Deprescribing in LTC

The art of the possible

October 19, 2018

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Acknowledgements: Wade Thompson

Faculty/Presenter Disclosure

- **Faculty:** Barbara Farrell
- **Relationships with commercial interests:**
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Mitigating Potential Bias

- No mitigation required

Objectives

Participants will be able to:

- Identify opportunities for deprescribing
- Optimize ‘nightmare’ medication list
- Effectively deprescribe high yield medication classes

Outline

- What is deprescribing?
- Identifying deprescribing opportunities
- Benefits and harms of deprescribing
- Developing a deprescribing plan

What are some of our challenges in deprescribing for our LTC residents?

Polypharmacy in LTC

- Polypharmacy “more medications than needed, or for which harm outweighs benefit”
- 48% of LTC residents in Canada on 10+ medications

Consequences

- Falls
- Cognitive and functional decline
- Increased risk of adverse drug events
- Hospitalizations, higher costs

https://www.cihi.ca/sites/default/files/document/drug-use-among-seniors-2016-en-web.pdf

Challenges in older or frail patients

Kidney function reduced

Reduction in hepatic volume and blood flow

Increased sensitivity to CNS-active drugs

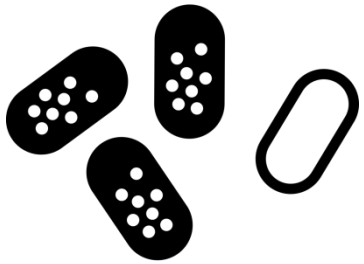
Increase in total fat, less muscle

Elderly and frail can react to drugs differently than younger people and may have increased susceptibility to adverse drug effects

Am J Geriatr Pharmacother 2007;5(4):345-51
Br J Clin Pharmacol 2005;61(2):218-23.
Drugs Aging 2009;26(12):1039-48.
Clin Geriatr Med 2012;28: 273–286.

Challenges in older or frail patients

Lack of evidence for benefits/harms of many drugs

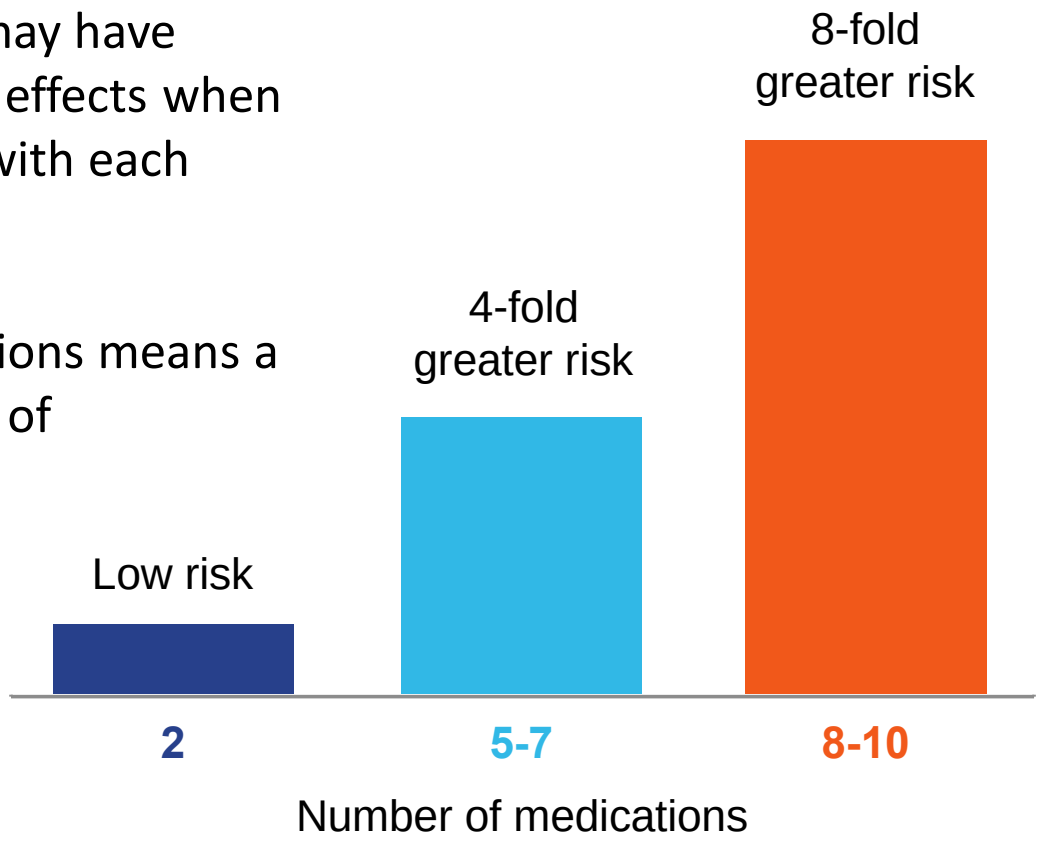


Many co-morbidities, many drugs

Risk of drug-drug interactions

Medications may have unpredictable effects when they interact with each other.

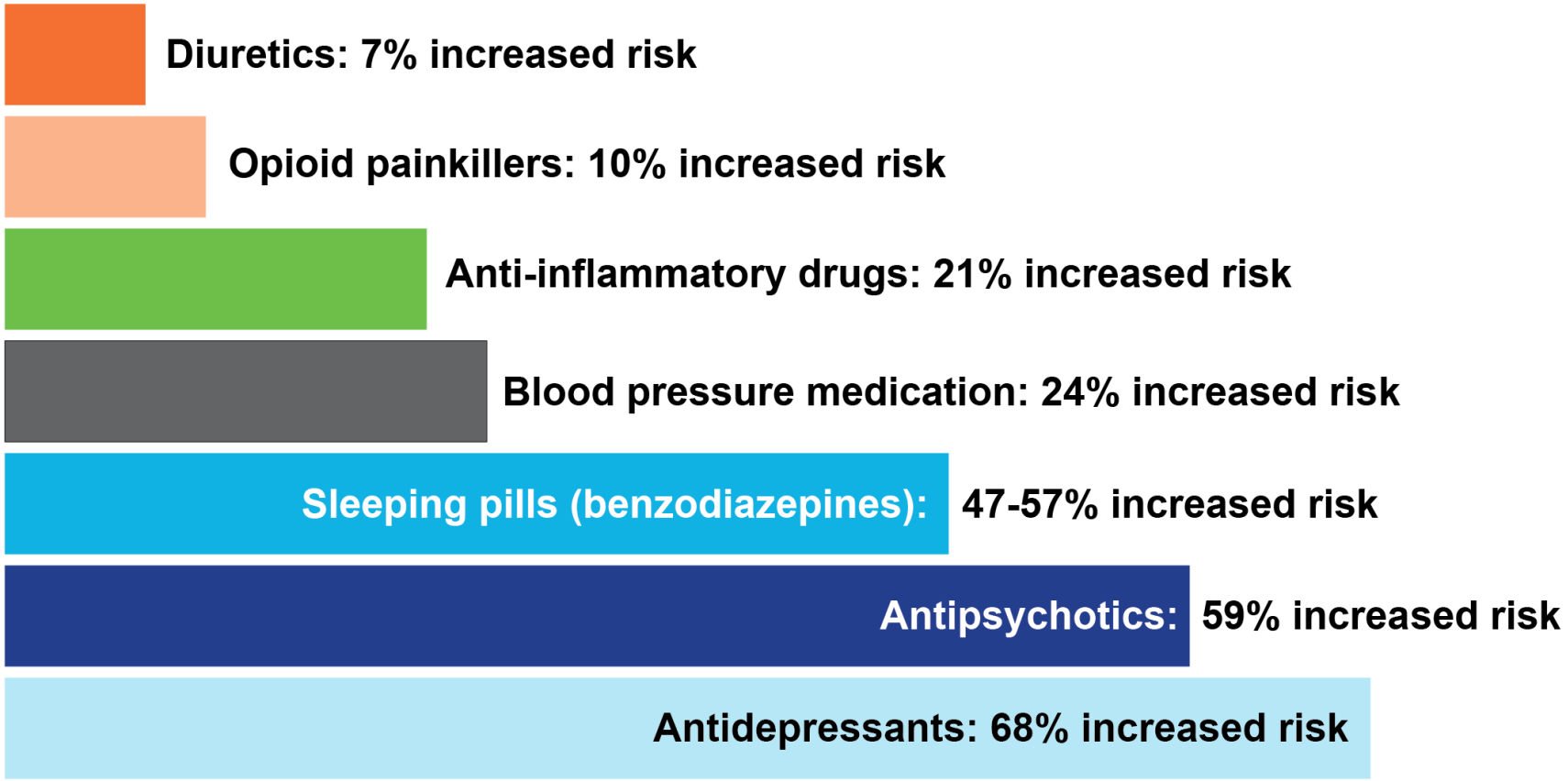
More medications means a higher chance of interactions.



Johnell, K., Klarin, I. 2007. Drug Safety; 30 (10): 911-918

Canadian Deprescribing Network

Which medications increase the risk of falls?



Canadian Deprescribing Network

Sources: de Jong et al. 2013. Therapeutic Advances in Drug Safety. 4(4): 147-154 & Huang et al. 2012. Drugs & Aging 29(5):359-76

Deprescribing

Deprescribing is the planned and supervised process of dose reduction or stopping of a medication that may be causing harm or no longer be providing benefit. The goal of deprescribing is to reduce medication burden and harm while maintaining or improving quality of life.

A plain language description

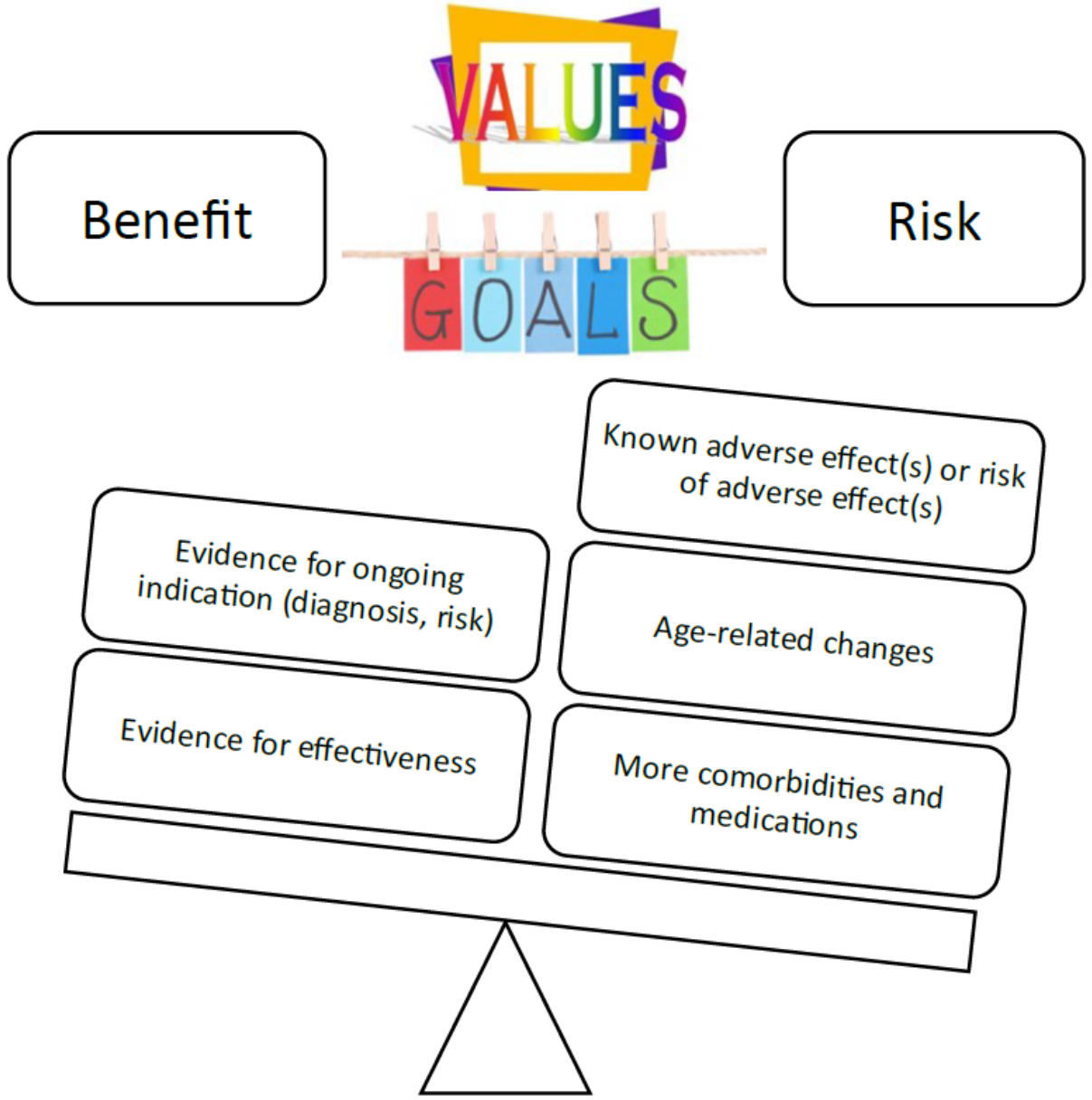
Medications that were good then, might not be the best choice now. Deprescribing is part of good prescribing – backing off when doses are too high, or stopping medications that are no longer needed.

Steps in deprescribing

1. Compile a medication history *(of medication experience)*
2. Identify potentially inappropriate medications, those with less evidence for benefit or those with harm
3. Assess each medication for eligibility for deprescribing
4. Prioritize medications for deprescribing
5. Develop a plan for tapering and monitoring
6. Monitor, support and document care

With the patient…

Reeve E et al. Review of deprescribing processes and development of an evidence-based patient-centred deprescribing process. *Br J Clin Pharm* 2014;78(4):738-747.


Benefit
VALUES
Risk
GOALS
Known adverse effect(s) or risk of adverse effect(s)
Evidence for ongoing indication (diagnosis, risk)
Age-related changes
Evidence for effectiveness
More comorbidities and medications
Frailty

Assess each drug for eligibility to be discontinued

Approaches to identifying medications for deprescribing

Explicit

- Screening criteria:
  - Beers
  - STOPP/START
- Anticholinergic load
  - Anticholinergic burden scales

Implicit

- Assess each medication
  - Indication, effectiveness, safety, compliance
- Assess each sign + symptom:
  - Can this be caused by a drug?

