Considerations for Medication Management in Older Adults with Multi-morbidity

Presenters:

Dr. Rae Petrucha
Julia Bareham

October 15, 2019

Speaker Bios

Rae Petrucha

- Family physician at West Winds Primary Health Centre
- Academic teaching unit at West Winds - Care of the Elderly; focus on providing optimal care in the community setting (Long Term Care & Personal Care Homes)

UNIVERSITY OF SASKATCHEWAN

Julia Bareham

- Pharmacist with RxFiles Academic Detailing
- RxFiles - primarily related to medication use in older adults
- Community pharmacy; MSc - comprehensive medication management

Presenter Disclosure

Relationships with financial sponsors:

- Rae Petrucha – contracted with West Winds Primary Health Centre (CoM)
- Julia Bareham – employee of RxFiles Academic Detailing (U of S) & Shoppers Drug Mart; Drug and Therapeutic Advisory Committee for Non-Insured Health Benefits – Indigenous Services Canada

Speakers have received no additional financial support for the preparation or delivery of the presentation

- Rae Petrucha has no conflicts of interest to declare
- Julia Bareham – conflict/bias: works for RxFiles - sells a product that will be discussed during the presentation

What is RxFiles?

Academic detailing program providing objective, comparative drug information to clinicians.

www.rxfiles.ca

julia@rxfiles.ca

@GeriRxfiles

Learning Objectives

Identify considerations & approaches that may be used when prescribing to older adults

Discuss methods to prioritize & optimize medication use in the presence of polypharmacy & multimorbidity in older adults in the primary care setting

Apply the principles of geriatric prescribing as it relates to sedatives, antihypertensives and anticholinergics to patient cases

Drug Therapy in Older Adults

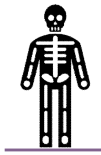
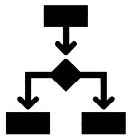
- Definition of “Older Adult”
- Consider overall frailty & physiological age more prominently than chronological age when applying geriatric models to care
- Few RCTs include individuals >80, especially for those with multiple comorbidities
- Individualization of approach, clinical judgement & special consideration for principles of geriatric care are critical!

Prescribing Considerations for Older Adults

Special Considerations in Geriatrics –

What to consider when there is no/limited evidence when it comes to decision making

- Older adults can be challenging & time consuming to adequately assess & treat due to multimorbidity, polypharmacy, provider time constraints, etc.
- They are complex!
- Making the decision to prescribe or not prescribe takes time.
  - Navigate those discussions/decisions
- Consider more frequent visits and discuss one issue at a time

	Physiological Changes
	Polypharmacy & Co-morbidities
	Limited Life Expectancy & Time-to-Benefit
	Quality of Life Considerations
	Personal Values & Shared Decision Making
	Challenges related to regular medication use
	Cost of medications/interventions

Tips:

- Look/think beyond the clinical interaction at the moment or the Rx → need a wholistic approach.
- Consider the social aspect!
  - Cognitive decline with lack of social engagement

Assessing Medications: Harm vs Benefit

- START/STOPP Criteria (complemented by the START Criteria)

Section A: Indication of medication

1. Any drug prescribed without an evidence-based clinical indication.
2. Any drug prescribed beyond the recommended duration, where treatment duration is well defined.
3. Any duplicate drug class prescription e.g. two concurrent NSAIDs, SSRIs, loop diuretics, ACE inhibitors, anticoagulants (optimisation of monotherapy within a single drug class should be observed prior to considering a new agent).

Section B: Cardiovascular System

1. Digoxin for heart failure with normal systolic ventricular function (no clear evidence of benefit).
2. Verapamil or diltiazem with NYHA Class III or IV heart failure (may worsen heart failure).

