Practical Tips for Deprescribing in Older Adults

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Disclosure Slide

- Dr. Linnebur has the following conflicts of interest related to this presentation:
  - ✓ Dr. Linnebur is a member of the Expert Panel for the 2023 Updated AGS Beers Criteria® and was a member of the 2019, 2015, and 2012 expert panels

Objectives

- Apply shared decision-making principles and strategies when deprescribing
- Incorporate deprescribing pathways into clinical treatment plans
- Utilize online tools to effectively deprescribe

Deprescribing Through Shared Decision Making

Step 1
- Creating awareness that options exist

Step 2
- Discussing the options and their benefits and harms

Step 3
- Exploring patient preferences for the different options

Step 4. Making the decision

DEPRESCRIBE

Jansen J et al. BMJ 2016;353:i2893 doi: 10.1136/bmj.i2893

Goals of Care and Time to Benefit

Treatment Decisions in Older Adults

- Consider goals of care
  - ✓ How frail is the patient?
  - ✓ Is the patient more interested in palliative care or prevention meds/tx?
  - ✓ What are the patient's QOL goals?
- Consider time to benefit: the time between when an intervention is initiated & when improved health outcomes occur
- To identify which patients are more likely to be helped vs harmed
  - ✓ Compare time to benefit vs life expectancy

Lee SJ, Leipzid RM, Walter LC. JAMA 2013;310(24):2609-10. **Br J Gen Pract 2017; DOI: https://doi.org/10.3399/bjgp17X690533**

http://eprognosis.ucsf.edu

ePrognosis HOME ABOUT CALCULATORS CANCER SCREENING DECISION TOOLS COMMUNICATION

Mitchell Index

- Population: Nursing home adults aged 65 and older
- Outcome: 6 month survival
- Scroll to the bottom for more detailed information

Risk Calculator

1. Has your patient been admitted to the nursing home in the past 90 days? Yes No
2. How old is your patient? Select
3. What is the sex of your patient? Male Female
4. Does your patient have shortness of breath? Yes No
5. Does your patient have at least one pressure ulcer that is greater than or equal to Stage 2? Yes No
6. Is your patient totally dependent for all Activities of Daily Living, including bed mobility and eating? Yes No
7. Is your patient bedbound most of the day? Yes No
8. Does your patient have insufficient oral intake? (Defined as not consuming almost all liquids in previous 3 days or at least 25% of food uneaten at most meals) Yes No
9. Does your patient have bowel incontinence? Yes No
10. Is your patient's BMI less than 18.5? BMI Calculator: BMI = 703 x (weight in pounds / (height in inches)²) Yes No
11. Has your patient experience recent weight loss? (Defined as more than 5% body weight in prior 30 days or more than 10% in prior 180 days) Yes No
12. Does your patient have congestive heart failure? Yes No

Total Points: 0

Calculate risk ›

- The index was developed and internally validated in 218,088 nursing home residents (49% of subjects were between 80 and 90 years, 23% were male, 84% were white).
- The index was externally validated in 606 nursing home residents with advanced dementia in 21 nursing homes in Boston, Massachusetts between 2007 and 2009 (39% were 85 and younger, 82% female)
- Discrimination: This risk calculator sorts patients who died from patients who lived correctly 67% of the time (c-statistic, 95% CI, 0.62-0.72).

poor | moderate | good | very good | excellent
50% 60% 70% 80% 90%

- Calibration: There is no evidence of poor calibration with a Hosmer-Lemeshow goodness-of-fit test.
- Citation: Mitchell SL, Miller SC, Teno JM, Kiely DK, Davis RB, Shaffer ML. Prediction of 6-Month Survival of Nursing Home Residents With Advanced Dementia Using ADEPT vs Hospice Eligibility Guidelines. JAMA. 2010;304(17):1929-1935. doi:10.1001/jama.2010.1572.

DISCLAIMER

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Time to benefit: How Long Will It Take for a Test or Treatment to Help Your Patient

Time to benefit is the time between the intervention (usually a test or treatment) and its benefit.

The following figure shows which preventive treatments your patient may benefit from and which may be harmful based on your patient's life expectancy and the time to benefit for each intervention. If time to benefit is longer than the patient's life expectancy, then the patient is unlikely to benefit from the intervention. If time to benefit is shorter than the patient's life expectancy, then the patient is likely to benefit from the intervention.

Instructions:

Estimate life expectancy using prognostic calculators. Adjust life expectancy using the orange slider.