Questions to ask

I	**Indicated?**	Time to benefit Goals of care
E	**Effective?**	Goals of care Clinical status – is the drug working?
S	**Safe?**	Potential or actual adverse drug effects
C	**Convenient?**	Pill burden Cost Route

Are there better options available?

http://www.nhshighland.scot.nhs.uk/publications/pages/polypharmacyguidanceforprescribinginfrailadults.aspx

Questions to ask

- Is this symptom being caused by a drug?
- Is this drug being used to treat the side effect of another drug?

Medications to question

- Most common meds assessed as inappropriate towards end of life:
  - Lipid-lowering agents
  - Vitamins, mineral supplements
  - Antihyperglycemics
  - Antihypertensives
  - Antiplatelets

BMJ Support Palliat Care 2016;doi:1136/bmjspcare-2015-000941

Medications to question

- Delphi panel on medications at end of life in advanced dementia (n=12 geriatricians in USA)

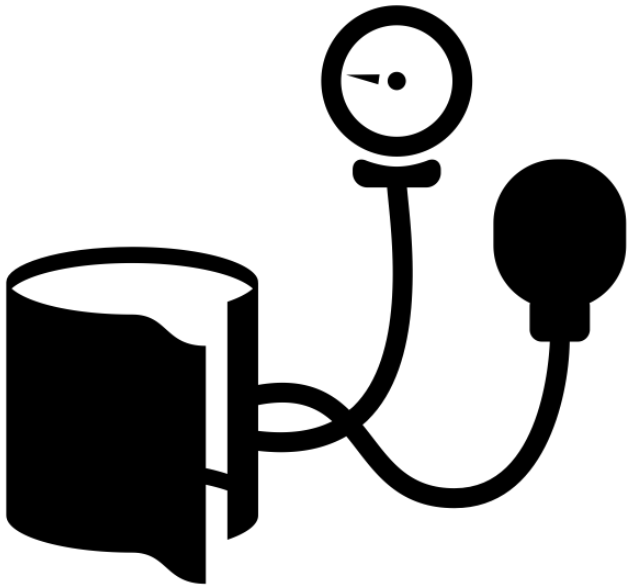
SOMETIMES APPROPRIATE	RARELY OR NEVER APPROPRIATE
PPIs	Lipid-lowering agents
Insulin	NMDA antagonists (memantine)
Beta-blockers	AChEIs
Corticosteroids	Digoxin
	Sex hormones
	Cytotoxic chemotherapy

J Am Geriatr Soc 2008;56:1306–1311.

Medications to question

OFTEN ESSENTIAL	Analgesics, antiemetics, antipsychotics, anxiolytics, anticonvulsants (rectal or injectable), anticholinergics for secretions, sedatives
SOMETIMES ESSENTIAL	Anitarrhythmics, anticonvulsants (oral), antihypertensives, antiparkinsonians, corticosteroids, diuretics, immunosuppresants, insulin, oral antihyperglycemics, NSAIDs
NOT ESSENTIAL	ASA, antibiotics, anticoagulants, antiplatelets, antisecretory drugs, bisphosphonates, hormones, vitamins and supplements, lipid-lowering agents, laxatives

Blood pressure



TARGET in very old/frail

SBP<150mmHg
140-160?
160-190? (PATH)

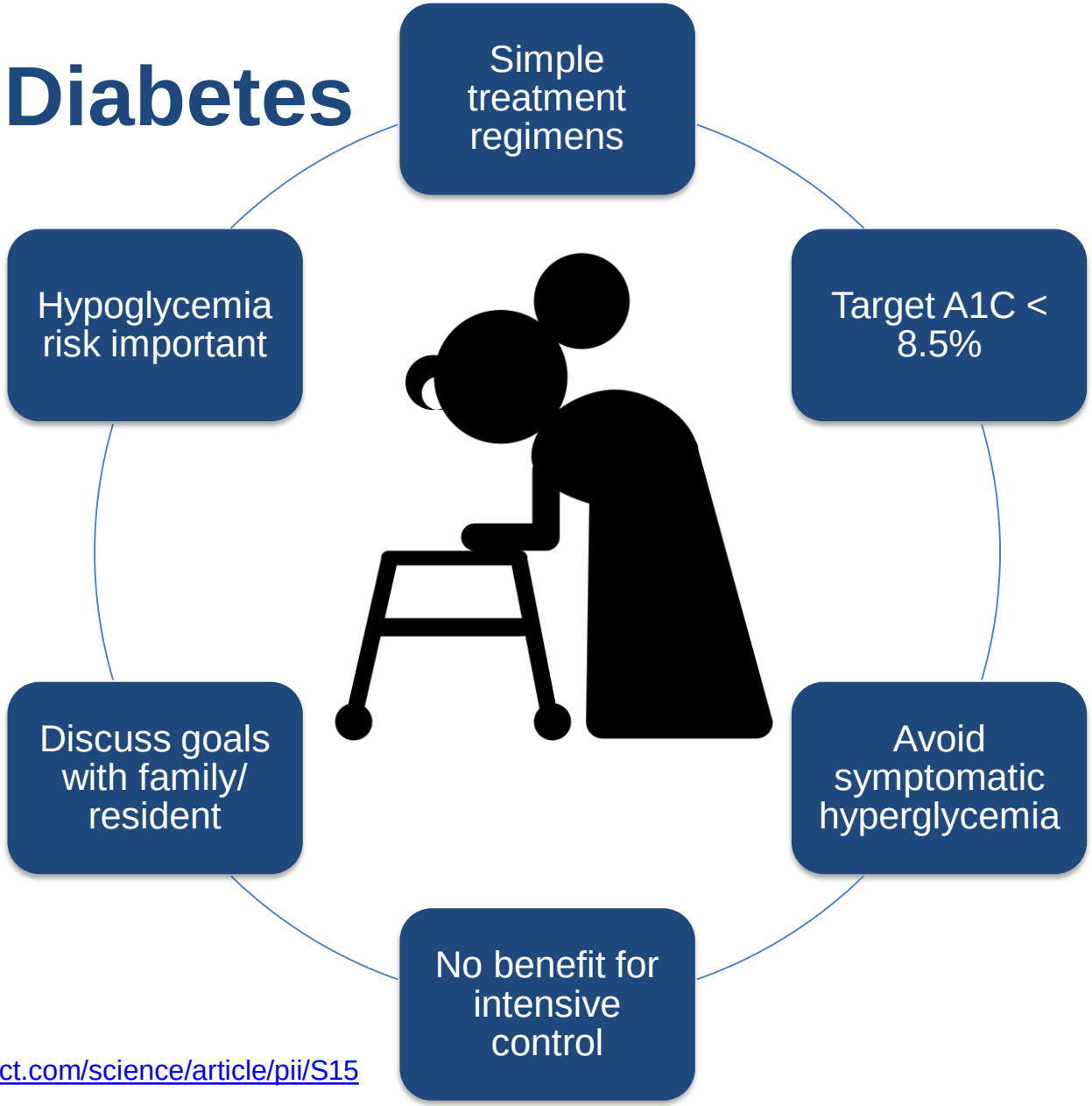
RATIONALE

Compared to intensive control:

- **Increased risk of harm**
- **Lack of evidence for benefit**

https://www.mdedge.com/ccjm/article/96096/cardiology/promoting-higher-blood-pressure-targets-frail-older-adults-consensus

Type 2 Diabetes



https://www.sciencedirect.com/science/article/pii/S1525586101300460X

http://care.diabetesjournals.org/content/diacare/39/2/308.full.pdf

Prevention of CVD

PRIMARY PREVENTION

"Current evidence is insufficient to assess the balance of benefits and harms of initiating statin use for the primary prevention of CVD events and mortality in adults 76 years and older without a history of heart attack or stroke."
USPSTF 2017

SECONDARY PREVENTION

"Statin treatment in severe frailty is probably not necessary, although there may be individualized circumstances that shift the risk/benefit ratio"
PATH 2013
http://pathclinic.ca/wp-content/uploads/2013/11/Treating-Hyperlipidemia_PATH-Nov-2013.pdf

Kutner et al. Safety and benefit of discontinuing statin therapy in the setting of advanced, life-limiting illness. A randomized controlled trial. JAMA Intern Med 2015;175(5):691-700 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4618294/
Holmes et al. Evidence-based deprescribing of statins in patients with advanced illness. JAMA Inter Med 2015;175(5):701-702. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4420700/

Potentially inappropriate medications

- Beers criteria
- STOPP criteria
- Anticholinergic burden

- Useful as guidance…

EXAMPLES OF MEDS TO AVOID

- **Benzodiazepines & Z drugs**
- **NSAIDs**
- **Tricyclic antidepressants (e.g. amitriptyline)**
- **First-generation anti-histamines**
- **Antipsychotics**
- **Digoxin**

Anticholinergic Cognitive Burden Scale

Score 1		Score 2	Score 3	
Alprazolam	Disopyramide	Amantadine	Amitripyline	Meclizine
Atenolol	Fentanyl	Belladona	Amoxapine	Nortriptyline
Brompheniramine	Isosorbide	Carbamazepine	Benztropine	Olanzepine
Buproprion	Metoprolol	Cyclobenzaprine	Chlorpheniramine	Orphenadrine
Captopril	Morphine	Cyproheptadine	Clemastine	Oxybutynin
Chlorthalidone	Nifedipine	Loxapine	Clomipramine	Paroxetine
Cimetidine	Predisone	Meperidine	Clozapine	Perphenazine
Clorazepate	Quinidine	Methotrimeprazine	Darifenacin	Procyclidine
Codeine	Risperidone	Molindone	Desipramine	Promethazine
Diazepam	Theophylline	Oxcarbazepine	Dicylcomine	Quetiapine
Digoxin	Trazodone	Pimozide	Dimenhydrinate	Scopolamine
Dipyridamole	Triamterene		Diphenhydramine	Thioridazine
			Doxepin	Tolterodine
			Flavoxate	Triluoperazine
			Hydroxyzine	Trihexyphenidyl
			Imipramine	Trimipramine

https://www.health.harvard.edu/newsletter_article/anticholinergic-cognitive-burden-scale
http://www.acbcalc.com/

Salahudeen M, Duffull S, Nishtala P. Anticholinergic burden quantified by anticholinergic risk scales and adverse outcomes in older people: a systematic review. BMC Geriatrics 2015:15:31.
Mintzer J, Burns A. Anticholinergic side-effects of drugs in elderly people. J R Soc Med 2000;93:457-462.

Goals of patient-centred treatment

- Have no aim except to help patients according to goals they wish to achieve
- Stop any treatment that is not of clear benefit
- Seek to use as few drugs as possible

Br J Gen Pract 2015; DOI: 10.3399/bjgp15X687001

Goals of care
&
Shared decision-making

Goals of care

- Symptom control
- Quality of life

- Life-prolonging therapy
- Disease prevention
- Aggressive treatment

- **Discuss with patient/family/caregiver**
- **Shared decisions**

J Pharm Pract Res 2011;41(2):146-51
Support Care Cancer 2014;22:1113-19
Can Fam Phys 2011;57:304-7

Collaborative Care: shared expertise

Patient

Lived

Experience

I know me.

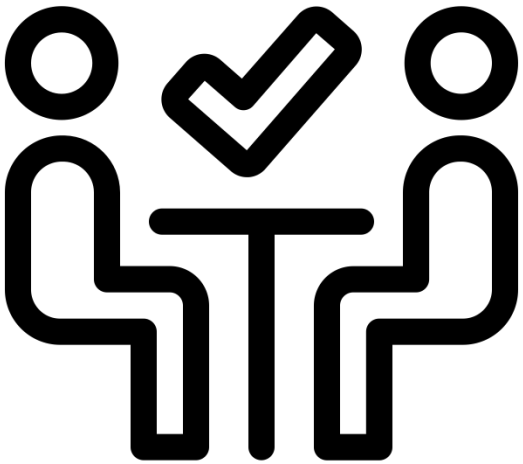
Professionals

Illness

Experts

We know stuff.

Shared decisions



COMMON UNDERSTANDING OF

- **Reason help is being sought / decision being made**
- **Options available**
- **Outcomes that are important**
- **Benefits/harms of options**

JAMA Intern Med 2017;177(9):1237-8
JAMA Intern Med 2017;177(9):1239-40

Participation of older adults in decision-making

- Interviews (29 participants; 80-93; US)
- Barriers affecting participation
  - Perception there are no options (use of the word ‘routine’)
  - Low patient activation
  - Obstructed communication with the clinician
  - Patients seeking information from few resources
  - Patient believes clinician knows their values
  - Patients don’t address discord with clinician directly

Bynum JP et al. Participation of very old adults in health care decisions. *Medical Decision Making* 2014; 34:216-230.