Patient Snapshot – 68 yr old Martha

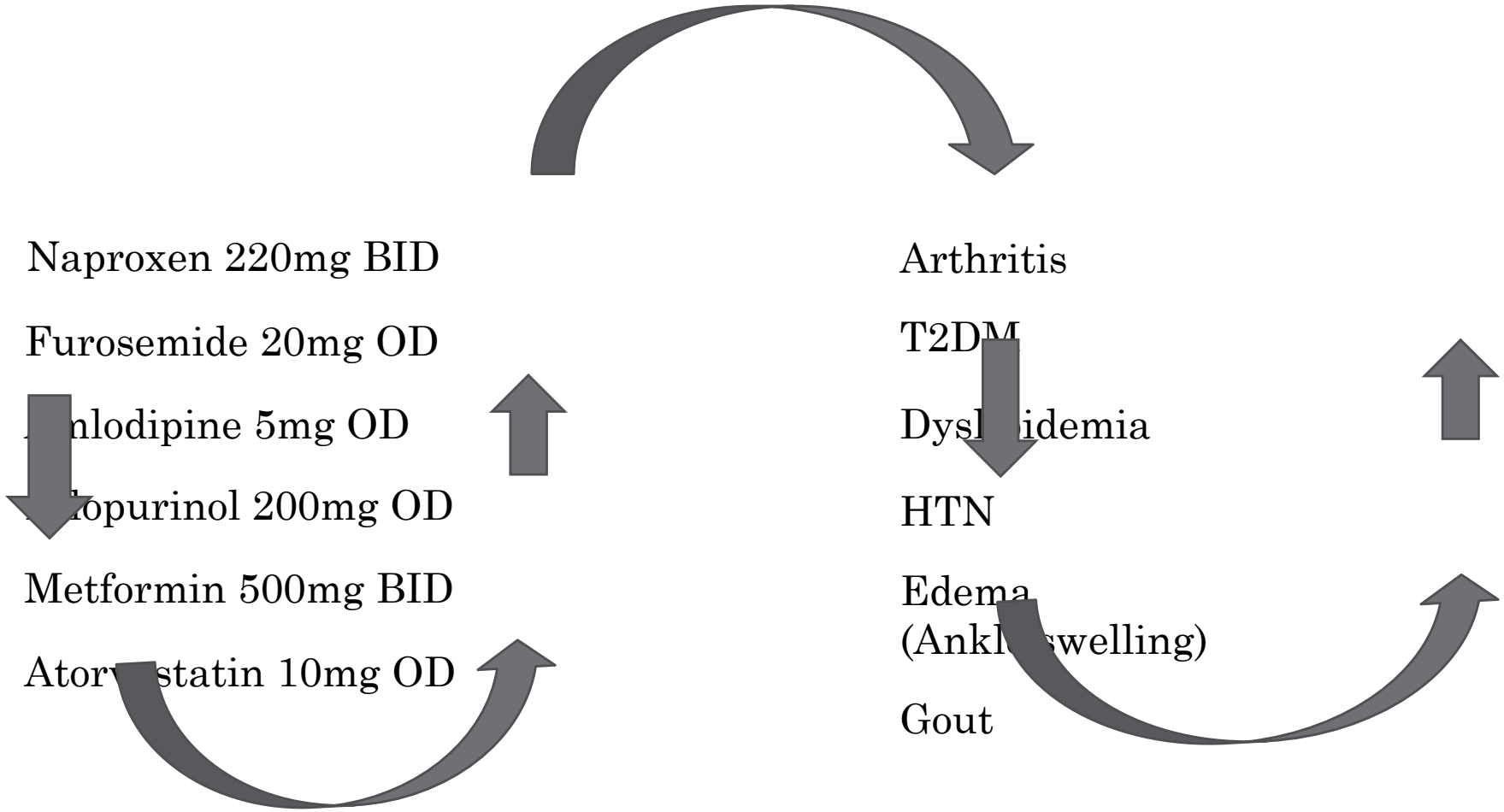
- Naproxen 220mg BID
- Furosemide 20mg OD
- Amlodipine 5mg OD
- Allopurinol 200mg OD
- Metformin 500mg BID
- Atorvastatin 10mg OD

- Arthritis
- T2DM
- Dyslipidemia
- HTN
- Edema (Ankle swelling)
- Gout

Prescribing Cascades

Definition:

The prescribing of a new medication to treat symptoms that have arisen from an unrecognized adverse drug event related to an existing therapy.


Naproxen 220mg BID
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Amlodipine 5mg OD
Allopurinol 200mg OD
Metformin 500mg BID
Atorvastatin 10mg OD
Arthritis
T2DM
Dyslipidemia
HTN
Edema (Ankle swelling)
Gout

Medications Commonly Involved in Prescribing Cascades

- ANTIBIOTICS
- ANTIEPILEPTICS
- ANTIHYPERTENSIVES
  - ACEIS
  - βBS
  - CCBS
  - DIURETICS
- ANTIPSYCHOTICS
- ACETYLCHOLINESTERASE INHIBITORS
- DIGOXIN
- METOCLOPRAMIDE
- NITRATES
- NSAIDS
- OPIOIDS
- PAROXETINE
- SEDATIVES

ANTICHOLINERGICS?

Preventing the Prescribing Cascade

Assume every new symptom is due to a drug until proven otherwise.

Look for opportunities to deprescribe!

Preventing the Prescribing Cascade

Start low, go slow.

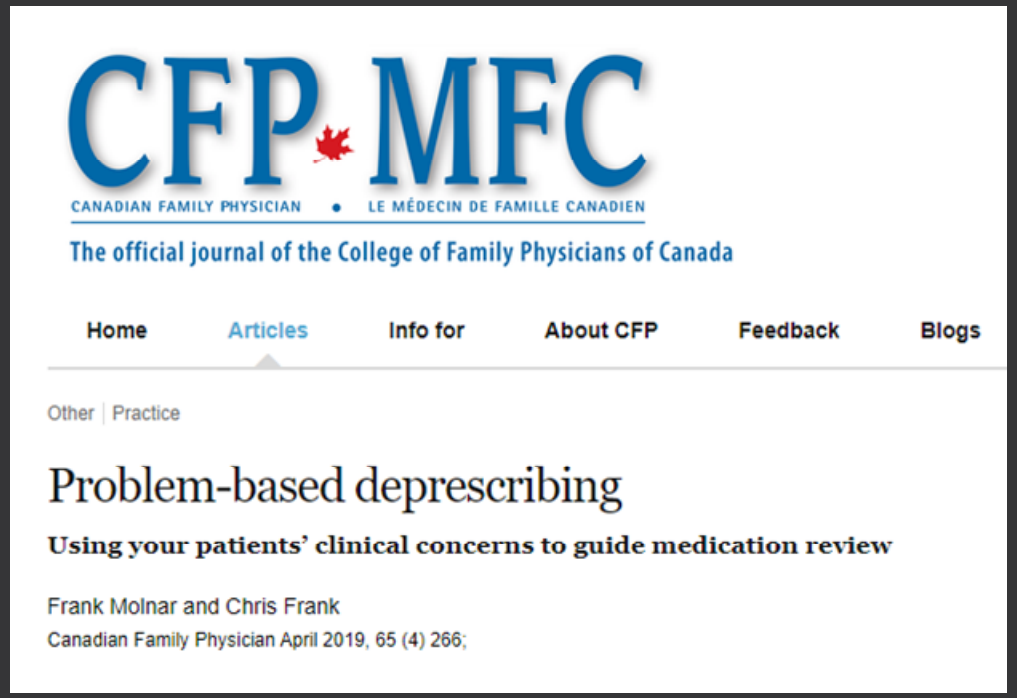
Did the symptoms started after a new medication was initiated/ dose change

