal symptoms.
<p>Trazodone DESYREL  ³⁶</p>	<ul style="list-style-type: none"> • Withdrawal symptoms most likely to occur within 1-2 days (some suggest up to 7 days) after trazodone is stopped or dose reduced and typically disappears within 3 weeks. • Taper gradually over several days. If at lowest dose, may discontinue, but if any withdrawal symptoms occur, go to every other day dosing for a short time.
<p>Tricyclic Antidepressants (TCAs): ³⁷</p> <p>Amitriptyline ELAVIL  </p> <p>Clomipramine ANAFRANIL  </p> <p>Desipramine NORPRAMIN  </p> <p>Doxepin SINEQUAN </p> <p>Imipramine TOFRANIL  </p> <p>Nortriptyline AVENTYL  </p>	<ul style="list-style-type: none"> • Risk or withdrawal effects increases with magnitude of dose and duration of therapy. Low doses often do not require tapering. • Withdrawal occurs most frequently with clomipramine (likely due to cholinergic & adrenergic rebound). • Withdrawal symptoms are most likely to occur 24-48 hours after withdrawal or large dose decrease (or after 1 to several days if the medication is being used for mania). • Gradually decrease dose by 10-25% over a period of several months to prevent withdrawal symptoms. <p>Potentially useful adjuncts for withdrawal symptom management are listed below; however, in older adults adjunct medications are associated with their own set of risks, and may require tapering to discontinue as well. Adding on an adjunct medication has the potential to lead to a prescribing cascade (i.e. the use of a medication to treat the side effect of another medication).</p> <ul style="list-style-type: none"> ◦ Cholinergic rebound (e.g. nausea, vomiting, sweating): ginger GRAVOL NATURAL SOURCE or benztropine 0.5-4mg PRN ◦ Anxiety, agitation, insomnia: benzodiazepine (e.g. lorazepam 0.5-2mg PRN) ◦ Dizziness: dimenhydrinate 25-50mg q6h PRN ◦ Neurological symptoms: <ul style="list-style-type: none"> ▪ Akathisia: propranolol 10-20mg TID to QID ▪ Dyskinesia: clonazepam 0.5-2mg PRN ▪ Dystonia: benztropine 0.5-4mg PRN

Medstopper: Tool to support shared decision-making



MedStopper is a deprescribing resource for healthcare professionals and their patients.

1 Frail elderly? ☒

2 Generic or Brand Name:

3 Select Condition Treated:

Generic Name	Brand Name	Condition Treated	Add to MedStopper
--------------	------------	-------------------	-------------------

◀ Previous Next ▶

	Stopping Priority RED=Highest GREEN=Lowest	Medication/ Category/ Condition	May Improve Symptoms?	May Reduce Risk for Future Illness?	May Cause Harm?	Suggested Taper Approach	Possible Symptoms when Stopping or Tapering	Beers/ STOPP Criteria
X	Orange	warfarin (Coumadin) / Warfarin / afib/valve	☹️	😊 <small>CANS / INR</small>	☹️	Taper to INR targets		None
X	Orange	digoxin (Lanoxin, Digitek) / Digoxin / heart failure	☹️	😐	☹️	If used daily for more than 3-4 weeks. Reduce dose by 50% every 1 to 2 weeks. Once at 25% of the original dose and no withdrawal symptoms have been seen, stop the drug. If any withdrawal symptoms occur, go back to approximately 75% of the previously tolerated dose.	worsening of symptoms, increase in heart rate	Details
X	Orange	prednisone (Sterapred, Orasone, Deltasone) / Corticosteroid / inflammatory conditions	😊	😐	☹️	If used daily for more than 3-4 weeks. Reduce dose by 5mg/week until 10 mg/day is reached. Subsequent dosages should be decreased by 2.5mg/week until the medication is stopped. If withdrawal symptoms occur, increase the dosage and taper at 1mg/week.	return of symptoms, weakness, fatigue, decreased appetite, weight loss, nausea, vomiting, diarrhea, constipation, abdominal pain, low blood pressure, low blood glucose, joint pain, muscle aches, fever, mental changes	Details
X	Yellow	pantoprazole (Protonix) / Proton pump inhibitor / heartburn/GERD	😊	☹️	😐	If used daily for more than 3-4 weeks. Reduce dose by 50% every 1 to 2 weeks. Once at 25% of the original dose and no withdrawal symptoms have been seen, stop the drug. If any withdrawal symptoms occur, go back to approximately 75% of the previously tolerated dose.	return of symptoms, heartburn, reflux	Details

www.medstopper.com



Available: <https://public.medsafer.org/public/reports>



Français



Working Towards Safer Deprescribing

Optimize your medication regimen with MedSafer, an App powered by science that helps identify medications that could be adjusted based on your current health priorities. MedSafer generates a customized report from proven, best prescribing practices to help you and your healthcare provider (e.g., doctor, nurse practitioner, pharmacist) create a plan for your better health.