Generally recommended
Generally not recommended

Making Smart Decisions: Time to Benefit vs Time to Harm

- Statins (3 years) vs prostate cancer screening (10 years)
- Immunizations: side effects immediate, benefit at 2 wks
- Pain treatment: side effects immediate, benefit immediately
- HTN treatment: hypotension immediate, benefit 6-12 mo later
- Bisphosphonates: side effects immediate, benefit 12 mo later
- Hypoglycemic agents: hypoglycemia immediate, benefit months to years later
- Aspirin: side effects immediate, reduction in CV events may take several years if it is being used for primary prevention

Lee SJ, LeipziG RM, Walter LC. JAMA 2013;310(24):2609-10.; JAMA Intern Med. 2021;181(2):179-185

Less Aggressive Treatment: ADA 2023 Standards of Care for Older Adults

Table 13.1—Framework for considering treatment goals for glycemia, blood pressure, and dyslipidemia in older adults with diabetes

Patient characteristics/ health status	Rationale	Reasonable A1C goal‡	Fasting or preprandial glucose	Bedtime glucose	Blood pressure	Lipids
Healthy (few coexisting chronic illnesses, intact cognitive and functional status)	Longer remaining life expectancy	<7.0–7.5% (53–58 mmol/mol)	80–130 mg/dL (4.4–7.2 mmol/L)	80–180 mg/dL (4.4–10.0 mmol/L)	<130/80 mmHg	Statin, unless contraindicated or not tolerated
Complex/intermediate (multiple coexisting chronic illnesses* or two or more instrumental ADL impairments or mild-to-moderate cognitive impairment)	Intermediate remaining life expectancy, high treatment burden, hypoglycemia vulnerability, fall risk	<8.0% (64 mmol/mol)	90–150 mg/dL (5.0–8.3 mmol/L)	100–180 mg/dL (5.6–10.0 mmol/L)	<130/80 mmHg	Statin, unless contraindicated or not tolerated
Very complex/poor health (LTC or end-stage chronic illnesses** or moderate-to-severe cognitive impairment or two or more ADL impairments)	Limited remaining life expectancy makes benefit uncertain	Avoid reliance on A1C; glucose control decisions should be based on avoiding hypoglycemia and symptomatic hyperglycemia	100–180 mg/dL (5.6–10.0 mmol/L)	110–200 mg/dL (6.1–11.1 mmol/L)	<140/90 mmHg	Consider likelihood of benefit with statin

https://diabetesjournals.org/care/article/46/Supplement_1/S216/148044/13-Older-Adults-Standards-of-Care-in-Diabetes-2023

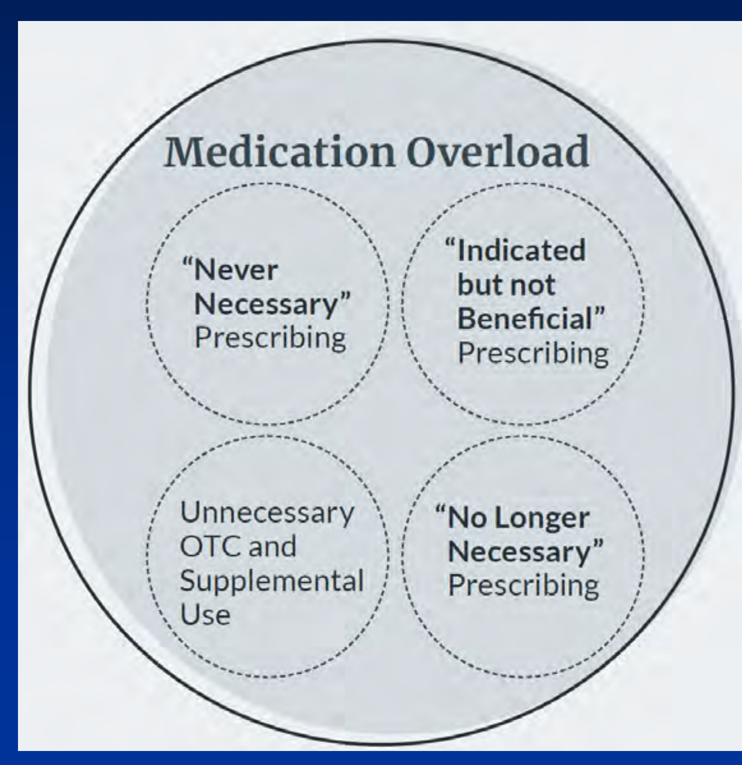
ADA Algorithm: Simplification of Complex Insulin Therapy

- Change timing of basal insulin from evening to morning
- Stop sliding scale insulin
- How to titrate basal insulin based on fasting blood glucose
- How to stop mealtime insulin and start non-insulin options to replace it
  - ✓ Examples: metformin, GLP-1 agonists, DPP4-inhibitors, SGLT-2 inhibitors, pioglitazone
- Make changes to insulin regimen every 1-2 weeks

https://care.diabetesjournals.org/content/44/Supplement_1/S168

Drugs to Consider Deprescribing

- Never necessary medications
- Indicated but not beneficial medications
- No longer necessary medications
- Unnecessary OTC meds and supplements
- Drugs causing side effects
- Drugs that the patient is interested in stopping
- Trade drugs for non-pharmacologic approaches