Pt education

Document clearly when & why a medication is stopped or started

Encourage patients/residents to keep an up-to-date list of meds

Always consider potential drug-drug or drug-disease interactions when starting new meds.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Problem-based deprescribing
Using your patients' clinical concerns to guide medication review
Frank Molnar and Chris Frank
Canadian Family Physician April 2019, 65 (4) 266;


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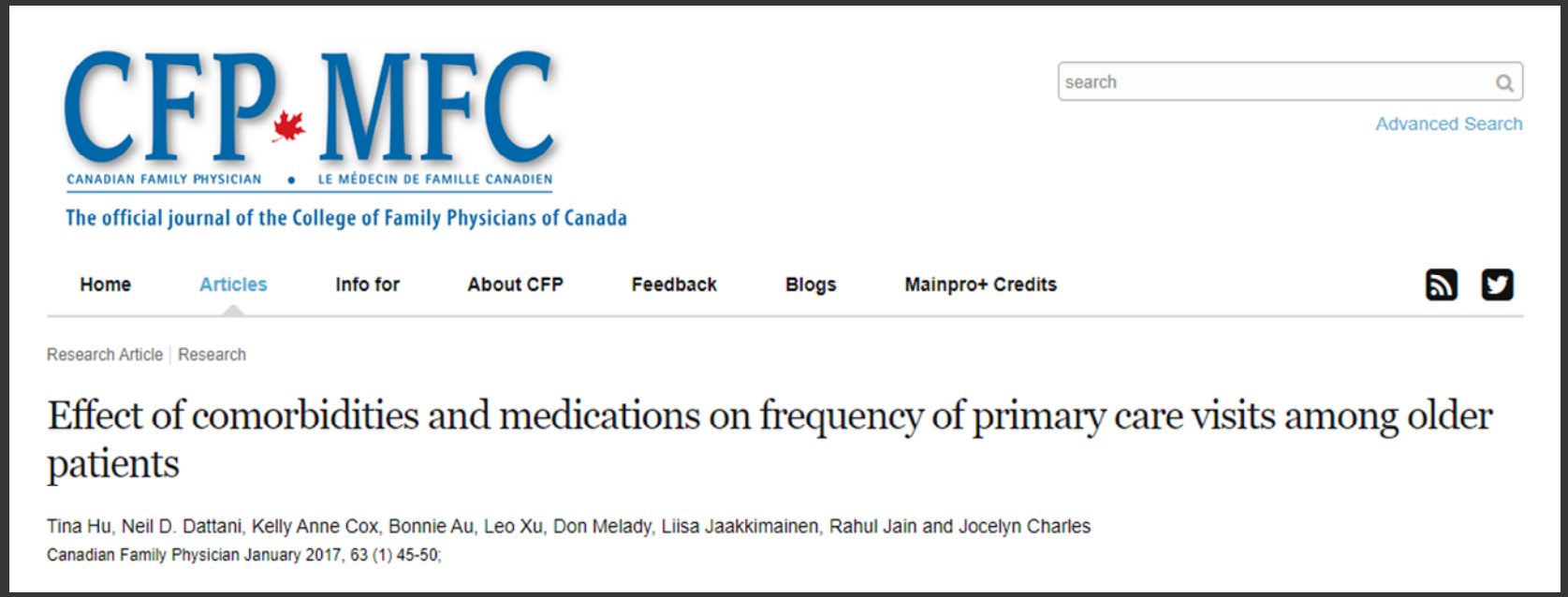
Choosing wisely
Avoiding too much medicine
Bartosz Hudzik, Michal Hudzik and Lech Polonski
Canadian Family Physician October 2014, 60 (10) 873-876;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Effect of comorbidities and medications on frequency of primary care visits among older patients
Tina Hu, Neil D. Dattani, Kelly Anne Cox, Bonnie Au, Leo Xu, Don Melady, Liisa Jaakkimainen, Rahul Jain and Jocelyn Charles
Canadian Family Physician January 2017, 63 (1) 45-50;

Considerations for Deprescribing

What is deprescribing?

- The process of withdrawing medications in an attempt to improve patient outcomes. Deprescribing should be considered during every regular review of a patient. It is particularly important among older people in whom multimorbidity and polypharmacy are common.