[Start the MedSafer interview](#)

[Already registered on MedSafer? Click here to login.](#)

[Access our platform for professionals here!](#)

High risk medications that you may be able to deprescribe today, with the supervision of a healthcare practitioner. These are medications that can lead to falls, fractures, hospitalizations, and premature loss of independence.

Amitriptyline, amitriptyline (amitriptyline hydrochloride)

This drug, often used for anxiety or depression, may be contributing to difficulties urinating. You may want to speak with your healthcare provider.

How to stop this medication

Deprescribing this medication should be supervised by a healthcare practitioner. If you decide to deprescribe it, you DO need to decrease the dose slowly. It's recommended to decrease by 10-25mg once a week. You might experience some uncomfortable side effects while you are coming off this medication. These include: dizziness, runny nose, muscular pain, nausea, vomiting, headache, malaise, trouble sleeping, irritability, heat intolerance, mania (feeling too energetic and excited). If you experience these symptoms, you should probably return to the dose you were taking before and decrease more slowly, with the supervision of your healthcare practitioner. US suicide prevention hotline: 1-800-273-8255 CANADA suicide prevention hotline: 1-833-456-4566.

These medications don't have any deprescribing opportunities identified today. If you're feeling well, keep taking them as prescribed, and check with your doctor once a year to see if they are still the best medications for you.

Metoprolol, metoprolol tartrate

Atorvastatin, atorvastatin (atorvastatin calcium)

Aspirin, acetylsalicylic acid

Bring this code to discuss your MedSafer report with your healthcare practitioner.



**Time to
plant a
seed!**

**Tools to
Empower
Patients to
Consider
Medication
Reassessment
& Deprescribing**



Deprescribing Tools to Help You & Your Patients

Canadian Medication Appropriateness and Deprescribing Network

- evidence-based tools to help ensure medications are used safely
- Patient resources in 9 different languages
- <https://www.deprescribingnetwork.ca/>

Deprescribing.org

- Deprescribing research and guidelines support healthcare providers and patients in reducing or stopping medications that may be harmful or no longer needed.
- <https://deprescribing.org/>



Canadian Medication
Appropriateness and
Deprescribing Network

About

Public

Health Care Providers

Students

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Research

Our partners

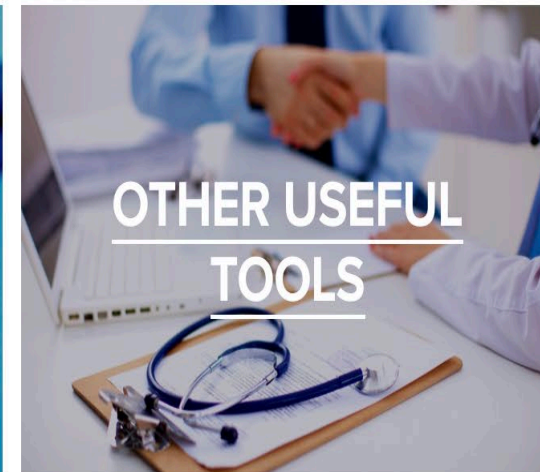
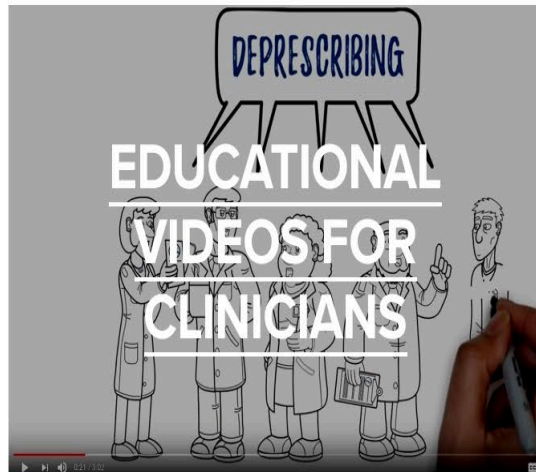
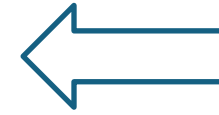
 Search

[Français](#)



Patient handouts

**Below are resources for health care providers.
Click on the titles to learn more:**



Deprescribingnetwork.ca



[Deprescribingnetwork.ca](https://deprescribingnetwork.ca)

Deprescribing handouts for patients

Is it time to review your medications?