"Never Necessary Prescribing"

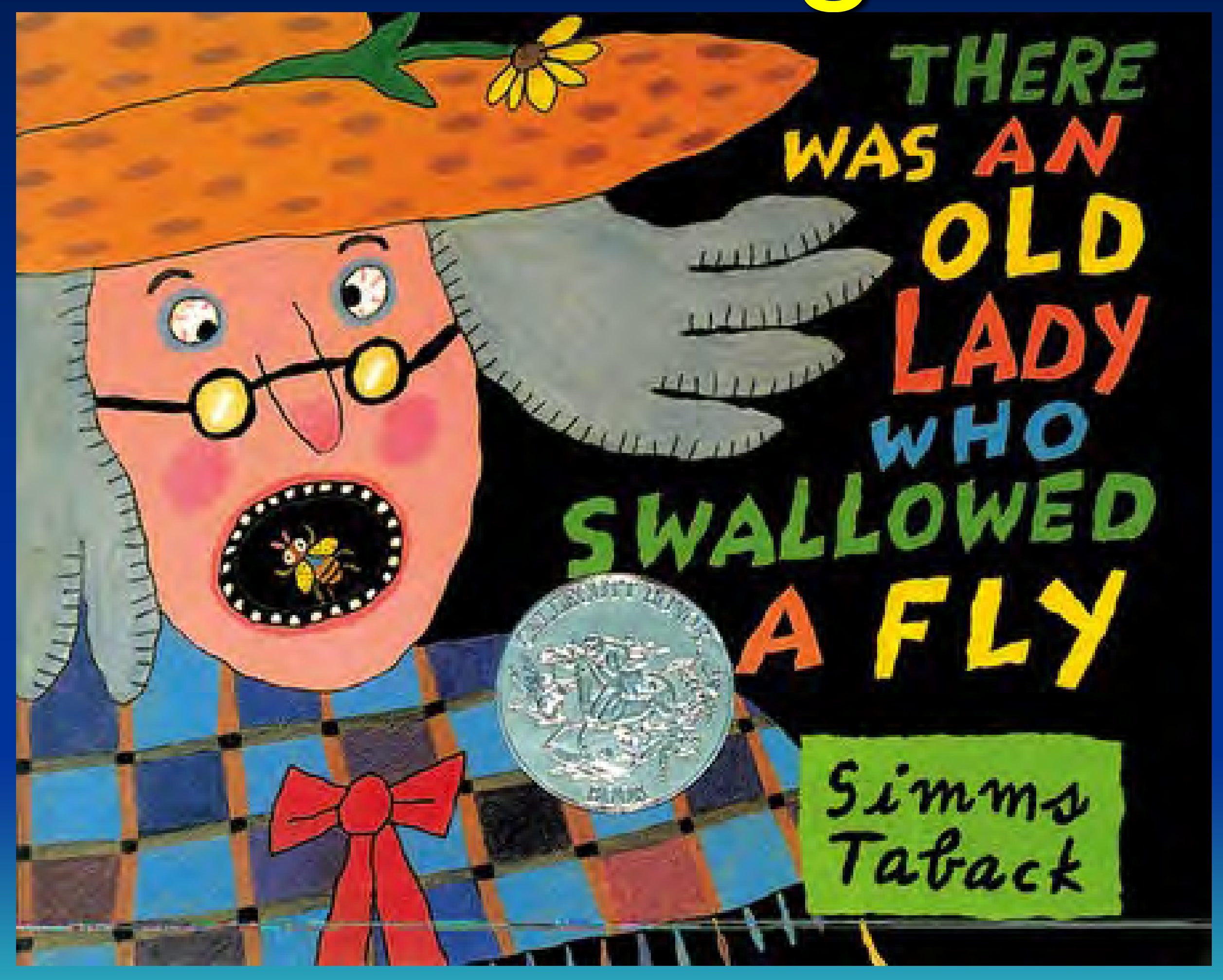
- **Drugs with a high risk and low benefit or with safer alternatives**
  - ✓ Example: Drugs on the AGS Updated Beers Criteria®

- **Drugs that are intended to be short-term but are continued long-term**
  - ✓ Examples: PPIs for ulcer ppx or treatment; Albuterol inhaler for an acute respiratory infection