Older adults and carers beliefs and attitudes

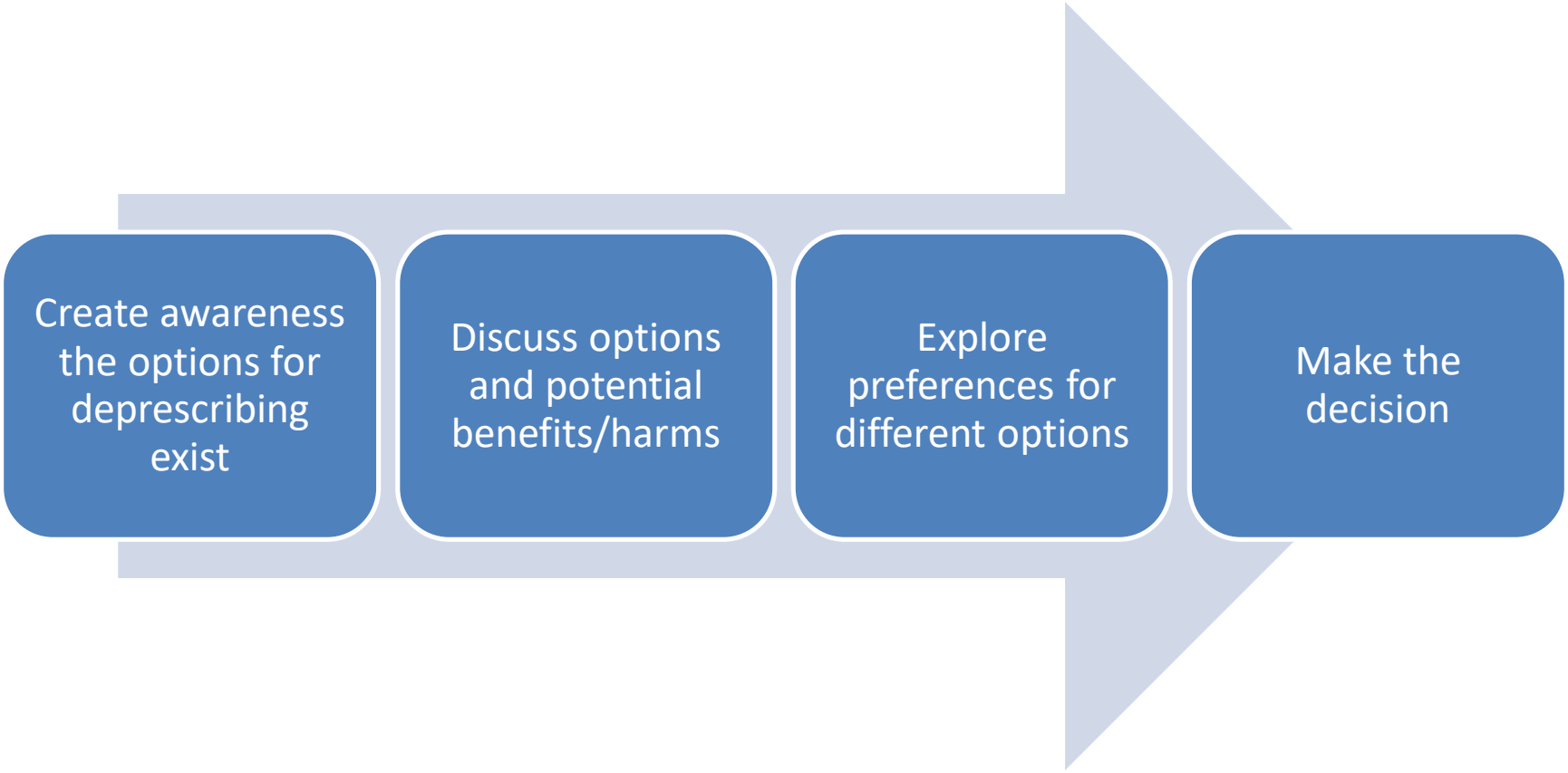
- Four focus groups with 14 older adults and 14 carers in Australia
- Results:
  - Appropriateness
  - Process
  - Willingness

Reeve,E et al. Beliefs and attitudes of older adults and carers about deprescribing of medications: A qualitative focus group study. *British Journal of General Practice*, 2016;66(649), e552–e560. https://doi.org/10.3399/bjgp16X685669

Implications

- Attending physicians are the main driver in LTC
  - Be aware of influence and do not fear patient resistance
- A process is required for deprescribing
  - Discussion b/w provider and patient needed
  - Explain why medication being considered
  - Patients/carers open to being involved
  - Emphasize that medication withdrawal is a trial
- Where there is resistance
  - Further discussion may reveal reason
  - Shared decision making needed to preserver relationships

Too much medicine in older people? Deprescribing through shared decision making



Jansen J et al. Too much medicine in older people? Deprescribing through shared decision making. *BMJ (Online)*, 2016;353(June). https://doi.org/10.1136/bmj.i2893

Patient barriers

Poor understanding of rationale and when appropriate

Not being involved in planning

Not knowing options if symptoms return

Help patient/family understand why deprescribing is being considered and involve in planning

Drugs Aging 2013;DOI 10.1007/s40266-013-0106-8


Deprescribing is t
planned proces
reducing or sto
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longer be of be
may be causing
Safely reducin
stopping me
a team eff
deprescribing.org

Video discussion

Case 1

Mr. Pilgrim

- 89 years-of-age with advanced dementia living in long-term care
- Wife is POA, visits daily
- Other medical conditions: age-related macular degeneration, hypertension, stroke
- Spends 90% of time in bed, up in wheelchair 10% of time
- Total care, incontinent of urine and stool, non-verbal (can grunt or moan)
- Grimacing and moaning with transfers,
- BP 97/53 mmHg HR 56 (avg of 3 readings)
- Crcl = 31 mL/min (stable)

Case 1 (cont'd)

- Medications:
  - Donepezil 10 mg once daily
  - Memantine 5 mg twice daily
  - Vitalux AREDS 1 caplet twice daily
  - Clopidogrel 75 mg once daily
  - Lorazepam 0.5mg qhs
  - Ramipril 5 mg once daily
  - Amlodipine 10 mg once daily
  - Rosuvastatin 5mg once daily
  - Multivitamin once daily
  - Vitamin D 1000 IU once daily

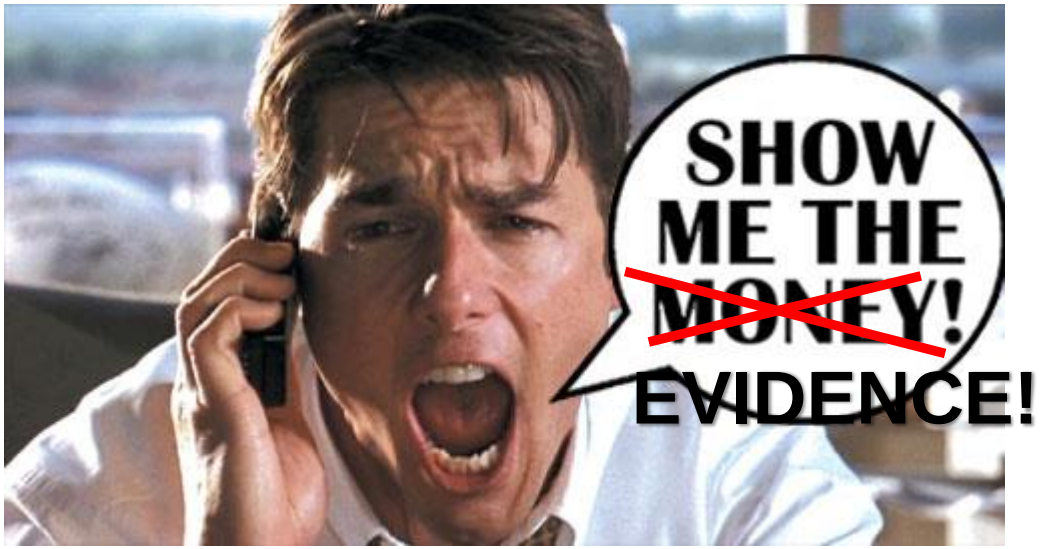
Which medications do you question?

- Thinking about:
  - Indications
  - Time to benefit/life expectancy
  - Benefits versus harms

- What would you discuss with Mr. Pilgrim's wife?

Considerations

- Think about
  - Goals of care (wife wants no heroic measures, comfort only)
  - Indication, benefit (considering life expectancy and goals)
  - Potential for ADEs or interactions



http://thesocialcsuite.net/show-me-the-money/

Evidence for deprescribing

2016 systematic review in patient > 65 years

- n=116 studies, mean age 74 years
- Mostly in outpatient settings

Findings

- Likely no effect on mortality, probably reduces # of medications
- Adverse effects → medication specific, worsening of disease state, known withdrawal effects
- Little evidence on QOL, pt important outcomes
- Few studies looking at end of life

BJCP 2016; doi: 10.1111/bcp.12975

Specific studies

Statins
(DOUBLE BLIND RCT)

PATIENTS	Terminal pts → life expectancy 1 month to 1 year (n=381, mean age 74 years)
INTERVENTION	Discontinue statin vs. continue
OUTCOMES	Death at 60 days → no difference CV events → no difference QoL → greater for discontinuation Saved $716 USD per resident

JAMA Intern Med 2015;Doi:10.1001/jamaintermed.2015.0289

Specific studies

Polypharmacy Reduction
(PROSPECTIVE COHORT STUDY)

PATIENTS	Frail nursing home pts, n=190, mean age 82 years, mean meds per pt = 7
INTERVENTION	Geriatric-palliative approach to reduce polypharmacy vs. continuation of meds
OUTCOMES	Attempts at reduction in 119 pts, 82% successful Reduction in referral to acute care (18%) Reduced mortality at 12 months in deprescribing group (24%)

Isr Med Assoc J, 2007. 9(6): p. 430-4

Specific studies

Deprescribing in LTC
(OPEN LABEL RCT in AUSTRALIA)

PATIENTS	Nursing home patients (n=95), mean age 84, mean # of meds at baseline = 9.5
INTERVENTIONS	Physician medication review, use of deprescribing algorithm vs. usual care
OUTCOMES	Mean change of **<u>2 fewer meds at 12 months</u>** for deprescribing intervention versus 0 for control No difference in secondary outcomes (survival, falls, hospital admissions)

PLoS One. 2016 Mar 4;11(3):e0149984

Potential benefits of deprescribing

Fewer medications (fewer ADEs, drug interactions?)

Decrease financial burden for patient/family

Increase patient/family involvement and patient-centered care

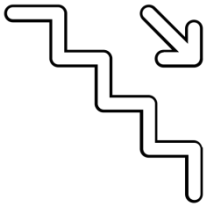
Potential harms of deprescribing

- Withdrawal symptoms
- Worsening of underlying disease/condition
- Patient/family anxiety

Address these issues with tapering, close monitoring and patient/family education

ADWEs

- ADWEs = adverse drug withdrawal events
- When in doubt, taper



- Monitor:
  - Withdrawal symptoms
  - Worsening of underlying disease

Adverse Drug Withdrawal Events (ADWEs)

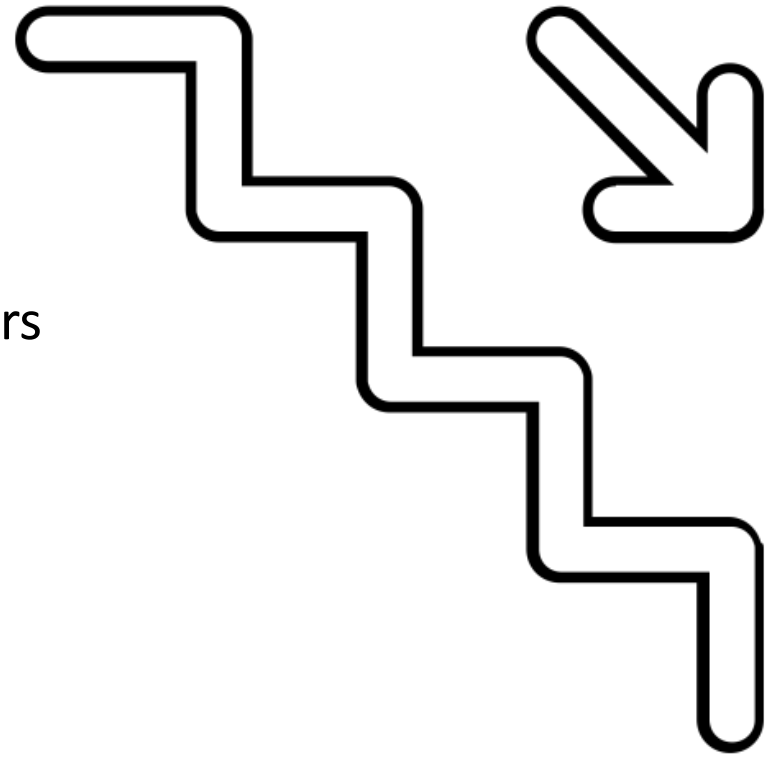
Drug or drug class	Discontinuation syndrome	Signs/symptoms/manifestations
Alpha-blockers	W, R	Agitation, headache, hypertension, palpitations
ACE inhibitors	D	Heart failure, hypertension
Anti-angina agents	D	Angina
Anticonvulsants	W, D	Anxiety, depression, seizures
Antidepressants	W, D	Akathisia, anxiety, chills, GI symptoms, headache, insomnia, irritability, malaise, myalgia, depression
Anti-parkinsonians	W, D, R	Hypotension, psychosis, rigidity, tremor
Antipsychotics	W	Dyskinesias, insomnia, nausea, restlessness
Anticholinergics	W	Anxiety, nausea, headache, dizziness
Baclofen	W, R	Agitation, anxiety, confusion, depression, insomnia, hypertonia, mania, nightmares, seizures
Benzodiazepines	W	Agitation, anxiety, insomnia, seizures, confusion
Beta-blockers	W, D	Angina, anxiety, hypertension, tachycardia
Corticosteroids	W, R, D	Anorexia, hypotension, nausea, weakness, inflammation
Digoxin	D	Heart failure, palpitations
Diuretics	D	Heart failure, hypertension
Opioids	W	Cramping, anger, anxiety, chills, diaphoresis, diarrhea, insomnia, restlessness
NSAIDs	D	Recurrence of arthritis, gout

D = disease recurrence, R = rebound of symptoms, W = withdrawal

Isr Med Assoc J, 2007. 9(6): p. 430-4

Medications that may need tapering

- Antidepressants
- Anticonvulsants
- Antipsychotics
- Benzodiazepines
- Beta-blockers
- Calcium channel blockers
- AChEIs
- Corticosteroids
- Memantine
- Nitrates
- Opioids
- Proton pump inhibitors