Canadian medication Appropriateness and Deprescribing Network

Medication use is a fine balance

Medications can help us in many different ways. But medications can also cause us harm. That's why it's important to weigh the potential benefits and harms of taking a medication over time.

What is medication overload?

Medication overload means taking more medications than we need. It also means taking too many medications that, together, cause more harm than good.

What are too many medications?

There is no strict number. When we take even one medication that can cause more harm than good at a particular time in our life, one can be too many.

Medication overload causes harm

Medication overload can cause drug interactions and harmful side effects. Harms from medication overload can be very serious. Some examples include:

- falls & fractures
- hospitalizations
- premature loss of independence
- confusion & memory problems
- car crashes
- death

Who is at highest risk?

People who take multiple medications, older adults, and women are at greatest risk of medication harm. The more medications we take, the greater our risk of experiencing harm.

1 in 10 hospital admissions in older adults are the result of a medication side effect.

What can you do? Deprescribing may be an option.

Deprescribing means working with your doctor or another health care professional to stop or reduce the dose of a medication that you feel may cause you harm or is not helping you.

Version 2.0: 2022/09/14

Flip the page for tips on preparing for a medication review. ➡

Having trouble communicating the need to deprescribe with your patients?

Our [deprescribing infographics](#) provide great conversation starters on the importance of appropriate medication management.

Brochure about how medications affect us differently as we age



This pamphlet describes physiological changes associated with aging and how these have an impact on medications' effects.

[Click here](#) to download the brochure.



Alprazolam (Xanax)	Diazepam (Valium)	Temazepam (Restoril)
Bromazepam (Lectopam)	Estazolam	Triazolam (Halcion)
Chlorazepate	Flurazepam	Eszopiclone (Lunesta)
Chlordiazepoxide-amylpyrine	Loprazolam	Sonata (Sonata)
Cilnidium-chlordiazepoxide	Lorazepam (Ativan)	Zalcipem (Ambien)
Clobazam	Lorazepam	Meperzepam, Eduram, Quibrom, Zepsonid
Clozapepam (Rivotril, Klonopin)	Nimetazepam	Zopiclone (Imovane, Rovanol)
	Oxazepam (Serax)	
	Quazipam	



- Dexlansoprazole (Dexilant®)
- Esomeprazole (Nexium®)
- Omeprazole (Losec®, Olex®)
- Lansoprazole (Prevacid®, Prevacid Fast Tab®)
- Pantoprazole sodium (Pantoloc®, Panto IV®)
- Pantoprazole magnesium (Tecta®)
- Rabeprazole (Pariet®)

* Generic brands often start with the words: Apo, Novo, Pro, Ratio, Sanis, Tova



**opioids/narcotics
for chronic pain**

Are you taking one of the following medications?

- Buprenorphine (Butrans®)
- Codeine (Tylenol NO. 10, NO. 20, NO. 30)
- Fentanyl (Duragesic®)
- Hydrocodone (Hycodan®)
- Hydromorphone (Dilaudid®)
- Meperidine (Demerol®)
- Methadone (Metadone®)
- Morphine (MS-Contin®, M-Esion®, Kadian®, Staxel®)
- Oxycodone (OxyNeo®, Percocet®, Supeudol®)
- Tramadol (Tramacet®, Ralvia®)



You May Be at Risk

[illegible]

You May Be at Risk

- ☐ Quetiapine (Seroquel®)
- ☐ Clozapine (Clozaril®, FazaClo®)
- ☐ Pimozide (Orapip®)
- ☐ Ziprasidone (Zeldox®, Geodon®, Zipwell®)
- ☐ Perphenazine (Trilafon®)
- ☐ Haloperidol (Haldol®)
- ☐ Aripiprazole (Abilify®)
- ☐ Loxapine (Xylo®, Loxane®)
- ☐ Chlorpromazine (Thorazine®, Promazine®)
- ☐ Pirothiopeazine (Compazine®)
- ☐ Compro®, Procompt®
- ☐ Risperidone (Risperdal®)
- ☐ Olanzapine (Zyprexa®)
- ☐ Fluphenazine (Modafate®, Fernbid®, Prolixin®)



You May Be at Risk

- Gabapentin (Neurontin®)
- Pregabalin (Lyrica®)