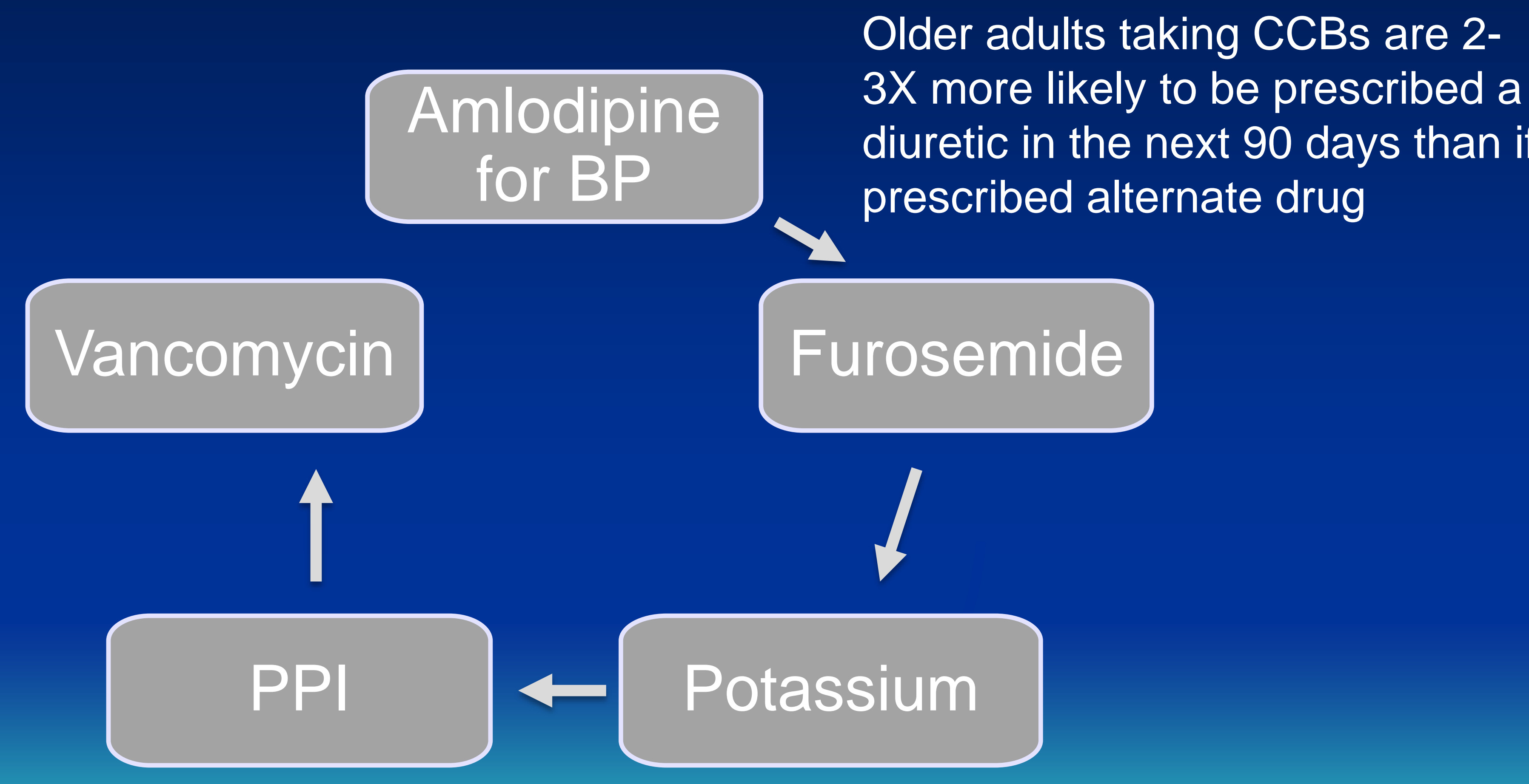
- **Drugs initiated as part of the prescribing cascade**

2023 Updated AGS Beers Criteria®…Coming Soon

The Prescribing Cascade



Prescribing Cascade Example



Older adults taking CCBs are 2-3X more likely to be prescribed a diuretic in the next 90 days than if prescribed alternate drug

JAMA Intern Med. 2020;180(5):643-651. doi:10.1001/jamainternmed.2019.7087

Avoiding the Prescribing Cascade

- For any new symptoms, if reasonable investigate drug causes 1st!
  - ✓ Ask your pharmacist to review drug databases and 1° literature
  - ✓ Many side effects are predictable and easy to identify
  - ✓ Rare side effects often occur in older adults
- Review for temporal relationship
- Laboratory measurements may be helpful
- Discontinue the drug or reduce the dose and monitor for symptom resolution
- If necessary, consider drug rechallenge

Other Prescribing Cascade Examples

Drug		Cascade
Sertraline	→	Loperamide
Spironolactone + lisinopril	→	Kayexelate
Carvedilol	→	Albuterol, oxybutynin
Cholinesterase inhibitors	→	Oxybutynin, other bladder meds

"Indicated but Not Beneficial Prescribing"

- **Drugs that have lost their effects or only provide modest benefit**
  - ✓ Example: dementia meds, sulfonylureas, antimuscarinics for UI
- **Drugs that will not be effective or show benefit in the remaining life span of the patient**
  - ✓ Example: statin for primary prevention
- **Drugs that have drug-drug interactions so they are not absorbed**
  - ✓ Examples: PPI + calcium carbonate/bisacodyl/clopidogrel