J Pharm Pract Res 2011;41(2):146-51
Pharmacists Letter Mar 2016 #320305

Deprescribing approaches

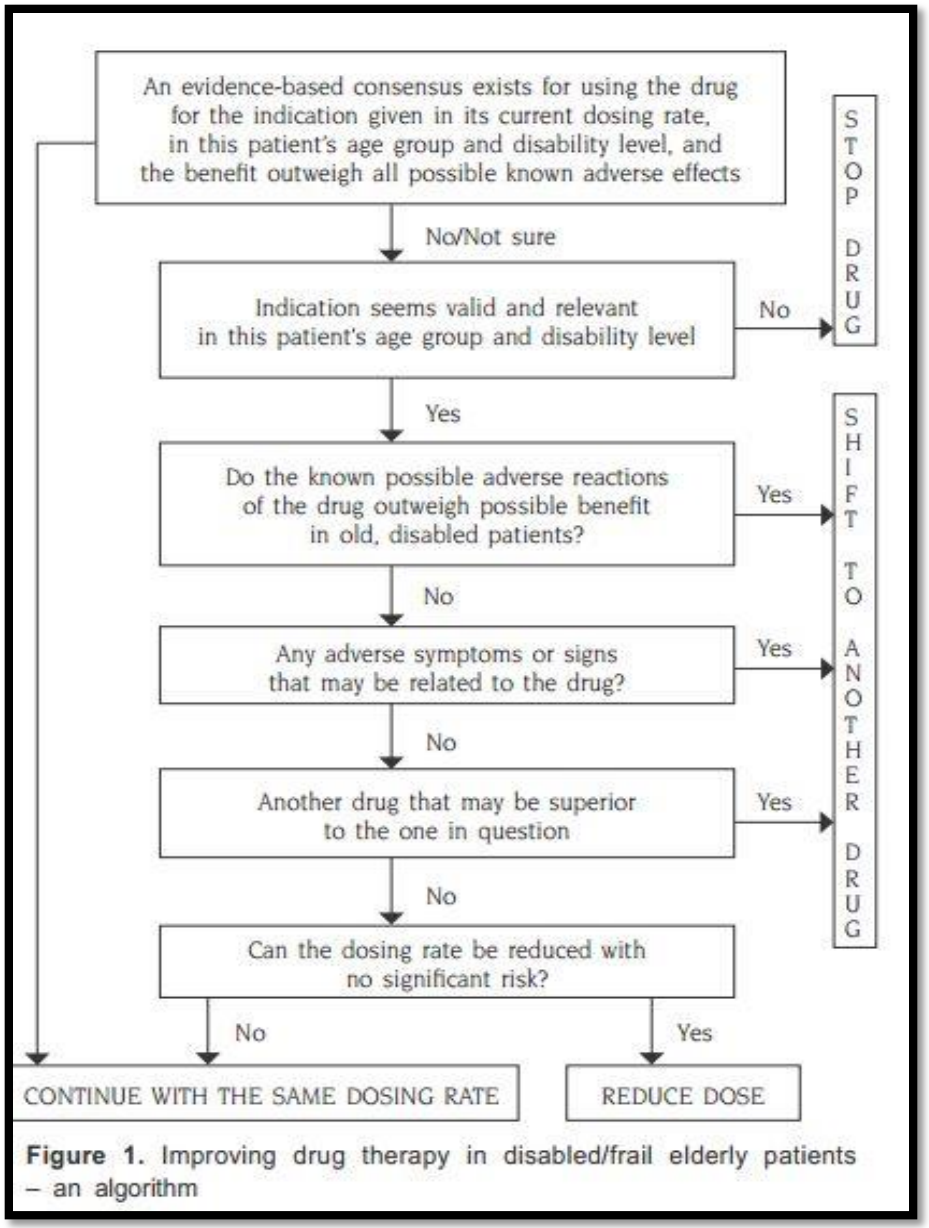


Figure 1. Improving drug therapy in disabled/frail elderly patients – an algorithm

Options

- Stop the drug completely
- Shift to another drug with more desirable side effect profile
- Reduce the dose of the drug
- Continue with the drug

Scott, I.A., et al., *Deciding when to stop: towards evidence-based deprescribing of drugs in older populations.* Evid Based Med, 2013. **18**(4): p. 121-4

5 step protocol

1. Ascertain all drugs the patient is currently taking and the reasons for each one;
2. Consider overall risk of drug-induced harm in individual patients in determining the required intensity of deprescribing intervention;
3. Assess each drug in regard to its current or future benefit potential compared with current or future harm or burden potential;
4. Prioritize drugs for discontinuation that have the lowest benefit-harm ratio and lowest likelihood of adverse withdrawal reactions or disease rebound syndromes;
5. Implement a discontinuation regimen and monitor patients closely for improvement in outcomes or onset of adverse effects.

Scott I et al, Reducing Inappropriate Polypharmacy The Process of Deprescribing, JAMA Int Med 2015
doi:10.1001/jamainternmed.2015.0324

Prioritize drugs to deprescribe

Develop and implement a discontinuation plan

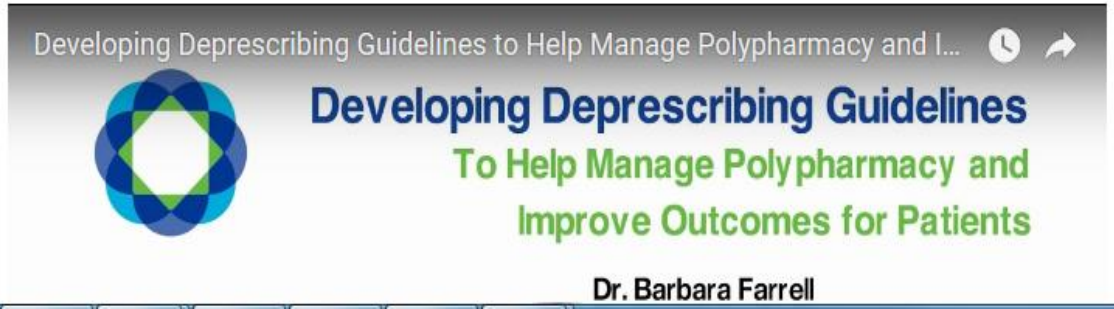
Deprescribing Guidelines and Algorithms

The evidence-based guidelines and their algorithms, developed by the Bruyère Research Institute Deprescribing Guidelines Research Team and its collaborators, are products of quality research and real-world application.

Watch our video to learn how the Bruyère team developed each of the evidence-based deprescribing guidelines.

This video helps viewers understand:

- The rationale for evidence-based deprescribing guidelines
- The process used for developing the deprescribing guidelines
- The steps that a health care professional and patient need to go through to make and carry out safe deprescribing processes



In this section

Case Reports and Testimonials

Deprescribing Guidelines and Algorithms

Deprescribing Information Pamphlets

Deprescribing Patient Decision Aids

Deprescribing Webinars

Frequently Asked Questions

Helpful Links

Publications

Symposium Resources

Case 1 (cont'd)

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  - Lorazepam 0.5 mg qhs
  - Ramipril 5 mg once daily
  - Amlodipine 10 mg once daily
  - Rosuvastatin 5mg once daily
  - Multivitamin once daily
  - Vitamin D 1000 IU once daily

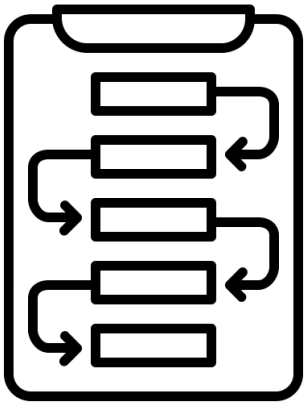
Prioritizing and Planning

- Which drug(s) would you stop first?
- Which drug(s) would you stop abruptly?
- Which drug(s) would you taper?
- Develop a tapering plan
- Discussion…
  - Use the worksheet and tools to develop a plan with your group

Monitoring

- Thinking about the drugs you would like to stop
  - What would you be monitoring for?
  - Consider ADWEs and underlying disease

Example: benzodiazepines



Plan developed in collaboration with resident/family according to goals, values and preferences

How fast/slow to taper?

What to do if withdrawal symptoms?

Threshold for slowing taper or going back to previous dose

Expert Opin Drug Safety 2014 Jul;13(7):919-34
http://www.open-pharmacy-research.ca/wordpress/wp-content/uploads/deprescribing-algorithm-benzodiazepines.pdf

DEPRESCRIBING: REDUCING MEDICATIONS SAFELY TO MEET LIFE'S CHANGES

deprescribing.org

FOCUS ON BENZODIAZEPINE RECEPTOR AGONISTS & Z-DRUGS (BZRAs)

As life changes, your medication needs may change as well. Medications that were once good for you, may not be the best choice for you now.

Deprescribing is a way for health care providers to help you safely cut back on medications.

WHAT ARE BENZODIAZEPINE RECEPTOR AGONISTS & Z-DRUGS?

- Drugs used to treat problems like anxiety or difficulty sleeping
- Examples include:
  - Alprazolam (Xanax®)
  - Bromazepam (Lectopam®)
  - Chlordiazepoxide (Librax®)
  - Clonazepam (Rivotril®)
  - Clorazepate (Tranxene®)
  - Diazepam (Valium®)
  - Flurazepam (Dalmane®)
  - Lorazepam (Ativan®)
  - Nitrazepam (Mogadon®)
  - Oxazepam (Serax®)
  - Temazepam (Restoril®)
  - Triazolam (Halcion®)
  - Zopiclone (Imovane®, Rhovane®)
  - Zolpidem (Sublinox®)

WHY CONSIDER REDUCING OR STOPPING A BZRA BEING USED FOR INSOMNIA?

- BZRAs can cause dependence, memory problems, daytime fatigue, and are linked to dementia and falls

- Many could take them for short periods (up to **4 weeks**) but remain on them for years

- BZRAs are not recommended at all (regardless of duration) in older persons as first line therapy for insomnia

- BZRAs may become less helpful for sleep after only a few weeks

HOW TO SAFELY REDUCE OR STOP A BZRA

- Ask your health care provider to find out if deprescribing is for you; BZRA doses should be reduced slowly with supervision

- Tell your health care provider about the BZRA deprescribing algorithm, available online: http://deprescribing.org/resources/deprescribing-guidelines-algorithms/

- Download the BZRA patient information pamphlet available online: http://deprescribing.org/resources/deprescribing-information-pamphlets/

Pottie K, Thompson W, Davies S, Grenier J, Sadowski C, Welch V, Holbrook A, Boyd C, Swenson JR, Ma A, Farrell B. Evidence-based clinical practice guideline for deprescribing benzodiazepine receptor agonists. *Can Fam Physician* 2018;64:339-51 (Eng), e209-24 (Fr)

Ask questions, stay informed and be proactive.

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deprescribing.org | Is a Benzodiazepine or Z-Drug still needed for sleep?

August 2018

What are Benzodiazepine & Z-Drugs (BZRAs)?

Benzodiazepine receptor agonists & Z-Drugs, or BZRAs, are a class of drugs that are used to treat problems such as anxiety or difficulty sleeping.

There are many different types of BZRA drugs:

- Alprazolam (Xanax®)
- Bromazepam (Lectopam®)
- Chlordiazepoxide (Librax®)
- Clonazepam (Rivotril®)
- Clorazepate (Tranxene®)
- Diazepam (Valium®)
- Flurazepam (Dalmane®)
- Lorazepam (Ativan®)
- Nitrazepam (Mogadon®)
- Oxazepam (Serax®)
- Temazepam (Restoril®)
- Triazolam (Halcion®)
- Zopiclone (Imovane®, Rhovane®)
- Zolpidem (Sublinox®)

Why use less of, or stop using a BZRA?

BZRAs used as sleeping pills are usually only helpful for a short period (around 4 weeks) of nightly use. After a few weeks, the brain gets used to the effects of the BZRA and it may not work as well as it did at first, but can still cause side effects.

BZRAs can cause dependence, memory problems and daytime fatigue. They are also associated with dementia and falls (sometimes resulting in broken bones). The chance of experiencing these effects may be higher as people get older. Many countries recommend against using BZRAs for sleep in older people.

Because BZRAs don't work as well after a few weeks and because they can cause side effects, it's reasonable for many people, especially older people, to try and stop taking them and learn to fall asleep on their own again.

Stopping a BZRA is not for everyone

Some patients may need to stay on a BZRA for a very specific reason. However, most need a BZRA for a short period of time.

People who may need to continue on a BZRA include those with any of the following:

- Unmanaged anxiety, depression, physical or mental condition that may be causing or aggravating insomnia
- Anxiety that has been specifically and effectively managed with the BZRA
- Alcohol withdrawal

How to safely reduce a BZRA

People between 18 and 64 years of age who have been taking a BZRA for insomnia more than 4 weeks, and people 65 years of age or older taking a BZRA for insomnia regardless of how long, should **talk to their health care provider** about whether stopping a BZRA is the right choice for them.

Doctors, nurse practitioners or pharmacists can help to decide on the best approach to using less of a BZRA. They can advise on how to reduce the dose, when to use drug-free days, and whether to stop the drug altogether. They can also give advice on how to make lifestyle changes that can manage insomnia.

Slowly reducing the dose of the BZRA helps to reduce the severity of withdrawal effects. People are more successful in stopping their BZRA if they slowly reduce the dose instead of just suddenly stopping it. Some people can reduce the dose over the course of a few weeks; others need several months.

Switching from a short-acting BZRA to a long-acting one has been recommended in the past but has not been shown to be more effective than slowly lowering the dose of a short-acting drug.

Pottie K, Thompson W, Davies S, Grenier J, Sadowski C, Welch V, Holbrook A, Boyd C, Swenson JR, Ma A, Farrell B (2016). Evidence-based clinical practice guideline for deprescribing benzodiazepine receptor agonists. Can Fam Physician 2018;64:339-51 (Eng), e209-24 (Fr)

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What to expect after reducing a BZRA

Some people may have difficulty sleeping when a dose is first reduced, but many will not. Difficulty sleeping tends to be worst in the first few days after reducing or stopping, and usually resolves in a few weeks.

Some people have other symptoms of withdrawal (e.g. anxiety, irritability, and sweating); these symptoms tend to be most severe in the first few days and get better within a few weeks. If anything odd happens, people should talk to a health care provider for advice.

Reducing or stopping a BZRA may improve alertness and thinking ability, and reduce daytime sedation and fall risk.

Other ways to manage insomnia

For a person who lives in the community:

- Go to bed only when sleepy
- Do not use bed or bedroom for anything but sleep (or intimacy)
- If not asleep within 20-30 min on going/returning to bed, exit the bedroom
- Use alarm to awaken at the same time every morning
- Do not nap
- Avoid caffeine after noon
- Avoid exercise, nicotine, alcohol, and big meals 2 hours before bedtime

For a patient who lives in long-term care or hospital:

- Pull up curtains during the day for light exposure
- Keep alarm noises to a minimum
- Increase daytime activity
- Reduce number of naps (no more than 30 minutes and no naps after 2pm)
- Have warm decaf drink, warm milk at night
- Restrict food, caffeine, smoking before bedtime
- Use toilet before going to bed
- Have regular bedtime and rising times
- Avoid waking at night for direct care
- Try backrub, gentle massage

What to do if insomnia continues

Talk to a health care provider about treating underlying conditions that are affecting sleep. Avoid using other medication to treat insomnia. Most sedatives contribute to sedation and increase risk of falls. Ask about "cognitive behavioural therapy" – an educational approach that has been shown to help patients stop BZRA. Check out this resource for more information: http://sleepwellns.ca/. You can also discuss other options for managing your insomnia if it gets worse when you use a lower dose or stop your BZRA.