You May Be at Risk

- ☐ Aspirin
- ☐ Diclofenac (Voltaren®)
- ☐ Diflunisal (Dolobid®)
- ☐ Etodolac (Lodine®)
- ☐ Ibuprofen (Advil®)
- ☐ Ketoprofen (Oruval®, Orudis®)
- ☐ Mefenamic acid (Ponstel®)
- ☐ Meloxicam (Mobic®)
- ☐ Nabumetone (Relafen®)
- ☐ Naproxen (Naprosyn®, Aleve®)
- ☐ Oxaprozin (Daypro®)
- ☐ Piroxicam (Feldene®)
- ☐ Sulindac (Clinoril®)



You May Be at Risk

- ☐ Chlorpropamide (Diabinese®, Glucamide®)
- ☐ Glyburide (DiaBeta®, Glynase® PresTab®, Micronase®)
- ☐ Glipizide (Diamicron®, Diamicron MR®)
- ☐ Glimepiride (Amaryl®)



TEST YOUR KNOWLEDGE ABOUT THIS MEDICATION



QUIZ

Proton pump inhibitors (PPI)

1. PPIs are sometimes prescribed for heartburn and acid reflux. ☐ TRUE ☐ FALSE
2. More than half of all people taking PPIs probably do not need them. ☐ TRUE ☐ FALSE
3. There are no risks involved in taking PPIs for a long time. ☐ TRUE ☐ FALSE
4. PPIs are the best option to treat occasional heartburn. ☐ TRUE ☐ FALSE



1. TRUE

Proton pump inhibitors (PPIs) are sometimes prescribed to treat heartburn and acid reflux. PPIs reduce the production of acid in the stomach. The stomach produces acid to help break down food, but sometimes the acid can reflux back up the throat and cause discomfort, pain or burning.

2. TRUE

To treat occasional heartburn, it is recommended to take Tums® or Rolaids® as needed. Should your condition require you to take a PPI, your physician should prescribe the lowest dose for the shortest amount of time possible. The next page lists reasons why PPIs should be continued or stopped.

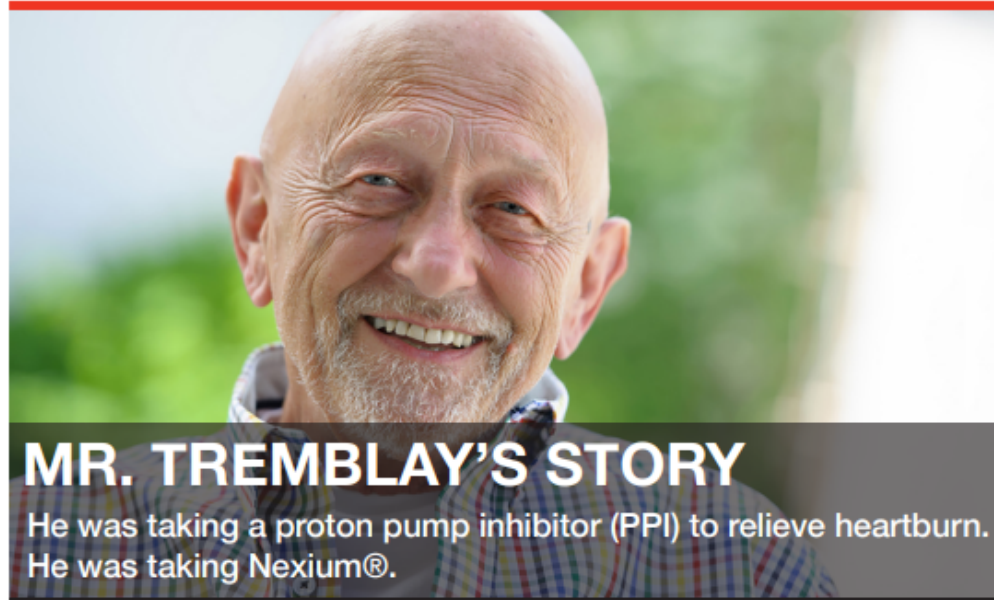
3. FALSE

Taking a PPI for longer than 4 to 12 weeks has been linked to:

- A higher risk of hip fractures
- Pneumonia
- An infection with the bacteria *Clostridium difficile*, which can lead to severe diarrhea, fever, and in rare cases, death
- A higher risk of kidney problems
- Rare instances of vitamin B12 or magnesium deficiency

4. FALSE

PPIs are powerful drugs. If you have heartburn every now and then, you probably do not need a PPI. Over-the-counter antacids should be sufficient. You can ease heartburn without drugs. This brochure explains how.