"No Longer Necessary Prescribing"

- **Drugs indicated for a certain time frame but never stopped**
  - ✓ Examples: bisphosphonates, anticoagulants, antiplatelets, PPIs, antidepressants, metoclopramide, estrogen
- **Drugs no longer necessary due to changes in goals of care**
  - ✓ Examples: bisphosphonates, statins, ASA, dementia meds, vitamins and minerals (e.g. calcium, vit D, vit B12)
- **Drugs used to treat a condition too aggressively**
  - ✓ Examples: DM or HTN treatment

“Unnecessary OTC and Supplement Use”

Can cause harm

- Aspirin
- Ibuprofen and naproxen
- Diphenhydramine
- Pseudoephedrine
- Omeprazole/PPIs

Often no long-term indication or data

- Multivitamins
- Fish oil
- Probiotics
- Vitamin C
- Almost everything else

EXCEPTIONS: vitamin D and B12, folate, calcium, iron, melatonin, diclofenac gel, acetaminophen, and AREDS2

https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2781119

Trade Drugs for Non-Pharmacologic Approaches

- Counseling/cognitive behavioral therapy/virtual reality
- Facility activities/social events
- Music therapy
- Physical therapy
- Exercise
- Heat/ice

Deprescribing Tips and Tools

Starting medications is like the bliss of marriage and stopping them is like the agony of divorce…

--Doug Danforth

General Tips to Overcome Barriers to Deprescribing

- Add in prescription drug checkups to visits
  - ✓ Perform after hospitalizations as well
- View discontinuation of drugs as part of the normal prescribing process and use shared decision making
  - ✓ Discuss options with patient/family and rationale for deprescribing, consider discussion of side effects and changes associated with aging
    - Continuation may cause harm
    - Discontinuation may cause harm
  - ✓ Educate patient/family and monitor for harm

Common Drugs To Consider Deprescribing

- ✓Proton pump inhibitors
- ✓Benzodiazepines
- ✓NSAIDs
- ✓Anticholinergics
- ✓Insulin
- ✓Sulfonylureas
- ✓Sedative hypnotics
- ✓Antipsychotics
- ✓Statins
- ✓ASA
- ✓Cholinesterase inhibitors
- ✓Memantine
- ✓OTCs/supplements

To Taper or Not to Taper?

Best to Taper

- Beta-blockers
- Clonidine
- Benzodiazepines
- Antidepressants
- Antipsychotics
- Opioids
- Pregabalin/gabapentin
- Proton pump inhibitors
- Estrogen

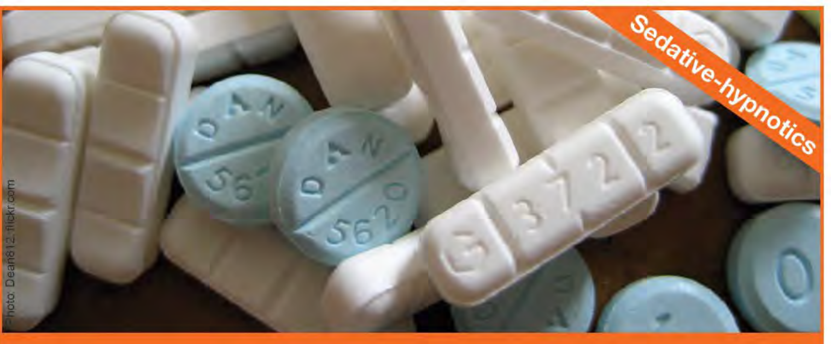
Generally No Taper Needed

- ACE-Is, ARBs, diuretics
- Statins
- Anticholinergics
- NSAIDs and aspirin
- Insulin, sulfonylureas, metformin
- Cholinesterase inhibitors
- OTCs and supplements

www.deprescribing.org
www.deprescribingnetwork.ca

- Deprescribing educational tools for patients and caregivers
- Deprescribing algorithms and videos for clinicians
- Deprescribing patient decision aids
- Non-drug advice

- PPIs, benzodiazepines, Z-drugs, antihyperglycemic agents, antipsychotics, cholinesterase inhibitors/memantine
- Studies: JAMA Intern Med. 2014;174(6):890-898. J Am Geriatr Soc 2018;66:1186–1189



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®)

SO ASK YOURSELF:

YES OR NO?

Question	Y	N
Have you been taking this sedative-hypnotic drug for a while?	◯ Y	◯ N
Are you often tired and groggy during the day?	◯ Y	◯ N
Do you ever feel hungover in the morning, even though you have not been drinking?	◯ Y	◯ N
Do you ever have problems with your memory or your balance?	◯ Y	◯ N

AS YOU AGE

Age-related changes take place in your body and modify the way you process medications. Drugs stay in your body longer and diminished liver function and poor blood flow to your kidneys may increase side effects. The chances you will take more than one medication increases as you age, as does your likelihood of having multiple chronic illnesses.