Personalized BZRA dose reduction strategy:

_____

_____

_____

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_____

_____

This pamphlet accompanies a deprescribing guideline and algorithm that can be used by doctors, nurse practitioners, or pharmacists to guide deprescribing.

Visit
deprescribing.org
for more information.

Pottie K, Thompson W, Davies S, Grenier J, Sadowski C, Welch V, Holbrook A, Boyd C, Swenson JR, Ma A, Farrell B (2016). Evidence-based clinical practice guideline for deprescribing benzodiazepine receptor agonists. Can Fam Physician 2018;64:339-51 (Eng), e209-24 (Fr)

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deprescribing.org | Benzodiazepine & Z-Drug (BZRA) Deprescribing Algorithm

August 2018

Why is patient taking a BZRA?

If unsure, find out if history of anxiety, past psychiatrist consult, whether may have been started in hospital for sleep, or for grief reaction.

- Insomnia on its own OR insomnia where underlying comorbidities managed
  For those ≥ 65 years of age: taking BZRA regardless of duration (avoid as first line therapy in older people)
  For those 18-64 years of age: taking BZRA > 4 weeks

- Other sleeping disorders (e.g. restless legs)
- Unmanaged anxiety, depression, physical or mental condition that may be causing or aggravating insomnia
- Benzodiazepine effective specifically for anxiety
- Alcohol withdrawal

Engage patients (discuss potential risks, benefits, withdrawal plan, symptoms and duration)

Recommend Deprescribing

Continue BZRA

- Minimize use of drugs that worsen insomnia (e.g. caffeine, alcohol etc.)
- Treat underlying condition
- Consider consulting psychologist or psychiatrist or sleep specialist

Taper and then stop BZRA

(taper slowly in collaboration with patient, for example ~25% every two weeks, and if possible, 12.5% reductions near end and/or planned drug-free days)

- For those ≥ 65 years of age (strong recommendation from systematic review and GRADE approach)
- For those 18-64 years of age (weak recommendation from systematic review and GRADE approach)
- Offer behavioural sleeping advice; consider CBT if available (see reverse)

Monitor every 1-2 weeks for duration of tapering

Expected benefits:

- May improve alertness, cognition, daytime sedation and reduce falls

Withdrawal symptoms:

- Insomnia, anxiety, irritability, sweating, gastrointestinal symptoms (all usually mild and last for days to a few weeks)

Use non-drug approaches to manage insomnia

Use behavioral approaches and/or CBT (see reverse)

If symptoms relapse:

Consider

- Maintaining current BZRA dose for 1-2 weeks, then continue to taper at slow rate

Alternate drugs

- Other medications have been used to manage insomnia. Assessment of their safety and effectiveness is beyond the scope of this algorithm. See BZRA deprescribing guideline for details.

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deprescribing.org | Benzodiazepine & Z-Drug (BZRA) Deprescribing Notes

August 2018

BZRA Availability

BZRA	Strength
Alprazolam (Xanax®) T	0.25 mg, 0.5 mg, 1 mg, 2 mg
Bromazepam (Lectopam®) T	1.5 mg, 3 mg, 6 mg
Chlordiazepoxide (Librax®) C	5 mg, 10 mg, 25 mg
Clonazepam (Rivotril®) T	0.25 mg, 0.5 mg, 1 mg, 2 mg
Clorazepate (Tranxene®) C	3.75 mg, 7.5 mg, 15 mg
Diazepam (Valium®) T	2 mg, 5 mg, 10 mg
Flurazepam (Dalmane®) C	15 mg, 30 mg
Lorazepam (Ativan®) T,S	0.5 mg, 1 mg, 2 mg
Nitrazepam (Mogadon®) T	5 mg, 10 mg
Oxazepam (Serax®) T	10 mg, 15 mg, 30 mg
Temazepam (Restoril®) C	15 mg, 30 mg
Triazolam (Halcion®) T	0.125 mg, 0.25 mg
Zopiclone (Imovane®, Rhovane®) T	5mg, 7.5mg
Zolpidem (Sublinox®) S	5mg, 10mg

T = tablet, C = capsule, S = sublingual tablet

BZRA Side Effects

- BZRAs have been associated with:
  - physical dependence, falls, memory disorder, dementia, functional impairment, daytime sedation and motor vehicle accidents
- Risks increase in older persons

Engaging patients and caregivers

Patients should understand:
- The rationale for deprescribing (associated risks of continued BZRA use, reduced long-term efficacy)
- Withdrawal symptoms (insomnia, anxiety) may occur but are usually mild, transient and short-term (days to a few weeks)
- They are part of the tapering plan, and can control tapering rate and duration

Tapering doses

- No published evidence exists to suggest switching to long-acting BZRAs reduces incidence of withdrawal symptoms or is more effective than tapering shorter-acting BZRAs
- If dosage forms do not allow 25% reduction, consider 50% reduction initially using drug-free days during latter part of tapering, or switch to lorazepam or oxazepam for final taper steps

Behavioural management

Primary care:
1. Go to bed only when sleepy
2. Do not use bed or bedroom for anything but sleep (or intimacy)
3. If not asleep within about 20-30 min at the beginning of the night or after an awakening, exit the bedroom
4. If not asleep within 20-30 min on returning to bed, repeat #3
5. Use alarm to awaken at the same time every morning
6. Do not nap
7. Avoid caffeine after noon
8. Avoid exercise, nicotine, alcohol, and big meals within 2 hrs of bedtime

Institutional care:
1. Pull up curtains during the day to obtain bright light exposure
2. Keep alarm noises to a minimum
3. Increase daytime activity & discourage daytime sleeping
4. Reduce number of naps (no more than 30 mins and no naps after 2 pm)
5. Offer warm decaf drink, warm milk at night
6. Restrict food, caffeine, smoking before bedtime
7. Have the resident toilet before going to bed
8. Encourage regular bedtime and rising times
9. Avoid waking at night to provide direct care
10. Offer backrub, gentle massage

Using CBT

What is cognitive behavioural therapy (CBT)?
- CBT includes 5-6 educational sessions about sleep/insomnia, stimulus control, sleep restriction, sleep hygiene, relaxation training and support

Does it work?
- CBT has been shown in trials to improve sleep outcomes with sustained long-term benefits

Who can provide it?
- Clinical psychologists usually deliver CBT, however, others can be trained or can provide aspects of CBT education; self-help programs are available

How can providers and patients find out about it?
- Some resources can be found here: http://sleepwellns.ca/

Pottie K, Thompson W, Davies S, Grenier J, Sadowski C, Welch V, Holbrook A, Boyd C, Swenson JR, Ma A, Farrell B (2016). Evidence-based clinical practice guideline for deprescribing benzodiazepine receptor agonists. *Can Fam Physician* 2018;64:339-51 (Eng), e209-24 (Fr)

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Is the person taking the medication for one of the following reasons:

ChEIs (donepezil, rivastigmine or galantamine):

- Alzheimer's disease, dementia of Parkinson's disease, Lewy body dementia or vascular dementia.

Memantine:

- Alzheimer's disease, dementia of Parkinson's disease or Lewy body dementia.

No

Yes

Have they been taking the medication for > 12 months

Yes

No

Do they fulfill one of the following?

- Cognition +/- function significantly worsened over past 6 months (or less, as per individual).
  Sustained decline (in cognition, function +/- behaviour), at a greater rate than previous (after exclusion of other causes).
- No benefit (i.e., no improvement, stabilisation or decreased rate of decline) seen during treatment.
- Severe/end-stage dementia (dependence in most activities of daily living, inability to respond to their environment +/- limited life expectancy).

No

Do they fulfill one of the following?

- Decision by a person with dementia/family/carer to discontinue.
- Refusal or inability to take the medication.
- Non-adherence that cannot be resolved.
- Drug–drug or drug–disease interactions that make treatment risky.
- Severe agitation/psychomotor restlessness.
- Non-dementia terminal illness.

No

Continue ChEI/ memantine

Consult geriatrician, psychiatrist or other healthcare professional if considering other reason for deprescribing.

Yes

Yes

Recommend trial deprescribing

Strong recommendation from systematic review and GRADE approach

Recommend trial deprescribing

Practice Point

Engage individuals and caregivers determine their values and preferences and discuss potential risks and benefits of continuation and discontinuation.

Taper and then stop
Halve dose (or step down through available dose forms) every 4 weeks to lowest available dose, followed by discontinuation. Plan this in collaboration with the individual/carer and relevant healthcare professionals.

Conduct close periodic monitoring (e.g. every 4 weeks)

- cognition, function and neuropsychiatric symptoms.

Consider other causes of changes (e.g. delirium).

Reeve E, Farrell B, Thompson W, at al Evidence-based Clinical Practice Guideline for Deprescribing Cholinesterase Inhibitors and Memantine. 2018.
ISBN-13: 978-0-6482658-0-1 Available from: http://sydney.edu.au/medicine/cdpc/resources/deprescribing-guidelines.php

deprescribing.org | Bruyère Research Institute | Cognitive Decline Partnership Centre | The University of Sydney

Monitoring during tapering and after discontinuation

Timing of symptoms after dose reduction/ discontinuation	Types of symptoms	Action to be taken by family/nurses/ care staff	Possible cause*
Less than 1 week	Severe symptoms, including agitation, aggression, hallucinations or reduced consciousness	Restart previous dose immediately and contact responsible healthcare professional as soon as possible	Adverse drug withdrawal reaction
2 to 6 weeks	Worsening of cognition, behavioural or psychological symptoms or function	Contact responsible healthcare professional and consider restarting previous dose and/or make an appointment to see responsible healthcare professional at the next available time	Re-emergence of symptoms that were being treated by ChEI/ memantine
6 weeks to 3 months	Worsening of cognition, behavioural or psychological symptoms or function	Contact responsible healthcare professional at the next available time to make an appointment	Likely progression of condition or possible re-emergence of symptoms that were being treated by ChEI/memantine
> 3 months	Any	As per usual care	Progression of condition

- *Exclude other causes of change in condition (e.g. infection or dehydration) first.
- Discuss monitoring plan with the individual/family/carer and write it down for them (e.g. frequency and type of follow-up). Ensure they have a way to contact a clinician if needed.

Engaging individuals and family/carers

Determining suitability for deprescribing

- Discuss treatment goals – what do they value the most (cognition, quality of life, remaining independent)?
- Ask about experience with dementia symptoms when treatment started and over last 6 months.
- Ask about side effects.

Helping the individual and family/carers to make an informed decision

- Deprescribing is a trial — medication can be restarted if appropriate.
- There are uncertain benefits and harms to both continuing and discontinuing the medication.
- Tailor discussion about benefits and harms to the individual.
- Explore fears and concerns about deprescribing.
- Consider medication costs and local reimbursement/subsidisation criteria.
- If the recommendation to deprescribe is being made due to progression of dementia, remind family/ carers that the person with dementia may continue to decline after deprescribing, and explain why.

Non-pharmacological management and ongoing care after deprescribing

See (http://sydney.edu.au/medicine/cdpc/resources/dementia-guidelines.php) for Australian guidelines on care of people with dementia, including behavioural and psychological symptoms.

ChEI and memantine availability (Australia)

Drug	Strength
Donepezil (Aricept®, Aridon®, Arazil®)	Tablet – 5mg, 10mg
Galantamine (Galantyl®, Gamine XR®, Reminyl®)	Controlled release capsule – 8mg, 16mg, 24mg
Rivastigmine (Exelon®)	Capsule – 1.5mg, 3mg, 4.5mg, 6mg
	Patch – 4.6mg/24 hours, 9.5mg/24 hours, 13.3mg/24 hours
Memantine (Ebixa®, Memanxa®)	Tablet – 10mg, 20mg

ChEI and memantine side effects

- Common: include gastrointestinal effects, dizziness, confusion, headache, insomnia, agitation, weight loss and falls.
- Rare (ChEI): may include urinary, cardiovascular (e.g. bradycardia), pulmonary and dermatological (e.g. Stevens-Johnson syndrome) complications, Pisa syndrome, seizures, gastrointestinal haemorrhage and rhabdomyolysis.
- Lack of evidence of potential harms in complex older adults.