What are the risks of deprescribing?

- Withdrawal reactions
  - e.g. GI symptoms & insomnia when stopping SSRIs
- Rebound phenomena
  - e.g. tachycardia when stopping beta-blocker
  - Does it need to be tapered? See the Geri-RxFiles!
- Reappearance of symptoms
  - e.g. pain when NSAID/opioid stopped

Practical Tips/Ideas

A) A good medication review is essential!!!

B) Deprescribe.

C) One medication change at a time.

D) Explain the rationale for the medication change.

E) Plan to assess after medication changes are made whether the target symptom (or parameter) got better or worse.

F) Be watchful for unmasked drug interactions.

G) Start medications that are missing & will be of benefit.

H) Use a team approach. Communicate. Make use of each team members' unique skill set.

Question….

Tomorrow, after watching this presentation, when you're in clinic and you have a routine visit with a 75 year old patient who is there to see you for her prescription renewal. What would be a good 'first step' to ensure you've touched on the foundational steps for optimizing care for this patient?

A) Ensure your patient is taking the appropriate medications doses for her age, health status, etc. and renew the prescription. Have the patient rebook for follow-up the following week.

B) Take the opportunity to ask about her spouse who is not present at today's visit, but usually attends, and is also a patient of yours. He appeared frailer at your last appointment.

C) Discuss goals of therapy and explore shared-decision making.

D) Refer your patient to geriatric assessment for a full assessment.

Patient Case #1 - Sedatives

- 83 year old female - “Elsa”
- new to your practice
- oxazepam 10mg PO QHS x ~30 yrs
- too tired to manage all of the routine household chores that she is accustomed to doing independently, and that she derives great satisfaction in completing
- dosing off if she is sitting quietly doing an activity (watching TV, knitting) throughout the day
- no difficulty with initiating sleep or with waking throughout the night

Shared-Decision Making & Educating Patients About the Risks vs Benefits

What are the potential harms of benzodiazepines in older adults?

Potential Harms & Benefits of BZDs

Harms of sedative hypnotics (BZD & non-BZD)	Benefits
• Risk of rebound insomnia • Development of tolerance, dependence & withdrawal reactions • Residual daytime sedation • Risk of falls, fractures & cognitive impairment • Risk of accidents (e.g. MVAs)	Improve **short-term** (up to 6 weeks) sleep outcomes modestly: • ↓ sleep onset by 10 to 20 minutes • ↑ total sleep time by ~30 minutes • ↓ # of awakening by ~ 0.6

Treating 13 patients with a sedative hypnotic (BZD or Z-drug) for insomnia will improve sleep quality in 1 patient but 2 patients will likely experience with adverse effects (5 days to 9 weeks).

[ii] Buscemi N, Vandermeer B, Friesen C et al. The Efficacy and Safety of Drug Treatments for Chronic Insomnia in Adults: a meta-analysis of RCTs. *JGIM* 2007; 22: 1335-1350.

Buscemi N, Vandermeer B, Friesen C et al. The Efficacy and Safety of Drug Treatments for Chronic Insomnia in Adults: a meta-analysis of RCTs. *JGIM* 2007; 22: 1335-1350.

Potential Harms & Benefits of BZDs

<u>BZD Long-term</u> effects on sleep:

- 76 middle-aged & elderly chronic insomniacs using low-dose benzodiazepines (LDB),minimum of 6 months VS drug-free insomniacs to determine the effect on sleep.
- Results showed that LDB leads to a complete loss of hypnotic activity & substantial suppression of delta & REM sleep.

Schneider-Helmert D. Why low-dose benzodiazepine-dependent insomniacs can't escape their sleeping pills. Acta Psychiatr Scand. 1988 Dec;78(6):706-11. PubMed PMID: 2906215.

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Deprescribing proton pump inhibitors

Evidence-based clinical practice guideline

Barbara Farrell, Kevin Pottie, Wade Thompson, Taline Boghossian, Lisa Pizzola, Farah Joy Rashid, Carlos Rojas-Fernandez, Kate Walsh, Vivian Welch and Paul Moayyedi

Canadian Family Physician May 2017, 63 (5) 354-364;

Article | Figures & Data | CFPlus | eLetters | Info & Metrics

PDF

Abstract

Objective To develop an evidence-based guideline to help clinicians make decisions about when and how to safely taper or stop proton pump inhibitors (PPIs); to focus on the highest level of evidence available and seek input from primary care professionals in the guideline development, review, and endorsement processes.

Methods Five health professionals (1 family physician, 3 pharmacists, and 1 gastroenterologist) and 5 nonvoting members comprised the overall team; members disclosed conflicts of interest. The guideline process included the GRADE (Grading of Recommendations Assessment, Development and Evaluation) approach, with a detailed evidence review in in-person, telephone, and online meetings. Uniquely, the guideline development process included a systematic review of PPI deprescribing trials and examination of reviews of the harm of continued PPI use. Narrative syntheses of patient preferences and resource-implication literature informed recommendations. The team refined guideline content and recommendation wording through consensus and synthesized clinical considerations to address common front-line clinician questions. The draft guideline was distributed to clinicians and then to health care professional associations for review and revisions made at each stage. A decision-support algorithm was developed in conjunction with the guideline.