Unfortunately, this important information is often not passed on to patients who are taking this drug. Please consult your doctor, nurse or pharmacist to discuss this further. Alternative therapies could relieve your anxiety or improve your sleep with fewer side effects and improved quality of life.

www.deprescribingnetwork.ca.

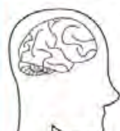
DEPRESCRIBING: REDUCING MEDICATIONS SAFELY TO MEET LIFE'S CHANGES

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/

Ask questions, stay informed and be proactive.

Reference
Pottie K, Thompson W, Davies SJC, Grenier J, Sadowski CA, Welch V, et al. Deprescribing benzodiazepine receptor agonists: an evidence-based clinical practice guideline. Can Fam Physician. In press.

6 STEPS TO ENSURE A GOOD NIGHT'S SLEEP

STEP 1 - Start a sleep diary

Familiarize yourself with your baseline sleep profile to help you determine the best strategy to implement.

STEP 2 - Develop good sleep habits

Developing good sleep habits will improve your sleep.

STEP 3 - Dispel myths

Correct any false beliefs you may have concerning sleep.

STEP 4 - Manage daily stress

Various issues have an impact on sleep as you age: medical and psychological issues, medications, lifestyle changes (retirement for example), biological factors, or pain.

STEP 5 - Benefit from good sleep hygiene

Avoid caffeine, nicotine, alcohol and exercises before going to bed. The bedroom should be sleep-inducing: dark, quiet and at a comfortable temperature.

STEP 6 - Taper off sleeping pills

Follow the tapering-off program provided on page 19 under the supervision of your doctor or your pharmacist, if you are currently taking sleeping pills.

www.deprescribingnetwork.ca

Benzodiazepine & Z-Drug (BZRA) Deprescribing Algorithm

September 2016

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

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.

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

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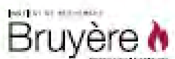
Contact deprescribing@bruyere.org or visit deprescribing.org for more information.

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. Unpublished manuscript.

deprescribing.org



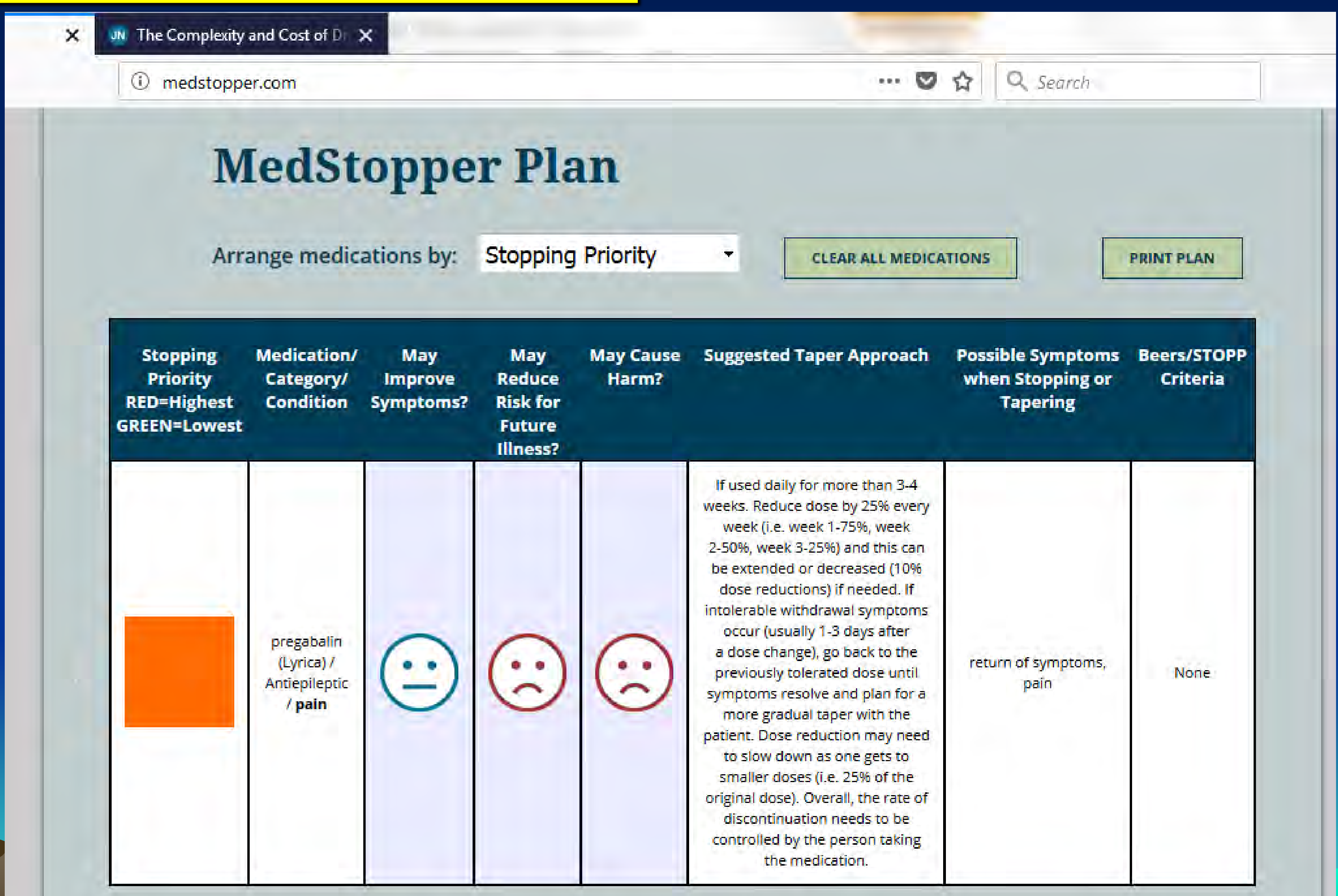
US Deprescribing Research Network (USDeN)