Reeve E, Farrell B, Thompson W, et al Evidence-based Clinical Practice Guideline for Deprescribing Cholinesterase Inhibitors and Memantine. 2018. ISBN-13: 978-0-6482658-0-1 Available from: http://sydney.edu.au/medicine/cdpc/resources/deprescribing-guidelines.php

Example Plan

Drug to deprescribe and rationale	Plan
Multivitamin, vitamin D, Vitalux likely no longer necessary given limited life expectancy – discussed with POA who is amenable to stopping	1. Stop multivitamin, vitamin D, Vitalux
Donepezil, memantine likely no longer necessary or effective given cognitive status and function – discussed with POA who is amenable to attempting to taper and stop	1. Reduce donepezil dose to 5mg once daily x 2 weeks 2. Monitor function (e.g. can no longer moan or sit up), cognition, behaviours 3. If dose reduction tolerated, stop donepezil 4. Taper memantine…
Ramipril, amlodipine – BP 97/53 mmHg and limited life expectancy, therefore antihypertensives likely not necessary – discussed with POA who is amenable to attempting to taper and stop	1. Reduce ramipril dose to 2.5 mg once daily x 1 week 2. Monitor BP and HR daily x 1 week 3. If dose reduction tolerated, stop ramipril 4. Taper amlodipine with monitoring of BP and HR

Example Plan

Drug to deprescribe and rationale	Plan
Rosuvastatin – given short life expectancy, not likely to reduce CV events or mortality; stopping may improve quality of life	1. Stop rosuvastatin; do not measure LDL
Lorazepam – risk of falls, worsening of cognitive impairment, daytime sedation	1. Options include stopping (already on lowest size tablet), cutting in half or asking pharmacist for help creating powders if slower taper needed 2. Ensure non-drug approaches to sleep management are being used 3. Monitor for rebound insomnia affecting behaviour for several days (usually resolves in approx. 1 week)

Drug therapy optimization at the end of life

Principles
• Life-extending drugs are usually not appropriate • Drugs for primary or secondary prevention usually not appropriate if time to benefit clearly longer than life expectancy • Avoid prescribing >5 drugs daily, as this increases risk of ADEs • Patient or caregiver is central in evaluating relevance of each symptom and drug • Revise goals of each disease and adapt treatments accordingly • Usually start or withdraw drugs one by one to assess impact on symptoms/ADEs • Tailor dosage form/schedule to needs • Withdrawing drugs may be distressing to patients/caregivers

Cruz-Jentoft, AJ et al, Drugs Aging 2012;29(6):511-521

Case 2

Mr. Silj

- 83 years of age
- New admission; was living alone in retirement home however difficulty managing
- 3 hospitalizations in the last 6 months
- Notable PMH: STEMI in 2005, HF class IV (EF 26%), T2D, depression (2 prior episodes remission x 7 years)
- Very SOB and congested, coughing, dizzy, tired, “cold and wet”, complaining of generalized pain
- Urinary frequency
- Decompensated + weak
- Spending most of the day in bed/wheelchair–requires 2 person assist for transfers, 1 person assist for bathing, toileting
- BP 101/43mmHg HR 46
- Crcl 24 mL/min
- A1C 6.3%, fasting BG 5-8 mmol/L

Case 2 (cont'd)

- ASA 81mg once daily
- Clopidogrel 75mg once daily
- Simvastatin 20mg once daily
- Ramipril 10 mg BID
- Bisoprolol 5mg once daily
- Spironolactone 25 mg once daily
- Amlodipine 5 mg daily
- Nitro patch 0.4mg/h on in morning off at bedtime
- Furosemide 80mg BID
- Metformin 500mg TID
- Gliclazide MR 60mg once daily
- Empagliflozin 25 mg daily
- Lantus 28 units QHS
- Multivitamin once daily
- Vitamin D 1000 IU once daily
- Calcium carbonate 1250 mg once daily
- Citalopram 20mg once daily
- Acetaminophen 650mg TID

Which drugs would you think about deprescribing?

What would you discuss with Mr. Silj?

Which drugs would you stop first?

Which drugs would you taper?

Thinking about what you would like to stop: what would you be monitoring for?

DEPRESCRIBING: REDUCING MEDICATIONS SAFELY TO MEET LIFE'S CHANGES

deprescribing.org

FOCUS ON ANTIHYPERGLYCEMICS

As life changes, your medication needs may change as well. Medications that were once good for you, may not be the best choice for you now.

Deprescribing is a way for health care providers to help you safely cut back on medications.

WHAT ARE ANTIHYPERGLYCEMICS?

- Drugs used to treat Type 2 diabetes in order to reduce blood sugar levels
- Examples include:

- Insulin
- Acarbose (e.g. Glucobay®)
- Metformin (e.g. Glucophage®)
- Alogliptin (Nesina®), linagliptin (Trajenta®), sitagliptin (Januvia®), saxagliptin (Onglyza®)
- Dulaglutide (Trulicity®), exenatide (e.g. Byetta®), liraglutide (Victoza®)
- Gliclazide (e.g. Diamicron®), glimepiride (Amaryl®), glyburide (Diabeta®), tolbutamide
- Repaglinide (Gluconorm®)
- Canagliflozin (Invokana®), dapagliflozin (Forxiga®), empagliflozin (Jardiance®)
- Pioglitazone (Actos®), rosiglitazone (Avandia®)
- Products are available that combine 2 different drugs in 1 pill

WHY CONSIDER REDUCING, STOPPING OR CHANGING AN ANTIHYPERGLYCEMIC?

- Low blood sugar in older people with Type 2 diabetes can cause falls, confusion, seizures and hospital visits

- Blood sugar targets may be higher in such people to avoid the risk of low blood sugar

- The benefits of tight blood sugar control are less clear for older adults, especially those who are frail, have dementia, or are very ill

- For many older people, reducing, stopping or changing antihyperglycemics can be done safely

HOW TO SAFELY REDUCE, STOP OR CHANGE AN ANTIHYPERGLYCEMIC?

- Ask your health care provider to find out if deprescribing is for you: changes to your antihyperglycemics and your blood sugar targets should be done with supervision

- Tell your health care provider about the antihyperglycemic deprescribing algorithm, available online: http://deprescribing.org/resources/deprescribing-guidelines-algorithms/

- Download the antihyperglycemic patient information pamphlet, available online: http://deprescribing.org/resources/deprescribing-information-pamphlets/

Farrell B, Black C, Thompson W, McCarthy L, Rojas-Fernandez C, Lochnan H, et al. Deprescribing antihyperglycemic agents in older persons. Evidence-based clinical practice guideline. Can Fam Physician 2017;63:832-43 (Eng), e452-65 (Fr).

Ask questions, stay informed and be proactive.

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What are Antihyperglycemics?

Antihyperglycemics are drugs that are used to reduce blood sugar levels to treat diabetes. There are many different types of antihyperglycemic drugs:

- Insulin
- Acarbose (e.g. Glucobay®)
- Metformin (e.g. Glucophage®)
- Alogliptin (Nesina®), linagliptin (Trajenta®), sitagliptin (Januvia®), saxagliptin (Onglyza®)
- Dulaglutide (Trulicity®), exenatide (e.g. Byetta®), liraglutide (Victoza®)
- Gliclazide (e.g. Diamicron®), glimepiride (Amaryl®), glyburide (Diabeta®), tolbutamide
- Repaglinide (Gluconorm®)
- Canagliflozin (Invokana®), dapagliflozin (Forxiga®), empagliflozin (Jardiance®)
- Pioglitazone (Actos®), rosiglitazone (Avandia®)
- Products are available that combine 2 different drugs in 1 pill

Why use less of, stop, or change Antihyperglycemics?

When antihyperglycemic drugs are first given, the goal is to keep blood sugar levels within a certain range to prevent problems like heart attacks, strokes or nerve damage. It can take several years of treatment to reduce risk of these problems.

With age, benefits are less clear and the risk of hypoglycemia (low blood sugar) gets higher. Very low blood sugar targets (tight control) may not be needed and can be risky. Older people may also need lower doses to avoid other side effects that can happen with low kidney function.

The risk of low blood sugar is higher for people who:

- Are older and frail, or who have dementia
- Have many medical conditions or low kidney function
- Have tight blood sugar control
- Have a history of low blood sugars or do not have symptoms when their blood sugars are low
- Are taking insulin or sulfonylurea type drugs like glyburide
- Are taking medications that can interact with antihyperglycemics, or cause low blood sugar, or mask symptoms of low blood sugar

Low blood sugar can increase risk for falls, fractures, confusion, seizures and hospitalizations.

Stopping, reducing or changing an Antihyperglycemic is not for everyone

If you are not at risk for low blood sugar, you are not having any side effects and you and your prescriber feel there is clear benefit to taking the medications, then, you do not need to make any changes.

Healthy older people may choose to stick with an A1C target less than 7% and blood sugar goals similar to their younger days in order to reduce the risk of complications.

But, people over 65 who might be at risk of low blood sugar or want to revisit their diabetes treatment goals **should talk to their health care provider** about whether deprescribing is the right choice for them.

How to safely reduce an Antihyperglycemic

First, work with your health care provider to choose appropriate blood sugar and A1C targets for your age and state of health. For example, blood sugars less than 12mmol/L and A1C less than 8.5% may be appropriate for an older, frailer person with many other medical conditions.

Together, develop a plan for medication changes. This might involve reducing a dose, changing to a safer medication or stopping a medication altogether. Such changes could occur every 1 to 2 weeks, always under the supervision of your health care provider.

Many healthcare providers can be involved in helping to decide on the best approach to changing your antihyperglycemic medications. These include doctors, nurses, pharmacists, certified diabetes educators or dieticians. They can advise on how to safely reduce doses, change medications, stop medications or make lifestyle changes that can help meet the new targets and reduce risk of low blood sugar.

Farrell B, Black C, Thompson W, McCarthy L, Rojas-Fernandez C, Lochnan H, et al. Deprescribing antihyperglycemic agents in older persons. Evidence-based clinical practice guideline. Can Fam Physician 2017;63:832-43 (Eng), e452-65 (Fr).

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What to monitor while making changes to an Antihyperglycemic

Develop a plan with your health care provider for monitoring. For example, you could check your blood sugar daily for 1-2 weeks after each change. You may need a longer time for monitoring depending on the type of medication you are taking (up to 12 weeks for some).

- Watch for signs of high blood sugar (e.g. increase in thirst, urination or fatigue).
- Watch for improvement in low blood sugar (with fewer symptoms such as sweating, fast heart rate or tremor)
- Watch for improvement in other side effects.
- Report changes to your health care provider
- Changes in the A1C blood test may not be seen for several months.

What to do if low blood sugars or drug side effects continue?

Talk to your health care provider. They can help decide what changes to make next. They may suggest eating at regular times (to reduce risk of low blood sugar). They may check your other medications to make sure none are interacting with your antihyperglycemics or causing low blood sugar on their own. They may also check to see if you recently stopped a medication that can cause high blood sugar.

What to do if blood sugars go above your individualized target?

If blood sugar readings or A1C go above the agreed upon target, your healthcare provider may decide to return to the previous dose or consider changing to a different drug with less risk of low blood sugar.

Personalized Antihyperglycemic dose reduction strategy

Blood glucose target: _____

A1C target: _____

Deprescribing strategy and monitoring plan:

_____

_____

_____

_____

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_____

This pamphlet accompanies a deprescribing guideline and algorithm that can be used by doctors, nurse practitioners, or pharmacists to guide deprescribing.

Visit
deprescribing.org
for more information.

Farrell B, Black C, Thompson W, McCarthy L, Rojas-Fernandez C, Lochnan H, et al. Deprescribing antihyperglycemic agents in older persons. Evidence-based clinical practice guideline. Can Fam Physician 2017;63:832-43 (Eng), e452-65 (Fr).

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deprescribing.org | Antihyperglycemics Deprescribing Algorithm

August 2018

Does your elderly (>65 years of age) patient with type 2 diabetes meet one or more of the following criteria:

- At risk of hypoglycemia (e.g. due to advancing age, tight glycemic control, multiple comorbidities, drug interactions, hypoglycemia history or unawareness, impaired renal function, or on sulfonylurea or insulin)
- Experiencing, or at risk of, adverse effects from antihyperglycemic
- Uncertainty of clinical benefit (due to: frailty, dementia or limited life-expectancy)

Yes → Set individualized A1C and blood glucose (BG) targets (otherwise healthy with 10+ years life expectancy, A1C < 7% appropriate; considering advancing age, frailty, comorbidities and time-to-benefit, A1C < 8.5% and BG < 12mmol/L may be acceptable; at end-of life, BG < 15mmol/L may be acceptable) (good practice recommendation)

Yes → Address potential contributors to hypoglycemia (e.g. not eating, drug interactions such as trimethoprim/sulfamethoxazole and sulfonylurea, recent cessation of drugs causing hyperglycemia – see reverse)

No → Continue Antihyperglycemic(s)

Still at risk? → **No** → Continue Antihyperglycemic(s)

Still at risk? → **Yes** → Recommend Deprescribing

Recommend Deprescribing

• Reduce dose(s) or stop agent(s)

- most likely to contribute to hypoglycemia (e.g. sulfonylurea, insulin; strong recommendation from systematic review and GRADE approach) or other adverse effects (good practice recommendation)

• Switch to an agent

- with lower risk of hypoglycemia (e.g. switch from glyburide to gliclazide or non-sulfonylurea; change NPH or mixed insulin to detemir or glargine insulin to reduce nocturnal hypoglycemia; strong recommendation from systematic review and GRADE approach)

• Reduce doses

- of renally eliminated antihyperglycemics (e.g. metformin, sitagliptin; good practice recommendation) – See guideline for recommended dosing

Monitor daily for 1-2 weeks after each change (TZD – up to 12 weeks):

- For signs of hyperglycemia (excessive thirst or urination, fatigue)
- For signs of hypoglycemia and/or resolution of adverse effects related to antihyperglycemic(s)

Increase frequency of blood glucose monitoring if needed
A1C changes may not be seen for several months

If hypoglycemia continues and/or adverse effects do not resolve:
- Reduce dose further or try another deprescribing strategy

If symptomatic hyperglycemia or blood glucose exceeds individual target:
- Return to previous dose or consider alternate drug with lower risk of hypoglycemia

Farrell B, Black C, Thompson W, McCarthy L, Rojas-Fernandez C, Lochnan H, et al. Deprescribing antihyperglycemic agents in older persons. Evidence-based clinical practice guideline. Can Fam Physician 2017;63:832-43 (Eng), e452-65 (Fr).