Recommendations This guideline recommends deprescribing PPIs (reducing dose, stopping, or

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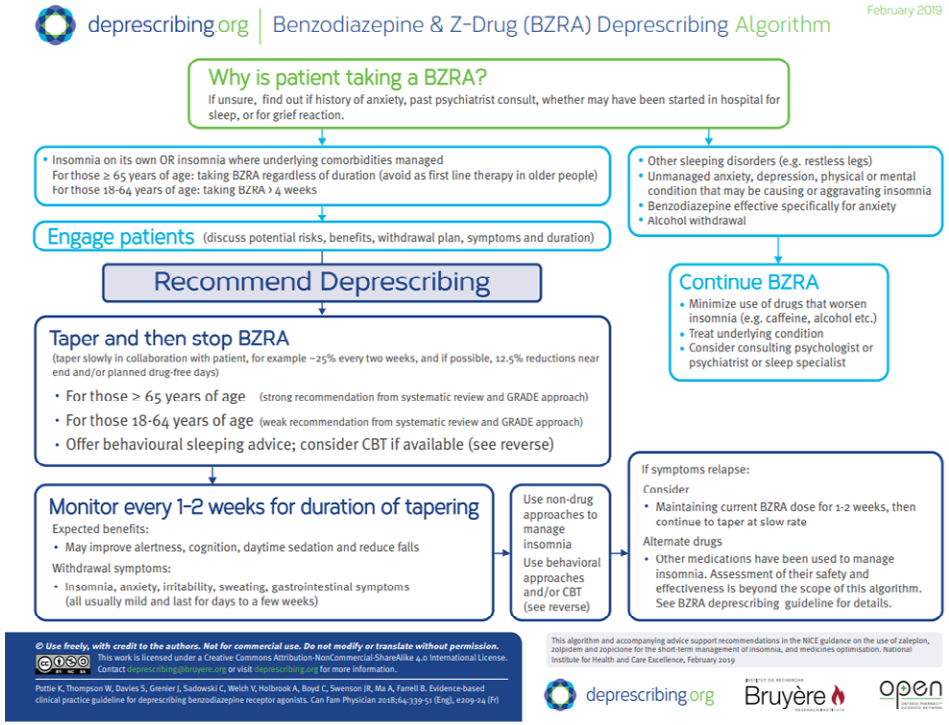


deprescribing.org | Benzodiazepine & Z-Drug (BZRA) Deprescribing Algorithm

February 2019

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

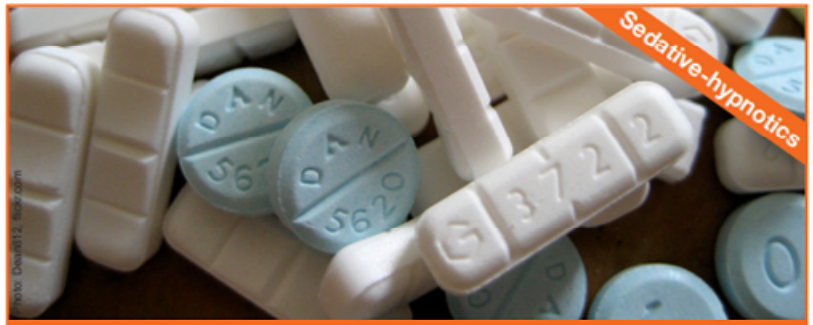
Alternate drugs
- Other medications have been used to manage insomnia. Assessment of their safety and effectiveness is beyond the scope of this algorithm. See BZRA deprescribing guideline for details.

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)

This algorithm and accompanying advice support recommendations in the NICE guidance on the use of zaleplon, zolpidem and zopiclone for the short-term management of insomnia, and medicines optimisation. National Institute for Health and Care Excellence, February 2019

deprescribing.org | Bruyère | open

https://deprescribing.org/



You May Be at Risk

You are taking one of the following sedative-hypnotic medications:

- Alprazolam (Xanax®)
- Bromazepam (Lectopam®)
- Chlorazepate
- Chlordiazepoxide-amitriptyline
- Clidinium-chlordiazepoxide
- Clobazam
- Clonazepam (Rivotril®, Klonopin®)
- Diazepam (Valium®)
- Estazolam
- Flurazepam
- Loprazolam
- Lorazepam (Ativan®)
- Lormetazepam
- Nitrazepam
- Oxazepam (Serax®)
- Quazepam
- Temazepam (Restoril®)
- Triazolam (Halcion®)
- Eszopiclone (Lunesta®)
- Zaleplon (Sonata®)
- Zolpidem (Ambien®, Intermezzo®, Edluar®, Sublinox®, Zolpimist®)
- Zopiclone (Imovane®, Rhovane®)

CIHR IRSC · iugm · Université de Montréal · La Chaire pharmaceutique Michel-Saucier en santé et vieillissement · CaDeN Canadian Deprescribing Network

Tapering-off program

Be sure to talk to your doctor, nurse or pharmacist before you try reducing your dose or stopping your medication.

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

Back to the patient case….

We discussed risks of the medication (impacts on cognition, falls, increased daytime somnolence) while taking the patient's preference into consideration.