"I am 65 years old and had been taking Nexium® for at least two years to relieve heartburn. Recently, I was hospitalized for pneumonia. At my next medical visit, my doctor suggested I stop taking Nexium®, as new guidelines show that taking a PPI for more than eight weeks could be linked to pneumonia. Furthermore, my doctor told me it could also interfere with the osteoporosis drug I am now taking.

I took his advice. Now when I get heartburn every now and then, I take Tums® and it does the job.


I also made lifestyle changes. I stopped smoking and I lost a few pounds. Not only did my heartburn almost disappear, but these changes are having a very positive impact on my overall health.

When I know I will be having a big meal, I try to avoid foods that can cause heartburn. I do not drink coffee, I limit my consumption of alcohol and I go out for a walk after dinner.

I know PPIs, like Nexium®, are powerful drugs that have side effects. I trust my doctor to prescribe them only when appropriate and at the smallest dose possible."

Do I need to **continue** taking my PPI?

Check all that apply:

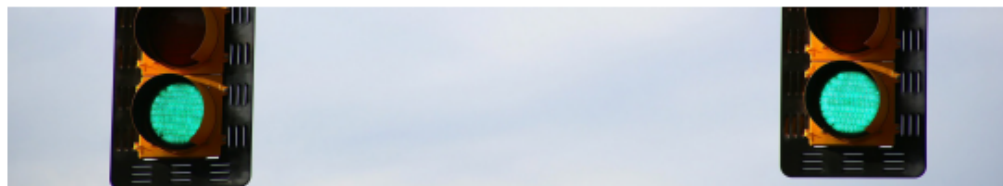
- ☐ Every day, I take medication that can irritate the stomach, such as anti-inflammatory medication (e.g. ibuprofen or corticosteroids).
- ☐ I had a major stomach bleed.
 -  If you tick this box, speak to your doctor about your specific circumstances.

I was referred to a gastroenterologist, who looked down my throat with a camera and diagnosed me with:

- ☐ Barrett's esophagitis.
- ☐ Severe erosive esophagitis.

If you checked any of these statements, then long-term use of PPIs is usually recommended.

If you don't know the answers, you should talk to your doctor before stopping your PPI.



When you need a PPI, you should take the lowest dose for the shortest amount of time possible.

Do I need to **stop** taking my PPI?

Check all that apply:

- ☐ I no longer have heartburn.
- ☐ My symptoms are infrequent.
- ☐ I have been taking my PPI for longer than 12 weeks and I did not check any of the statements on the previous page (page 6).

If you checked any of these statements, continue reading about how to stop your PPI.



Please consult your doctor, nurse or pharmacist before stopping any medication.

TAPERING-OFF PROGRAM

There are 3 approaches that are equally effective in preventing symptom return when you stop your PPI:

1. One approach is to ask your physician to write a new prescription for only half the dose and take this for four weeks, then stop.
2. Alternatively, you can simply skip a pill every second day for four weeks, then stop.

1. One approach is to ask your physician to write a new prescription for only half the dose and take this for four weeks, then stop.

2. Alternatively, you can simply skip a pill every second day for four weeks, then stop.

WEEKS	TAPERING SCHEDULE							✓
	MO	TU	WE	TH	FR	SA	SU	
1		●		●		●		
2	●		●		●		●	
3		●		●		●		
4	●		●		●		●	

3. Or, you can use your PPI or alternatives such as ranitidine (Zantac®) or antacids including Tums®, Rolaids® or Maalox® to keep control of your symptoms, only when needed.

In order to select the best option for you, make sure you discuss this with your doctor, nurse or pharmacist.



5 QUESTIONS TO ASK YOUR HEALTH CARE PROVIDER

1. Do I need to continue my medication?
2. How do I reduce my dose?
3. Is there an alternative treatment?
4. What symptoms should I look for when I stop my medication?
5. With whom do I follow up and when?

Questions I want to ask my health care provider about my medication

Use this space to write down questions you may want to ask:

This brochure can be found online at:

www.deprescribingnetwork.ca/useful-resources



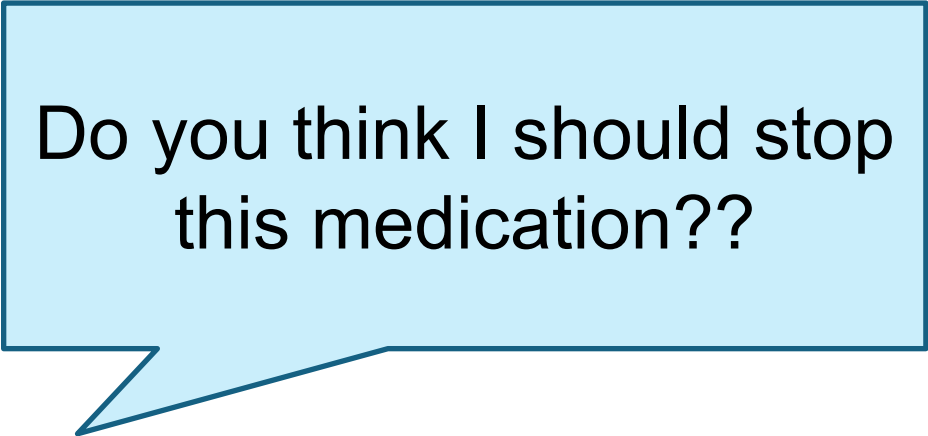
Tips for Deprescribing Conversations



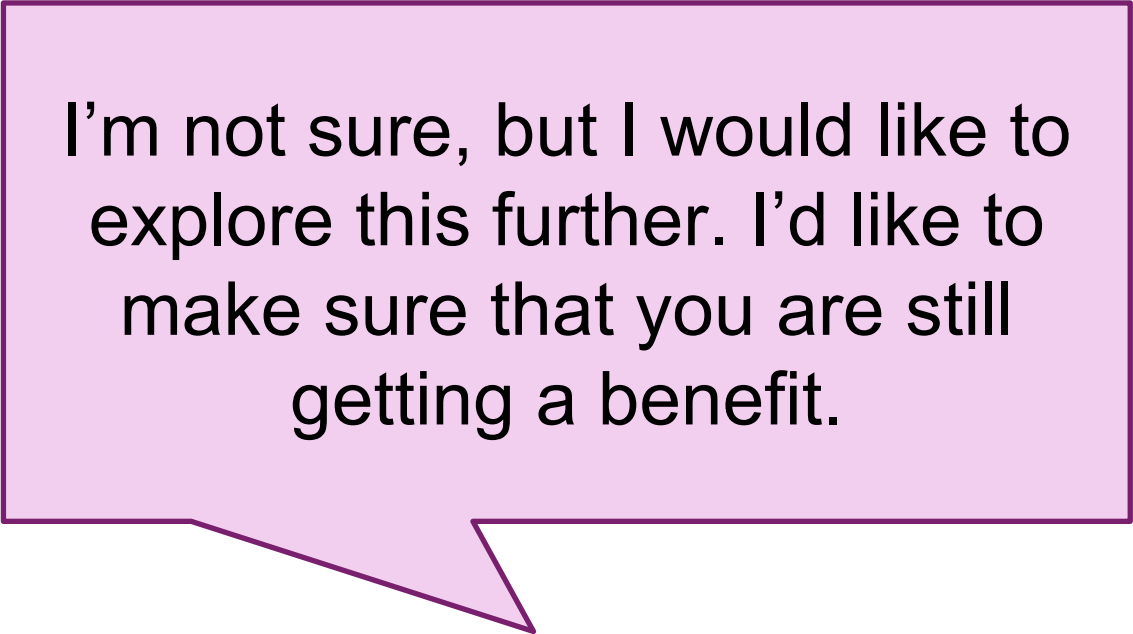
Tip: Scripts for a busy day

- I wanted to quickly speak to you about your medications. Do you know why you are taking pantoprazole?
- Have you ever discussed with your doctor reducing the dose or stopping this medication?
- I am wondering if it is still the best medication/or whether you still need it. This booklet has great information for you to consider.
 - It has information you can take to your doctor and see what they think
 - Or I can call you tomorrow and we can discuss further and take a closer at your medications [medication reassessment]?

Scripts for Hesitant Patients



Do you think I should stop this medication??



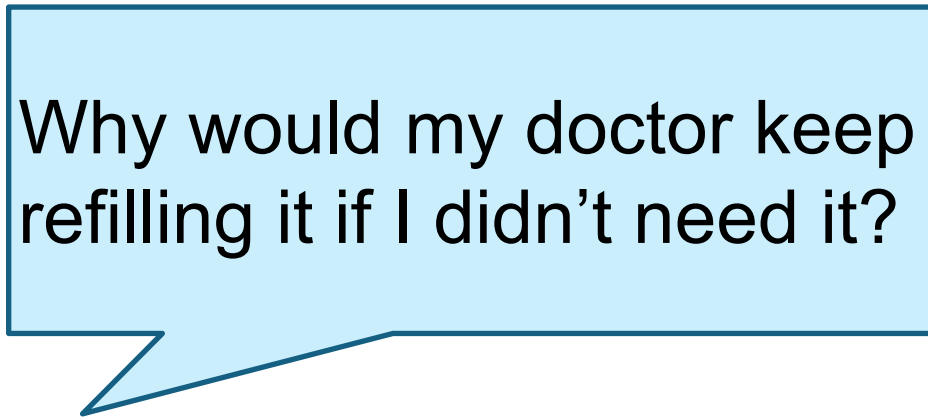
I'm not sure, but I would like to explore this further. I'd like to make sure that you are still getting a benefit.