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Antihyperglycemics and Hypoglycemia Risk

Drug	Causes hypoglycemia?
Alpha-glucosidase inhibitor	No
Dipeptidyl peptidase-4 (DPP-4) inhibitors	No
Glucagon-like peptide-1 (GLP-1) agonists	No
Insulin	Yes (highest risk with regular insulin and NPH insulin)
Meglitinides	Yes (low risk)
Metformin	No
Sodium-glucose linked transporter 2 (SGLT2) inhibitors	No
Sulfonylureas	Yes (highest risk with glyburide and lower risk with gliclazide)
Thiazolidinediones (TZDs)	No

Drugs affecting glycemic control

- Drugs reported to cause hyperglycemia (when these drugs stopped, can result in hypoglycemia from antihyperglycemic drugs) e.g. quinolones (especially gatifloxacin), beta-blockers (except carvedilol), thiazides, atypical antipsychotics (especially olanzapine and clozapine), corticosteroids, calcineurin inhibitors (such as cyclosprine, sirolimus, tacrolimus), protease inhibitors
- Drugs that interact with antihyperglycemics (e.g. trimethoprim/sulfamethoxazole with sulfonylureas)
- Drugs reported to cause hypoglycemia (e.g. alcohol, MAOIs, salicylates, quinolones, quinine, beta-blockers, ACEIs, pentamidine)

Engaging patients and caregivers

- Some older adults prefer less intensive therapy, especially if burdensome or increases risk of hypoglycemia
- Patients and/or caregivers may be more likely to engage in discussion about changing targets or considering deprescribing if they understand the rationale:
  - Risks of hypoglycemia and other side effects
  - Risks of tight glucose control (no benefit and possible harm with A1C < 6%)
  - Time to benefit of tight glucose control
  - Reduced certainty about benefit of treatment with frailty, dementia or at end-of-life
- Goals of care: avoid hyperglycemic symptoms (thirst, dehydration, frequency, falls, fatigue, renal insufficiency) and prevent complications (5-10 years of treatment needed)
- Many countries agree on less aggressive treatment of diabetes in older persons
- Reviewing options for deprescribing, as well as the planned process for monitoring and thresholds for returning to previous doses will help engage patients and caregivers

Hypoglycemia information for patients and caregivers

- Older frail adults are at higher risk of hypoglycemia
- There is a greater risk of hypoglycemia with tight control
- Symptoms of hypoglycemia include: sweating, tachycardia, tremor BUT older patients may not typically have these
- Cognitive or physical impairments may limit older patient's ability to respond to hypoglycemia symptoms
- Some drugs can mask the symptoms of hypoglycemia (e.g. beta blockers)
- Harms of hypoglycemia may be severe and include: impaired cognitive and physical function, falls and fractures, seizures, emergency room visits and hospitalizations

Tapering advice

- Set blood glucose & A1C targets, plus thresholds for returning to previous dose, restarting a drug or maintaining a dose
- Develop tapering plan with patient/caregiver (no evidence for one best tapering approach; can stop oral antihyperglycemics, switch drugs, or lower doses gradually e.g. changes every 1-4 weeks, to the minimum dose available prior to discontinuation, or simply deplete patient's supply)
- Doses may be increased or medication restarted any time if blood glucose persists above individual target (12-15 mmol/L) or symptomatic hyperglycemia returns

Farrell B, Black C, Thompson W, McCarthy L, Rojas-Fernandez C, Lochnan H, et al. Deprescribing antihyperglycemic agents in older persons. Evidence-based clinical practice guideline. Can Fam Physician 2017;63:832-43 (Eng), e452-65 (Fr).

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Plan

Drug to deprescribe and rationale	Plan

Case 3

Jane Brown, 82 year old female

- Stroke, Alzheimer's disease, overactive bladder
- Widow, was living in retirement home (son has POA)

- BP 123/74 mmHg, HR 70s
- Crcl = 43 mL/min
- MMSE 13/30
- Supervision for eating, uses walker, limited assist for transfers, hygiene, toileting, bathing
- ABS 6/12; physically aggressive with showers, agitation and restlessness at bedtime
- Impulsive, tries to self-transfer – 3 falls in last month

Case 3 (cont'd)

- ASA 81mg daily
- Metoprolol 25mg BID
- Amlodipine 5mg daily
- Furosemide 40mg QAM
- Tolterodine ER 4mg QHS
- Donepezil 10mg daily
- Risperidone 0.5mg QHS
- Mirtazapine 30mg QHS
- Atorvastatin 20mg daily
- Vitamin D 1000 IU daily
- Acetaminophen 500mg Q6H PRN
- Trazodone 25mg BID PRN

Which drugs would you think about deprescribing?

What would you discuss with Mrs. Brown's son?

Which drugs would you stop first?

Which drugs would you taper?
Stop abruptly?

deprescribing.org | Antipsychotic (AP) Deprescribing Algorithm

August 2018

Why is patient taking an antipsychotic?

- Psychosis, aggression, agitation (behavioural and psychological symptoms of dementia - BPSD) treated ≥ 3 months (symptoms controlled, or no response to therapy).
- Primary insomnia treated for any duration or secondary insomnia where underlying comorbidities are managed
- Schizophrenia
- Schizo-affective disorder
- Bipolar disorder
- Acute delirium
- Tourette's syndrome
- Tic disorders
- Autism
- Less than 3 months duration of psychosis in dementia
- Intellectual disability
- Developmental delay
- Obsessive-compulsive disorder
- Alcoholism
- Cocaine abuse
- Parkinson's disease psychosis
- Adjunct for treatment of Major Depressive Disorder

Recommend Deprescribing

Strong Recommendation (from Systematic Review and GRADE approach)

Taper and stop AP (slowly in collaboration with patient and/or caregiver; e.g. 25%-50% dose reduction every 1–2 weeks)

Stop AP

Good practice recommendation

Continue AP

or consult psychiatrist if considering deprescribing

Monitor every 1-2 weeks for duration of tapering

Expected benefits:

- May improve alertness, gait, reduce falls, or extrapyramidal symptoms

Adverse drug withdrawal events (closer monitoring for those with more severe baseline symptoms):

- Psychosis, aggression, agitation, delusions, hallucinations

If BPSD relapses:

Consider:

- Non-drug approaches (e.g. music therapy, behavioural management strategies)

Restart AP drug:

- Restart AP at lowest dose possible if resurgence of BPSD with re-trial of deprescribing in 3 months
- At least 2 attempts to stop should be made

Alternate drugs:

- Consider change to risperidone, olanzapine, or aripiprazole

If insomnia relapses:

Consider

- Minimize use of substances that worsen insomnia (e.g. caffeine, alcohol)
- Non-drug behavioural approaches (see reverse)

Alternate drugs

- Other medications have been used to manage insomnia. Assessment of their safety and effectiveness is beyond the scope of this deprescribing algorithm. See AP deprescribing guideline for details.

Bjerre LM, Farrell B, Hogel M, Graham L, Lemay G, McCarthy L, et al. Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia: Evidence-based clinical practice guideline. Can Fam Physician 2018;64:17-27 (Eng), e1-e12 (Fr).

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deprescribing.org | Antipsychotic (AP) Deprescribing Notes

August 2018

Commonly Prescribed Antipsychotics

Antipsychotic	Form	Strength
Chlorpromazine	T IM, IV	25, 50, 100 mg l25 mg/mL
Haloperidol (Haldol®)	T L IR, IM, IV LA IM	0.5, 1, 2, 5, 10, 20 mg 2 mg/mL 5 mg/mL 50, 100 mg/mL
Loxapine (Xylac®, Loxapac®)	T L IM	2.5, 5, 10, 25, 50 mg 25 mg/L 25, 50 mg/mL
Aripiprazole (Abilify®)	T IM	2, 5, 10, 15, 20, 30 mg 300, 400 mg
Clozapine (Clozaril®)	T	25, 100 mg
Olanzapine (Zyprexa®)	T D IM	2.5, 5, 7.5, 10, 15, 20 mg 5, 10, 15, 20 mg 10mg per vial
Paliperidone (Invega®)	ER T PR IM	3, 6, 9 mg 50mg/0.5mL, 75mg/0.75mL, 100mg/1mL, 150mg/1.5mL
Quetiapine (Seroquel®)	IR T ER T	25, 100, 200, 300 mg 50, 150, 200, 300, 400 mg
Risperidone (Risperdal®)	T S D PR IM	0.25, 0.5, 1, 2, 3, 4 mg 1 mg/mL 0.5, 1, 2, 3, 4 mg 12.5, 25, 37.5, 50 mg

IM = intramuscular, IV = intravenous, L = liquid, S = suppository, SL = sublingual, T = tablet, D = disintegrating tablet, ER = extended release, IR = immediate release, LA = long-acting, PR = prolonged release

Antipsychotic side effects

- **APs associated with increased risk of:**
  - Metabolic disturbances, weight gain, dry mouth, dizziness
  - Somnolence, drowsiness, injury or falls, hip fractures, EPS, abnormal gait, urinary tract infections, cardiovascular adverse events, death
- **Risk factors**: higher dose, older age, Parkinsons', Lewy Body Dementia

Engaging patients and caregivers

Patients and caregivers should understand:

- The rationale for deprescribing (risk of side effects of continued AP use)
- Withdrawal symptoms, including BPSD symptom relapse, may occur
- They are part of the tapering plan, and can control tapering rate and duration

Tapering doses

- No evidence that one tapering approach is better than another
- Consider:
  - Reduce to 75%, 50%, 25% of original dose on a weekly or bi-weekly basis and then stop; **or**
- Consider slower tapering and frequent monitoring in those with severe baseline BPSD
- Tapering may not be needed if low dose for insomnia only

Sleep management

Primary care:

1. Go to bed only when sleepy
2. Do not use your bed or bedroom for anything but sleep (or intimacy)
3. If you do not fall asleep within about 20-30 min at the beginning of the night or after an awakening, exit the bedroom
4. If you do not fall asleep within 20-30 min on returning to bed, repeat #3
5. Use your alarm to awaken at the same time every morning
6. Do not nap
7. Avoid caffeine after noon
8. Avoid exercise, nicotine, alcohol, and big meals within 2 hrs of bedtime

Institutional care:

1. Pull up curtains during the day to obtain bright light exposure
2. Keep alarm noises to a minimum
3. Increase daytime activity and discourage daytime sleeping
4. Reduce number of naps (no more than 30 mins and no naps after 2pm)
5. Offer warm decaf drink, warm milk at night
6. Restrict food, caffeine, smoking before bedtime
7. Have the resident toilet before going to bed
8. Encourage regular bedtime and rising times
9. Avoid waking at night to provide direct care
10. Offer backrub, gentle massage

BPSD management

- Consider interventions such as: relaxation, social contact, sensory (music or aroma-therapy), structured activities and behavioural therapy
- Address physical and other disease factors: e.g. pain, infection, constipation, depression
- Consider environment: e.g. light, noise
- Review medications that might be worsening symptoms

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deprescribing.org | Is an Antipsychotic still needed?

August 2018

What are antipsychotics?

Antipsychotics are a class of drugs used to treat behavioural and psychological symptoms of dementia (BPSD), such as hallucinations, aggression and agitation. They are also used to treat psychiatric conditions such as bipolar disorder and schizophrenia. More recently, they have started to be used to treat insomnia.

There are many different types of antipsychotic drugs:

- Chlorpromazine
- Haloperidol (Haldol®)
- Loxapine (Xylac®, Loxapac®)
- Aripiprazole (Abilify®)
- Clozapine (Clozaril®)
- Olanzapine (Zyprexa®)
- Paliperidone (Invega®)
- Quetiapine (Seroquel®)
- Risperidone (Risperdal®)

Why use less of, stop, or change antipsychotics?

Antipsychotics can cause dry mouth, dizziness, balance problems, spasms, tremors, jerky movements, falls, and fatigue. They may increase the risk of bladder infections, weight gain, diabetes, heart attacks, strokes and death. The chance of side effects may be higher the longer the antipsychotic is used and as people get older.

People need to weigh the benefits of continuing the antipsychotic with the risks of these side effects.

Reducing or stopping antipsychotics once BPSD has been treated for more than three months and symptoms are under control, or there has been no response to therapy, has been shown to be feasible and safe. There is little evidence that antipsychotics are useful or safe for insomnia.

Therefore, because antipsychotics can cause side effects, it is reasonable to try and reduce the dose or stop taking them if BPSD symptoms are under control, or if antipsychotics are prescribed for insomnia.

Stopping an antipsychotic is not for everyone

Some patients need to continue taking their antipsychotic drug for a very specific reason. Never reduce or stop an antipsychotic without your doctor's advice.

People who may need to continue an antipsychotic include those with any of the following:

- Schizophrenia
- Schizo-affective disorder
- Bipolar disorder
- Acute delirium
- Tourette's syndrome
- Tic disorders
- Autism
- Less than 3 months duration of psychosis in dementia
- Intellectual disability
- Developmental delay
- Obsessive-compulsive disorder
- Alcoholism
- Cocaine abuse
- Parkinson's disease psychosis
- Adjunct for treatment of Major Depressive disorder

How to safely reduce an antipsychotic

People who have been taking an antipsychotic for BPSD for at least 3 months, or people who have been taking an antipsychotic for insomnia, should talk to their health care provider about whether stopping the antipsychotic is the right choice for them.

Doctors, nurse practitioners or pharmacists can help to decide on the best approach to using less of an antipsychotic. They can advise on how to reduce the dose, change medications, or whether to stop it altogether. They can also give advice on how to use non-drug approaches that can help manage BPSD symptoms or insomnia.

For BPSD symptoms, slowly reducing the dose of an antipsychotic over several weeks is recommended. This allows health care providers to carefully monitor for any return of symptoms. If used in low doses for insomnia, antipsychotics can be stopped completely without first reducing the dose.

Bjerre LM, Farrell B, Hogel M, Graham L, Lemay G, McCarthy L, et al. Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia: Evidence-based clinical practice guideline. Can Fam Physician 2018;64:17-27 (Eng), e1-e12 (Fr).

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What to monitor while reducing an antipsychotic

If used for BPSD, it's important to check for, and report signs of psychosis, aggression, agitation, delusions, and hallucinations.

If used for insomnia, there is no usual withdrawal reaction. Some people may feel less sedated and need help with sleeping strategies.

Reducing or stopping antipsychotics may improve alertness, movement or balance problems and lead to fewer falls. It may also lessen spasms, tremors, and jerky movements.

What to do if BPSD symptoms return

Consider non-drug approaches:

- Ask about relaxation therapy, more social contact and structured activities, music therapy, aromatherapy, or behavioral therapy
- Treat problems like pain, infection, constipation or depression that can cause or worsen BPSD
- Reduce environmental triggers like too much light or noise
- Ask your health care provider to review medications to see if any are worsening BPSD symptoms

If non-drug approaches are not effective to manage returning BPSD symptoms, some patients may need to have their antipsychotic restarted at the lowest effective dose or switched to a different drug. Another trial of deprescribing can be attempted in 3 months if symptoms are stable. At least 2 attempts to deprescribe antipsychotics should be made.