Patient unwilling to titrate off completely, but open to reducing dose.

Gradual reduction in dose, taper is currently ongoing, but now down to oxazepam 5mg PO QHS.

Patient has a lot more energy throughout the day, is able to complete all of her housework, and is no longer falling asleep. Since she is feeling so much better she would like to see how she feels at an even lower dose.

Question…..

A 96-year-old female patient of yours presents to you in clinic requesting a refill of her long-standing prescriptions of quetiapine and lorazepam that she is unwilling to discontinue. Which response to her request would you likely provide?

A) Refill her prescription. She has been taking them for years without any problems.

B) Explain the risks to her and document your discussion.

C) Discontinue the medications. They are risky in older adults.

D) Offer a non-pharmacological alternative to the medications such as CBTi since she is using the meds for sleep.

Patient Case #2 - Antihypertensives

- 93 year old female - “Anna”; new to your practice.
- Living in a personal care home for several years, and has not been to see a physician for at least a decade.
- The personal care home operator notes that she is quite fatigued most of the time and doesn’t really participate in activities within the home. No complaints of pain.
- Rockwood Frailty score of 7
- No BPs measured since living in the personal care home (~10 years)
- Review of her medication list shows that she is currently taking:
  - α-methyldopa 500mg PO BID
  - Naproxen 500mg PO BID
  - Acetaminophen 500mg PO BID PRN

Hypertension in Older Adults

- Need to look at systolic & diastolic
- May need to tolerate higher systolic in order to maintain diastolic >60mmHg to ensure adequate cardiac perfusion
  - ↑ risk with ↓ diastolic
- Multimorbidity makes it challenging to find the ideal treatment/target. Does the pt have T2DM but is also on an anticoagulant? How far do we push the target?
- Balance the harms vs the risks!

Hypertension in Older Adults

BP Targets

- What do the guidelines say??
- SO what do we do?

	Population	Office Blood Pressure (mmHg) Threshold to treat with antihypertensive(s)	Blood Pressure Target (mmHg)	
CAN 2018	**Age≥75,** High risk CVD*	SBP ≥130	SBP <120	
	Low risk#	SBP ≥160 or DBP ≥100	<140/90	
	Diabetes	SBP ≥130, DBP ≥80	<130/80	
	All others	SBP ≥140, DBP ≥90	<140/90	
ACC/AHA 2017	Older persons (≥65 years, ambulatory, non-institutionalized, community living adults)	SBP ≥130	SBP <130	
	Adults with Clinical CVD or 10y ASCVD risk ≥ 10%, DM, CKD, HF, stable ischemic HD, PAD	≥130/80	<130/80	
	Adults - no clinical CVD & 10y ASCVD risk < 10%, or 2nd stroke prevention	≥140/90	<130/80	
ESH/ESC 2018	Very high risk of CVD, established CAD	SBP ≥135 and/or DBP ≥85	Age ≥65: SBP 130-140, DBP 70-80	Age <65: SBP 120-130, DBP 70-80
	Diabetes, CKD, HF, LVH, Low-moderate risk without CVD, renal disease or Hypertension Mediated Organ Damage after 3 to 6 months of lifestyle intervention	SBP ≥140 and/or DBP ≥90	Age ≥65^: <140/90 and >120/70; <130/80 if tolerated **DM**, age≥65: SBP 130-140, DBP 70-80	Age 18-65: <130/80 and >120/70 **DM**, age<65: SBP 120-130
	All patients (including elderly age ≥80)	SBP ≥160 and/or DBP ≥100	Any age: **CKD:** <140/80 **LVH:** SBP 120-130	

Back to the patient case….

- Measured BPs 3x / week for a month
  - Average BP was 100/64mmHg
  - Discussed discontinuing anti-hypertensive therapy entirely due to increased risk of falls and poor cardiac perfusion with this BP, patient and family were in agreement with the plan.
  - Also discontinued naproxen due to lack of pain symptoms.
- When BPs re-checked after discontinuation of the anti-hypertensive medication average readings were 130/80mmHg
  - Care home operator noted improved energy, more participation in activities following the medication changes.

Question…

What would you do if the BP goes up to 155/104 but the patient is asymptomatic?

A) Nothing

B) Restart the methyldopa

C) Start HCTZ

D) Start ramipril if the renal function is adequate

Patient Case #3 - Anticholinergics

- 72 year old male “Olaf”; new to your practice.
- Recently admitted to LTC & care team has noted issues with daytime drowsiness & constipation.
- Hx of Alzheimer’s disease, hypertension, and diabetes.
- pleasant to talk to, though very disorganized. His son is present & mentions that his dad had been getting increasingly confused, and that this accelerated quite rapidly, necessitating his move to LTC from a personal care home.
- His recent labs show normal renal function and an A1C of 7.8%.
- Olaf’s medication list includes:
  - Metformin 1000mg PO BID
  - Amlodipine 10mg PO QD
  - Perindopril/Indapamide 4mg/1.25mg PO QD
  - Oxybutynin 5mg PO OD
  - Risperidone 1mg PO QD
  - Senokot S 50mg/8.6mg PO QD

ANTICHOLINERGICS: Reference List of Drugs with Anticholinergic Effects [1, 2, 3, 4]