- https://deprescribingresearch.org/
- Links to Canadian, Australian, and UK deprescribing tools
- Links to articles discussing deprescribing and potentially inappropriate medications
- Webinars for researchers and clinicians

MedStopper.Com

- Provides guidance for deprescribing with risk/benefit for each drug
- Medications can be arranged by either stopping priority or by condition
- For some medications/indications, just below the faces, there are CALC and NNT links for more information.
- Includes suggested tapering approach if applicable
- If the medication is listed in either the Beers or STOPP criteria, click the details button and the specific criteria form these tools will be provided in a popup

MEDSTOPPER.COM



TaperMD (taperMD.com)

- Medication Therapy Management and Drug Review Tool (for a fee)
  - ✓ Dashboard with EHR integration with PointClickCare
  - ✓ Tracking and exporting of reports related to patient progress, recommendations, and monitoring plan
- Deprescribing resources: guidelines, algorithms, guides for many drugs (free)
- Taper guidance, withdrawal symptoms and monitoring guidance for many drugs (free)

MedSafer https://www.medsafer.org/

- Deprescribing software integrated with PointClickCare in Canada

ORIGINAL RESEARCH

MedSafer to Support Deprescribing for Residents of Long-Term Care: a Mixed-Methods Study

Giulia-Anna Perri, MD[1*], Émilie Bortolussi-Courval, CPN[2*], Christopher D. Brinton, BSc[1], Anna Berall, RN[1], Anna Theresa Santiago, MPH, MSc[1], Mareiz Morcos, RPh, PharmD, PMP[4], Todd C. Lee, MD, MPH[2,3], Emily G. McDonald, MD, MSc[2,3]

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[*] These authors contributed equally to this paper

https://doi.org/10.5770/cgj.25.545

JAMA Internal Medicine | Original Investigation | LESS IS MORE

The MedSafer Study—Electronic Decision Support for Deprescribing in Hospitalized Older Adults
A Cluster Randomized Clinical Trial

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https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2788297; https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9156423/

Example Deprescribing

89 y/o man with dementia and atrial fibrillation

Deprescribing Considerations for Each Drug

- ✓ Is the patient receiving a benefit from the drug?
- ✓ Do the harm(s) outweigh the benefit?
- ✓ Are the patient's symptoms stable?
- ✓ Is the purpose of the drug preventive or treatment?
- ✓ Will withdrawal symptoms or disease recurrence occur if the drug is stopped?
- ✓ Is tapering required?
- ✓ How should the patient be monitored?

Deprescribing Process

- 1. Review medications for opportunities to deprescribe. You identify simvastatin 40 mg and omeprazole 20 mg daily.
  - ✓ Statin indication: primary prevention of CV events, no stroke history
  - ✓ PPI indication: GERD, patient currently asymptomatic
- 2. Consider life expectancy and using eprognosis

Deprescribing Process

Mitchell Index

- Population: Nursing home adults aged 65 and older
- Outcome: 6 month survival
- Scroll to the bottom for more detailed information

Risk calculators cannot predict the future for any one individual. Risk calculators give an estimate of how many people with similar risk factors will live and die, but they cannot identify who will live and who will die.

Thank you so much for your time today.