What to do if insomnia continues

Talk to a health care provider about treating underlying conditions that are affecting sleep. Avoid using other medications to treat insomnia. Most sedatives contribute to sedation and increase risk of falls. Ask about "cognitive behavioural therapy" – an educational approach that has been shown to treat insomnia successfully. Check out this resource for more information: http://sleepwellns.ca/

Consider these practical strategies for improving sleep behaviour:

For a person who lives in the community:

- Go to bed only when sleepy
- Do not use bed or bedroom for anything but sleep (or intimacy)
- If not asleep within 20-30 min on going/returning to bed, exit the bedroom
- Use alarm to awaken at the same time every morning
- Do not nap
- Avoid caffeine after noon
- Avoid exercise nicotine, alcohol, and big meals 2 hours before bedtime

For a person who lives in long-term care or hospital:

- Pull up curtains during the day for light exposure
- Keep alarm noises to a minimum
- Increase daytime activity
- Reduce the number of naps (no more than 30 min and no naps after 2 pm)
- Use toilet before going to bed
- Have regular bedtime and rising times
- Avoid waking at night for direct care
- Try backrubs, or gentle massages

Personalized antipsychotic dose reduction strategy

_____

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This pamphlet accompanies a deprescribing guideline and algorithm that can be used by doctors, nurse practitioners, or pharmacists to guide deprescribing.

Visit
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for more information.

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DEPRESCRIBING: REDUCING MEDICATIONS SAFELY TO MEET LIFE'S CHANGES

deprescribing.org

FOCUS ON ANTIPSYCHOTICS

As life changes, your medication needs may change as well. Medications that were once good for you, may not be the best choice for you now.

Deprescribing is a way for health care providers to help you safely cut back on medications.

WHAT ARE ANTIPSYCHOTICS?

- Drugs used to treat problems like behavioural and psychological symptoms of dementia (BPSD), difficulty sleeping or psychiatric conditions like bipolar disorder and schizophrenia
- Examples include:
  - Chlorpromazine
  - Haloperidol (Haldol®)
  - Loxapine (Xylac®, Loxapac®)
  - Aripiprazole (Abilify®)
  - Clozapine (Clozaril®)
  - Olanzapine (Zyprexa®)
  - Paliperidone (Invega®)
  - Quetiapine (Seroquel®)
  - Risperidone (Risperdal®)

WHY CONSIDER REDUCING OR STOPPING AN ANTIPSYCHOTIC BEING USED FOR BPSD OR INSOMNIA?

- Antipsychotics can cause balance problems, falls, spasms, tremors, jerky movements, fatigue and dry mouth
- There is little evidence that antipsychotics are useful or safe for insomnia
- Some taking antipsychotics for BPSD could take them for short periods but remain on them for years
- The risk of harm is higher with longer antipsychotic use, and in older people

HOW TO SAFELY REDUCE OR STOP AN ANTIPSYCHOTIC

- Ask your health care provider to find out if deprescribing is for you; never reduce or stop an antipsychotic on your own
- Tell your health care provider about the antipsychotic deprescribing algorithm, available online: http://deprescribing.org/resources/deprescribing-guidelines-algorithms/
- Download the antipsychotic patient information pamphlet, available online: http://deprescribing.org/resources/deprescribing-information-pamphlets/

Bjerre LM, Farrell B, Hogel M, Graham L, Lemay G, McCarthy L, et al. Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia: Evidence-based clinical practice guideline. Can Fam Physician 2018;64:17-27 (Eng), e1-e12 (Fr).

Ask questions, stay informed and be proactive.

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Plan

Drug to deprescribe and rationale	Plan

Case 4

- 77 yr old woman living in a retirement home; on LTC waiting list
- Wheelchair bound; referred to GDH re: falls, pain, constipation, cognition and polypharmacy
- PMH: CVD, CAD, hypertension, dementia, fibromyalgia, myositis, bipolar disorder, arthritis, remote duodenal ulcer, hypothyroidism
- Requiring daily assistance with washing and dressing

Medication, dosage	Reason for use, if known
Quinapril 40 mg/d	CAD/hypertension
Amlodipine 5 mg/d	CAD/hypertension
Diltiazem ER 360 mg/d	CAD/hypertension/angina
Acebutolol 200 mg twice daily	CAD/hypertension/angina
Nitroglycerin patch 0.6 mg/h at bedtime	CAD/angina
Nitroglycerin spray 0.4 mg/spray as needed	CAD/angina
Furosemide 40 mg/d	Edema
Dipyridamole/ASA 200/25 mg twice daily	Stroke in 2008
Rosuvastatin 20 mg twice daily	Stroke in 2008
Levothyroxine 0.088 mg/d	Thyroid ablation
Tiotropium 18 μg/d	Unclear if COPD or asthma
Salbutamol 100 μg/puff, 2 puffs four times daily if needed	Unclear
Galantamine ER 16 mg/d	Dementia
Morphine 10 mg at bedtime	Pain (fibromyalgia)
Acetaminophen 650 mg every 4–6 h as needed	Pain (fibromyalgia)
Cyclobenzaprine 5 mg three times daily	Pain (fibromyalgia)
Glucosamine 500 mg twice daily	Pain (type of arthritis unclear)
Amitriptyline 75 mg at bedtime	Insomnia
Oxazepam 15 mg at bedtime	Insomnia
Lactulose 15 mL/d as needed	Constipation
Magnesium hydroxide 311 mg, 1–2 tablets at bedtime	Constipation
Fibre in water	Constipation
Bisacodyl, 2 pills as needed	Constipation
Suppository?	Constipation
Cranberry 500 mg three times daily	Bladder
Carbamazepine 200 mg twice daily	Post-stroke seizure prophylaxis
Omeprazole 20 mg/d	History of duodenal ulcer
Levofloxacin 250 mg/d	Urinary tract infection

Note: ASA = acetylsalicylic acid, CAD = coronary artery disease, COPD = chronic obstructive pulmonary disease, ER = extended release.

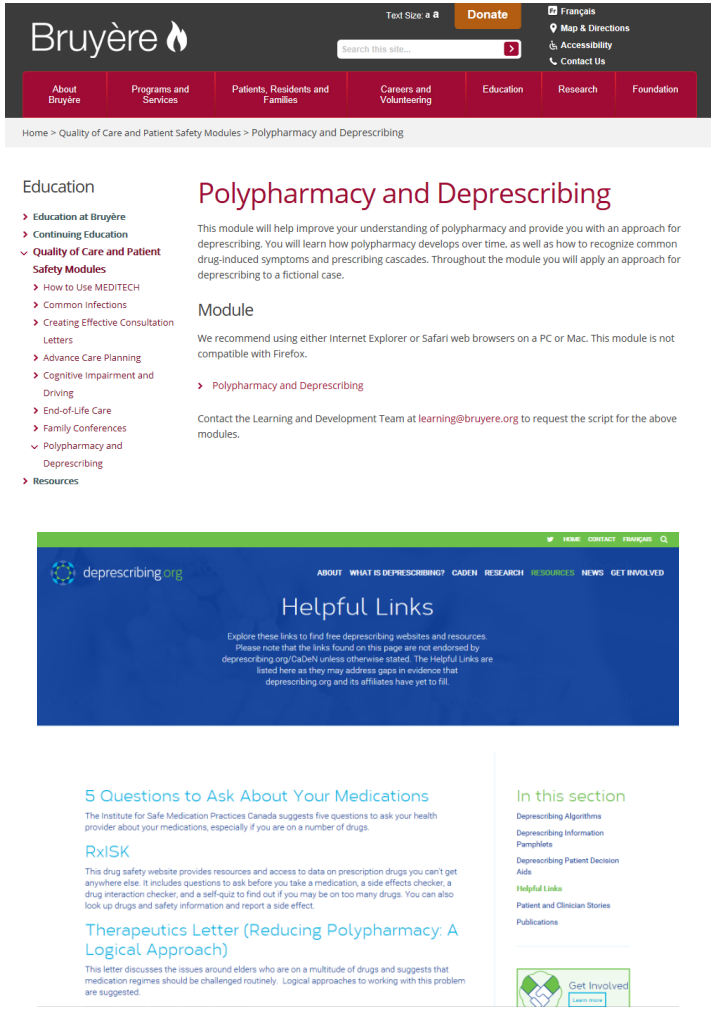
Barbara Farrell et al. CMAJ 2013;185:1240-1245

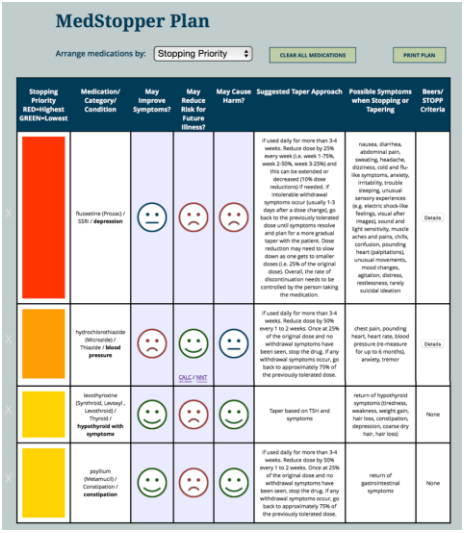
Plan

Drug to deprescribe and rationale	Plan

Drugs worth keeping and starting

Resources: deprescribing and monitoring





Conversational ideas for shared decision-making

- Introducing choice (creating awareness)
  - Several drugs could be *contributing to problems with falls*
  - I'd like to tell you about options to reduce risks from these drugs
- Discussing options and benefits/risks
  - What do you already know about drugs that *might cause falls*?
  - It's possible that your (x, y, z) can all be *contributing to falls risk*
  - We can reduce the dose or stop one or more of these drugs
  - *If we reduce the dose or stop your sleeping pill(s), there is a risk you might have trouble sleeping for a few nights and we'll need to focus on how you can get a good night's sleep without a drug. On the plus side, if the sleeping pill is reduced or stopped, benefits are that you may be less tired in the morning and have fewer falls*

Conversational ideas for shared decision-making

- Help explore options
  - From your point of view, what matters most to you? How do you feel about these options? Is this something you'd consider?
- Help make decisions
  - Are you ready to decide? Do you need more time?
  - Would you like to try the 'pause and monitor' approach (where we temporarily stop the drug, monitor carefully and restart if needed)?

General tapering advice (http://www.rxfiles.ca/rxfiles/)

How much to reduce dose by at the initial step of tapering	When to consider tapering by the corresponding amount (specified at left)
100% (abruptly)	Drug-induced toxicity
50%	Not very concerned about withdrawal; individual is relatively healthy, vibrant
25%	Somewhat concerned about withdrawal; individual has multiple comorbidities but is not yet very frail
5-10%	Concerned about withdrawal; individual is ill or frail
How quickly to taper?	
Reduce every 1-2 weeks as tolerated for most medications. Time required to complete tapering: • Fast: 2-4 weeks • Slow: 3-6 months • Very slow: 1-2 years (e.g. benzodiazepines, very long-term opioids)	

Specific classes (http://www.rxfiles.ca/rxfiles/)

Drug class	Deprescribing and monitoring advice
Anticholinergics	▪ Reduce dose every 3 days to stop over 1-2 weeks ▪ Manage cholinergic rebound (nausea, vomiting, sweating, urination, diarrhea, tachycardia) with ginger or benztropine ▪ Manage dystonia with benztropine, akathisia with propranolol
Antidepressants	▪ Bupropion and mirtazapine may be stopped abruptly; some people may have w/d in 1-7 days, disappearing in 3 weeks ▪ SNRIs commonly have w/d symptoms within 24 hours lasting 1-3 weeks; varying tapering approaches suggested (e.g. over 2-6 weeks, possibly longer) ▪ SSRIs commonly have w/d symptoms in 1-3 days, lasting 1-3 weeks (fluoxetine longer but less likely); taper over 4 weeks, 25% weekly

Specific classes (http://www.rxfiles.ca/rxfiles/)

Drug class	Deprescribing and monitoring advice
Antipsychotics	• w/d symptoms most likely with chlorpromazine, clozapine, methotrimeprazine, olanzapine (mild symptoms need reassurance, if severe, increase dose or restart); usually resolve in 1 week (cholinergic rebound) • Taper over 1-3 weeks (slower if high dose or long-term)
BZRA	• w/d symptoms in 1-3 days (short half-life), within a week (long half-life), usually after >50% dose reduction (worse with short half-life, high dose, long duration); original anxiety symptoms may be more intense
Trazodone	• w/d most likely to occur in 1-2 days, resolving in 3 weeks; taper gradually over a few days
Tricyclic antidepressants	• Low doses do not need tapering • w/d most likely in 2-4 days (most likely with clomipramine) – cholinergic rebound; reduce by 10-25% over several months

Summary

Deprescribing steps	Prescriper steps	Resident/care team/SDM steps
1. Compile a medication history *(of medication experience)* 2. Identify potentially inappropriate medications, those with less evidence for benefit or those with harm 3. Assess each medication for eligibility for deprescribing 4. Prioritize medications for deprescribing 5. Develop a plan for tapering and monitoring 6. Monitor, support and document care	1. Create awareness that options for deprescribing exist 2. Discuss options and potential benefits/harms 3. Explore preferences for different options 4. Make the decision	1. Provide information about experience with medication 2. Ask and seek information about options (e.g. reducing or stopping medication, alternatives to medication or safer medications, rate of tapering) 3. Think about and describe your goals and preferences with regard to treatment and deprescribing 4. Contribute your input to the decision being made 5. If you disagree with a suggestion, explain why 6. Re-evaluate the decision afterward

What are some of our challenges in deprescribing for our LTC residents?

Summary

- Polypharmacy has serious outcomes
- Weigh benefits and risks of each drug guided by resident's goals
- A standardized approach can help
- Some drugs are more appropriate than others: Prioritize!
- Many deprescribing tools are available

Useful websites

- **Bruyère Deprescribing Guidelines Research**
  Website: www.deprescribing.org
  Polypharmacy/deprescribing module:
  https://www.bruyere.org/en/polypharmacy-deprescribing

- **Canadian Deprescribing Network**
  Website: www.deprescribingnetwork.ca

- **Choosing Wisely Canada**
  Website: www.choosingwiselycanada.org

- **Institute of Safe Medication Practices Canada**
  Website: www.ismp-canada.org

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- Icons courtesy of **Noun Project** (www.nounproject.com) : Aldric Rodriguez Iborra, Rediffusion, Juan Pablo Bravo, Creative Stall, Dominik Minet, misirlou, Yu Luck, Oliviu Stoian, richard pasqua, veronika karenina, Anisha Varghese, Venkatesh Aiyulu, Luis Prado, Julien Deveaux, PFT, Philip Hogeboom, fernfriedel

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