WHENEVER POSSIBLE, AVOID DRUGS WITH HIGH ANTICHOLINERGIC ACTIVITY IN OLDER ADULTS (>65 YEARS OF AGE)

J Bareham BSP © www.RxFiles.ca May 2019

Antibiotics

ampicillin	☑	*All Available as Generic
cefoxitin ✗	☑	
clindamycin	☑	
gentamicin (Oint & Sol'n NIHB covered)	☑	
piperacillin ✗ ⊗	☑	
vancomycin ☎ ✆	☑	

Antidepressants

TCA

amitriptyline	ELAVIL	☒
clomiPRAMINE	ANAFRANIL	☒
desipramine	NORPRAMIN	☒
doxepin	SINEQUAN	☒
imipramine	TOFRANIL	☒
nortriptyline	AVENTYL	☒

-less anticholinergic effects than amitriptyline & imipramine

trimipramine	SURMONTIL	☒

SSRI

citalopram ☆	CELEXA	☑
escitalopram ☆	CIPRALEX	☑
fluoxetine	PROZAC	☑
fluvoxamine	LUVOX	☑
PARoxetine	PAXIL	☒
sertraline ☆	ZOLOFT	☑

Other

buPROPion ☆	WELLBUTRIN, ZYBAN	☑
desvenlafaxine	PRISTIQ ✗ ⊗	☑
DULoxetine	CYMBALTA	☑
mirtazapine ☆	REMERON	☑
moclobemide ☆	MANERIX	☑
phenelzine	NARDIL	☑
trazodone ☆	TRAZOREL	☑
venlafaxine ☆	EFFEXOR	☑

In the elderly, citalopram [CELEXA] & sertraline [ZOLOFT] are the usually preferred SSRIs.

Antimuscarinics

darifenacin	ENABLEX ☎ ✆	☒
fesoterodine	TOVIAZ ☎ ✆	☒
flavoxate	URISPAS ✗	☒
mirabegron ◇	MYRBETRIQ ☎ ✆	☒
oxybutynin	DITROPAN (✗ ⊗ on XL only)	☒
propiverine	MICTORYL [PEDIATRIC] ☎ ▼	☒
solifenacin	VESICARE [on SPDP] ▼	☒
tolterodine l-tartrate	DETROL LA [on SPDP] ▼	☒
trospium	TROSEC ☎ ✆	☒

Antiparkinsonian

amantadine	SYMMETREL	☑
benztropine mesylate	COGENTIN	☒
bromocriptine	PARLODEL	☑
carbidopa/levodopa ☆	SINEMET	☑
entacapone	COMTAN	☑
ethopropazine	PARSITAN	☒
pramipexole	MIRAPEX	☑
procyclidine	KEMADRIN	☒
selegiline	ELDEPRYL ☎ ▼	☑
trihexyphenidyl	ARTANE	☒

Antipsychotics

aripiprazole ☆	ABILIFY ☎ ✆ & MAINTENA ☎ ▼	☑
asenapine	SAPHRIS (☎-BPAD) ⊗	X
chlorproMAZINE	LARGACTIL	☒
cloZAPine	CLOZARIL ☎ ▼	☒
flupentixol	FLUANXOL	☒
fluPHENAZine	MODITEN	☒
haloperidol ☆	HALDOL	☑
loxapine	LOXAPAC	☒
lurasidone ◇	LATUDA ☎ ✆	X
methotrimeprazine	NOZINAN	☒
OLANZapine	ZYPREXA	☒
paliperidone	INVEGA (☎ ✆ on injection only)	☑
pericyazine	NEULEPTIL	☒
perphenazine	TRILAFON	☒

Benzodiazepines

alprazolam	XANAX half-life: ~12 hr	☑
chlordiazepoxide	LIBRIUM half-life: ~100 hr ⊗	☑
clonazepam	RIVOTRIL half-life: ~34 hr	☑
clorazepate	TRANXENE half-life:~100 hr ⊗	☑
diazepam	VALIUM half-life: ~100 hr	☑
flurazepam	DALMANE half-life:~100 hr ⊗	☑
lorazepam ☆	ATIVAN half-life: ~15 hr	☑
midazolam	VERSED half-life: ~3 hr ✗ ⊗	☑
oxazepam ☆	SERAX half-life: ~8 hr	☑
temazepam ☆	RESTORIL half-life: ~11 hr	☑
triazolam	HALCION half-life: ~2 hr	☑

Avoid long- & ultra-short acting agents in the elderly.
(Clonazepam ok, if long-acting required e.g. chronic anxiety)

Cardiovascular Agents

atenolol	TENORMIN	☑
captopril	CAPOTEN	☑
chlorthalidone	GENERIC ONLY	☑
digoxin	LANOXIN, TOLOXIN	☑
diltiazem ☆	CARDIZEM, TIAZAC	☑
disopyramide	RYTHMODAN	☒
furosemide	LASIX	☑
hydralazine	APRESOLINE	☑
isosorbide	ISORDIL	☑
metoprolol ☆	LOPRESOR	☑
nifedipine	ADALAT	☑
quinidine	GENERIC ONLY ✗ ⊗	☑
triamterene	DYRENIUM	☑