I forgot to get my refill once and I got really bad heartburn!!

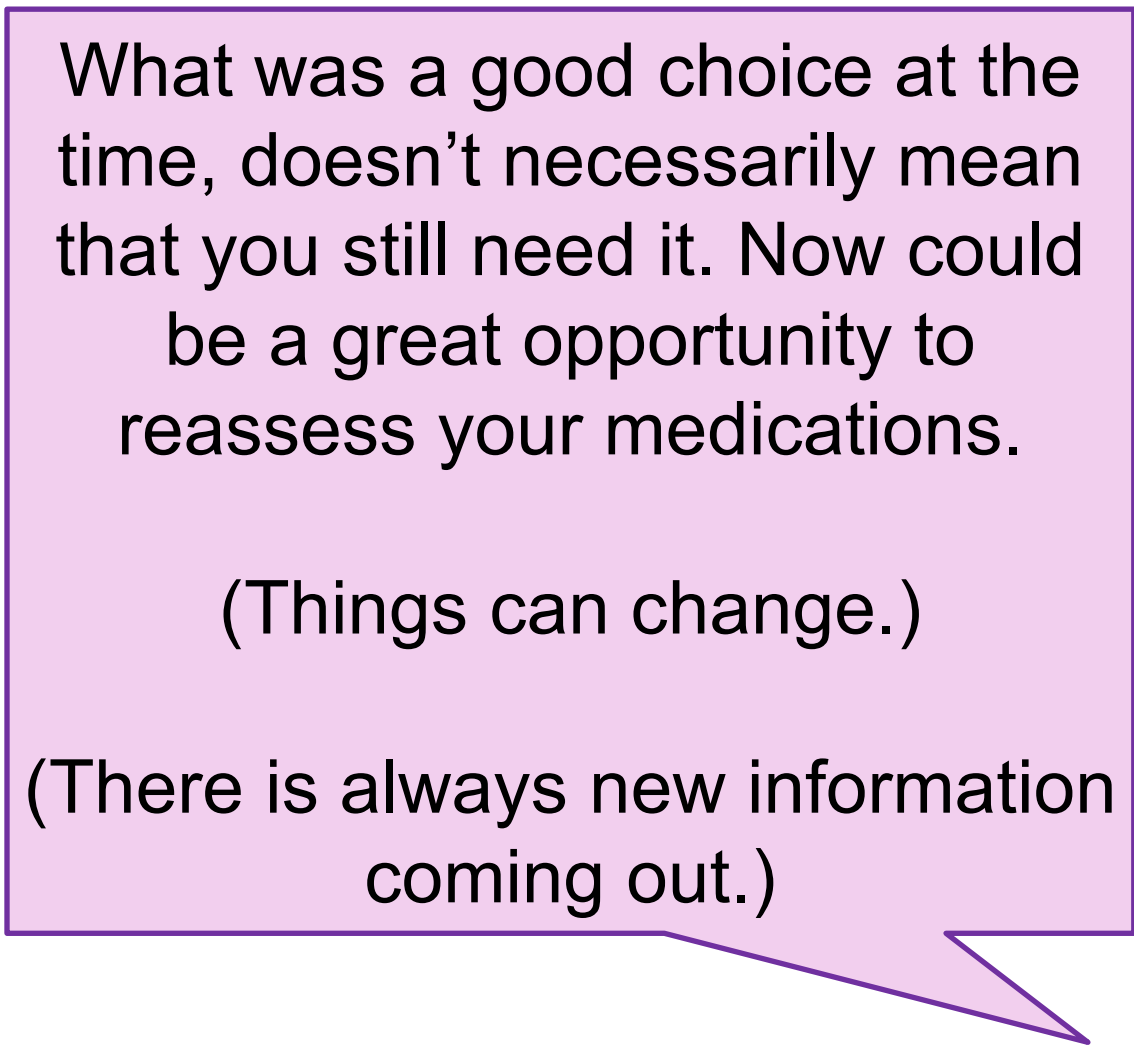
That can happen.