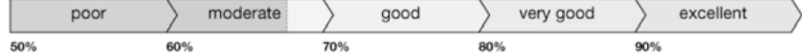
Results Based on Score:
Your total score is **13.7**

Six Month Mortality

Points	Risk of 6 month mortality
1.0 - 6.4	7%
6.5 - 7.9	10%
8.0 - 8.9	13%
9.0 - 9.7	14%
9.8 - 10.5	17%
10.6 - 11.5	20%
11.6 - 12.5	23%
12.6 - 14.0	28%
14.1 - 16.1	34 - 43%
> 16.1	49 - 62%

Finish

- The index was developed and internally validated in 218,088 nursing home residents (49% of subjects were between 80 and 90 years, 23% were male, 84% were white).
- The index was externally validated in 606 nursing home residents with advanced dementia in 21 nursing homes in Boston, Massachusetts between 2007 and 2009 (39% were 85 and younger, 82% female)
- Discrimination: This risk calculator sorts patients who died from patients who lived correctly 67% of the time (c-statistic, 95% CI, 0.62-0.72).



- Calibration: There is no evidence of poor calibration with a Hosmer-Lemeshow goodness-of-fit test.
- Citation: Mitchell SL, Miller SC, Teno JM, Kiely DK, Davis RB, Shaffer ML. Prediction of 6-Month Survival of Nursing Home Residents With Advanced Dementia Using ADEPT vs Hospice Eligibility Guidelines. JAMA. 2010;304(17):1929-1935. doi:10.1001/jama.2010.1572. (https://www.ncbi.nlm.nih.gov/pubmed/21045099)

Deprescribing Process

- 3. Consider benefits
  - ✓ Less pill burden, less muscle pain, less GI side effects, less DDIs, lower risk of C. diff/PNA/Mg and B12 deficiency
- Consider risks
  - ✓ Return of GI symptoms; potential increased GI bleed risk if patient is taking a DOAC or ASA
  - ✓ CV events—3 retrospective studies of older adults show ↑ CV risk 2-5 yrs after discontinuation, no increased risk if at end of life
- 4. Do the meds need tapered?
  - ✓ PPI: ideally, yes
  - ✓ Statin: no

Deprescribing Process

- 5. Discontinue simvastatin
- 6. Consider omeprazole taper https://tapermd.com/tapering-resources/proton-pump-inhibitors/
  - ✓ Reduce dose by 50% every 1-2 weeks. Once at 25% of the original dose and no withdrawal symptoms have been seen, stop the drug
  - ✓ If any withdrawal symptoms occur, go back to approximately 75% of the previously tolerated dose
- 7. Construct and document a follow-up plan
  - ✓ Monitor for CV events?: no
  - ✓ Monitor for side effect (GI/muscle pain) resolution: yes
  - ✓ Monitor for return of GERD/heartburn: yes

Figure 1 | Proton Pump Inhibitor (PPI) Deprescribing Algorithm

September 2016

Why is patient taking a PPI?

If unsure, **find out** if history of endoscopy, if ever hospitalized for bleeding ulcer or if taking because of chronic NSAID use in past, if ever had heartburn or dyspepsia

Indication still unknown? → Decrease to lower dose / Stop and use on-demand

- Mild to moderate esophagitis or
- GERD treated x 4-8 weeks (esophagitis healed, symptoms controlled)

- Peptic Ulcer Disease treated x 2-12 weeks (from NSAID; *H. pylori*)
- Upper GI symptoms without endoscopy; asymptomatic for 3 consecutive days
- ICU stress ulcer prophylaxis treated beyond ICU admission
- Uncomplicated *H. pylori* treated x 2 weeks and asymptomatic

→ **Recommend Deprescribing**

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

→ **Continue PPI** or consult gastroenterologist if considering deprescribing

Recommend Deprescribing

Strong Recommendation (from Systematic Review and GRADE approach)

Decrease to lower dose (evidence suggests no increased risk in return of symptoms compared to continuing higher dose), or

Stop and use on-demand (daily until symptoms stop) (1/10 patients may have return of symptoms)

Stop PPI

Monitor at 4 and 12 weeks

If verbal:
- Heartburn
- Regurgitation
- Dyspepsia
- Epigastric pain

If non-verbal:
- Loss of appetite
- Agitation
- Weight loss

Use non-drug approaches
- Avoid meals 2-3 hours before bedtime; elevate head of bed; address if need for weight loss and avoid dietary triggers

Manage occasional symptoms
- Over-the-counter antacid, H2RA, PPI, alginate prn (ie. Tums®, Rolaids®, Zantac®, Olex®, Gaviscon®)
- H2RA daily (weak recommendation – GRADE; 1/5 patients may have symptoms return)

If symptoms relapse:

If symptoms persist x 3 – 7 days and interfere with normal activity:

1) Test and treat for *H. pylori*
2) Consider return to previous dose

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Farrell B, Pottie K, Thompson W, Boghossian T, Pizzola L, Rashid FJ, et al. Deprescribing proton pump inhibitors. Evidence-based clinical practice guideline. *Can Fam Physician* 2017;63:354-64 (Eng), e253-65 (Fr).

THANK YOU! QUESTIONS?

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