Gastrointestinal Agents

belladonna	GENERIC ONLY ✗ ⊗	☒
chlordiazepoxide/clidinium	LIBRAX ✗ ⊗	☒
cimetidine	TAGAMET	☒
dicyclomine	BENTYLOL ⊗	☒
diphenoxylate/atropine	LOMOTIL ⊗	☒
famotidine ☆	PEPCID [OTC] & Rx	☑
loperamide	IMODIUM [OTC]	☒
	☑ if used short term	
metoclopramide	MAXERAN	☑

Muscle Relaxants

baclofen	LIORESAL (☎ on intrathecal only)	☑
cyclobenzaprine	FLEXERIL ☎ ✆	☒
methocarbamol	ROBAXIN [OTC] ✗ ⊗	☒
orphenadrine	NORFLEX [OTC] ✗ ⊗	☒
tizanidine	ZANAFLEX ☎ ✆	☒

Baclofen is the preferred agent of the above listed muscle relaxants however, it does display moderate to high anticholinergic activity.

Opioids

meperidine	DEMEROL *Not for chronic use ✗ ⊗	☒
codeine	(☎ on controlled release only, ✆, inj & liquid)	☑
fentanyl	DURAGESIC ☎ ✆	☑
hydromorphone ☆	DILAUDID, HYDROMORPH CONTIN ✆ on CR only	☑
morphine ☆	STATEX, M.O.S., KADIAN ✆	☑
oxycodone	SUPEDOL, OXY IR OXYNEO ☎ ⊗	☑
tramadol ☆	ULTRAM, RALIVIA, TRIDURAL, ZYTRAM XL ✗ ⊗	☑

Preferred Alternatives:
acetaminophen ✗ , NSAIDs (e.g. ibuprofen, naproxen)

Respiratory Meds

fluticasone/salmeterol	ADVAIR ☎ ✆	☑
theophylline	THEOLAIR, UNIPHYL	☑

Miscellaneous

busPIRone ◇	BUSPAR	☑
colchicine	GENERIC ONLY	☑
dipyridamole	PERSANTINE, AGGRENOX ☎ ▼	☑
doxylamine	UNISOM ✗ ⊗	☒
ketotifen ophthalmic	ZADITOR ☎ ⊗	☑
lithium	CARBOLITH, DURALITH	☑

Spectrum of Anticholinergic Side-Effects

Mild	Moderate	Severe
• Drowsiness • Fatigue • Mild amnesia • Inability to concentrate	• Excitement • Restlessness • Confusion • Memory impairment	• Profound restlessness & disorientation, agitation • Hallucinations, delirium • Ataxia, muscle twitching, hyperreflexia, seizures • Exacerbation of cognitive impairment (in patients with dementia)

Back to the patient case….

- Thorough medication review with geriatric pharmacist & conversation with his son did not find any indication for the oxybutynin, which was discontinued.
- Subsequent to this medication change care staff noted that Olaf's bowel movements were quite loose, and that he was stooling up to 4 times per day. His Senokot-S was discontinued, with resumption of his regular stooling pattern.
- Care staff had ongoing concerns about Olaf's level of daytime sedation, and his risperidone was gradually tapered and discontinued. There were no issues with responsive behaviours or aggression with the discontinuation of the risperidone.
- After all three medications were discontinued Olaf's son and care staff noticed that he was much more alert and engaged more readily in daily activities. His mobility improved and he was again able to mobilize with his walker without assistance from staff.

A final question….

82-year-old with history of anxiety & dementia, otherwise well. She lives at home with her family providing care. She has been taking amitriptyline because she reported trouble sleeping, as well as paroxetine for anxiety for many years. Currently, she is sleeping well but is displaying increased behaviours that are affecting the family's ability to care for her in her home (patient's wish). The family has come to you today asking if there is anything they can do to keep her in her own home longer. What might you suggest be done?

A) Discontinue both amitriptyline and paroxetine as they are likely causing the problem

B) Discontinue amitriptyline, then cross taper paroxetine to sertraline

C) Discontinue the paroxetine, continue the amitriptyline

D) Start discussing the need for an increased level of care (Personal Care Home/LTC).

Links to valuable resources

Clinical Frailty Score – Dalhousie University

https://www.dal.ca/sites/gmr/our-tools/clinical-frailty-scale.html

Deprescribing Guidelines and Algorithms

https://deprescribing.org/resources/deprescribing-guidelines-algorithms/

Deprescribing Information Pamphlets for Patients – EMPOWER Brochures

https://deprescribing.org/resources/deprescribing-information-pamphlets/

Links to RxFiles Resources

Q&A - STATIN INTOLERANCE - MANAGEMENT CONSIDERATIONS

https://www.rxfiles.ca/RxFiles/uploads/documents/Lipid-Statin-Intolerance.pdf

Q&A - ASA: When to Prescribe?

https://www.rxfiles.ca/RxFiles/uploads/documents/ASA-Q%20and%20A-When%20to%20prescribe.pdf

Geri-RxFiles Table of Contents

https://www.rxfiles.ca/RxFiles/uploads/documents/Geri-RxFiles-Table-of-Contents-Links.pdf

RxFiles Newsletter – Geriatrics

https://www.rxfiles.ca/rxfiles/uploads/documents/Geriatrics-Newsletter%20June%202019.pdf