Think of this medications as a “pause button” for the acid factory in your stomach. When you stop taking the medication, it’s like hitting the “play button” again. But instead of just making the normal amount of acid, the factory goes into overdrive and makes extra acid.

That’s when you get what is called rebound hypersecretion. The good news is that are things we can do to help minimize the rebound acid production.



Why would my doctor keep refilling it if I didn't need it?



What was a good choice at the time, doesn't necessarily mean that you still need it. Now could be a great opportunity to reassess your medications.

(Things can change.)

(There is always new information coming out.)

Communication is key!

- Healthcare is a team sport
- Teamwork requires effective communication
- Connect with prescribers when appropriate



Evidence-Based Pharmaceutical Opinion

Proton Pump Inhibitors

Patient Information

Name: _____

DOB: _____

PPI (drug/dose): _____
(drug) (dose)

Date: _____

Prescriber:

Tel # _____ Fax # _____

Pharmacist: _____

Pharmacy: _____

Tel # _____ Fax # _____

For most indications, PPI use beyond 12 weeks provides little benefit yet increases the risk of adverse events. **The Canadian Association of Gastroenterology and Clinical Practice Guidelines recommend deprescribing PPIs at least once per year unless the patient has one of the following indications:**

- ✓ Chronic NSAID users with bleeding risk
- ✓ Documented history of bleeding GI ulcer
- ✓ Barrett's esophagus
- ✓ Severe esophagitis

Long-term PPI use may be associated with increases in: vitamin B12 deficiency, *C. difficile* infection, community-acquired pneumonia, fractures, renal complications and hypomagnesemia.

Pharmacist Report (Indicate all that apply by checking boxes)

- ☐ Our patient has been taking a PPI for over 12 weeks
- ☐ To the best of my knowledge, our patient does not have an indication for long term PPI use
- ☐ Educational brochure on PPI deprescribing provided to patient following pharmacist consultation
- ☐ Please consider this patient as a candidate for PPI deprescribing

Pharmacist Comments or Recommendations (Optional):

Options to minimise rebound symptoms following deprescribing

- Use PPI only as needed
- Decrease PPI to a lower dose for 4 weeks then stop
- Switch to H2 Receptor Antagonist (H2RA)/alginate/antacid as needed

Prescriber Comments to Pharmacist (Optional):

WEEKS	TAPERING SCHEDULE							✓
	MO	TU	WE	TH	FR	SA	SU	
1 and 2								
3 and 4								
5 and 6								
7 and 8								
9 and 10								
11 and 12								
13 and 14								
15 and 16								
17 and 18								

EXPLANATIONS

Full dose Half dose Quarter of a dose No dose

*REFERENCES: American Geriatrics Society 2019 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults, <https://onlinelibrary.wiley.com/doi/full/10.1111/jgs.15767>; Otto *et al.* (2010). Efficacy of CBT for benzodiazepine discontinuation in patients with panic disorder: Further evaluation. *Behav Res Ther.* 2010 Aug;48(8):720-7. Finkle *et al.* (2011). Risk of fractures requiring

Available:

<https://www.deprescribingnetwork.ca/pharmaceutical-opinions>

Engaging other members of the Health Care Team

Fax:

I had a discussion with Emily Smith today and she reported that she hasn't experienced any symptoms of heartburn in months. She is currently taking a PPI.

I gave her an evidence-based tool to consider tapering her PPI and she agreed to first seek your input. If appropriate I would be able to assist in implementing a tapering schedule and follow her progress.

What about the
financial impact to
pharmacy revenues?




**You too can be a
deprescribing
heroine or hero!!**



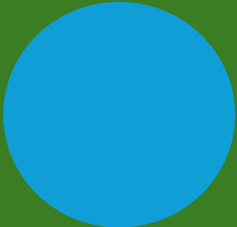
**Improve overall
adherence to
essential meds
AND
reduce costs
AND
inconvenience**

Why You?

- You are a medication expert! (and a deprescribing superhero)
- Offer an invaluable perspective
- You work in a variety of care settings: community, primary care teams, acute and long-term care environment
- Often following patients over their lifetime, or an important moment in time (admission to LTC, discharge from hospital)



What is the role of the pharmacist in medication reassessment and deprescribing?



- Look for opportunities for the need for medication reassessment
- Communicate with the patient regarding their medications to identify concerns & goals of care
- Work with the patient and the prescriber to appropriately deprescribe medications when indicated



Questions/ Comments?

What have been your successes and
challenges with deprescribing?

Bschuster@sasktel.net

Julia@rxfiles.ca





Canadian
Pharmacists
Association

Association des
pharmaciens
du Canada