Deprescribing in an Era with Diagnosis Drift and Polypills

Sunny Linnebur, PharmD, BCGP, BCPS
Professor, University of Colorado

Skaggs School of Pharmacy and Pharmaceutical Sciences

100+ years of education, patient care & scientific discovery.

Objectives

- Describe the medication burden facing older adults and the need for deprescribing
- Evaluate and access available resources to help with deprescribing
- Utilize strategies to initiate and monitor deprescribing in an older adult patient case

Skaggs School of Pharmacy and Pharmaceutical Sciences

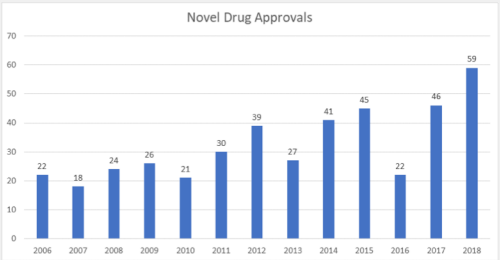
What is Diagnosis Drift?

- Diagnosis and treatment of "milder" illnesses with drug therapy
  - Often follows approval of a newer/better drug or test
  - Depression: SSRIs and SNRIs vs TCAs
  - High cholesterol: statins vs cholestyramine
  - Acid reflux: PPIs vs cimetidine
- Osteoporosis to osteopenia
- Secondary CV disease to primary CV disease
- Vitamin D deficiency to vitamin D insufficiency

Skaggs School of Pharmacy and Pharmaceutical Sciences

REIDENBERG MM. WWW.CPT-JOURNAL.COM APRIL 2018;103(4):556-7

Over 20,000 Drugs Approved by the FDA!



Skaggs School of Pharmacy and Pharmaceutical Sciences

HTTPS://WWW.BIOSPACE.COM/ARTICLE/FDA-APPROVES-59-NOVEL-DRUGS-IN-2018/

Medication Burden Facing Older Adults:
NHANES 2011-2012, NSHAP 2010-2011

- 90% reported taking at least 1 prescription drug in the last 30 days
  - » 39% reported taking 5 or more medications at a given time
- 39% reported taking OTCs
- 64% taking dietary supplements

Skaggs School of Pharmacy and Pharmaceutical Sciences

JAMA. 2015;314(17):1818-1831. JAMA INTERN MED. 2016;176(4):473-482.

Not the Rocky or the Allegheny Mountains…

Skaggs School of Pharmacy and Pharmaceutical Sciences

Grandma and Grandpa's Medication Mountain!

Skaggs School of Pharmacy and Pharmaceutical Sciences

Medication Overload and Older Americans: The Need for Deprescribing

The Threat of Medication Overload and Adverse Drug Events (ADEs)

- 5 million older adults sought medical attention for ADEs in 2018
- 42% of older adults take 5 or more prescription medications
- There was a 200% increase in polypharmacy over 20 years
- 280,000 hospitalizations in 2018 due to ADEs
- $62 billion in preventable hospitalizations over 10 years
- 150,000 premature deaths in next 10 years due to ADEs

Skaggs School of Pharmacy and Pharmaceutical Sciences

WWW.LOWNINSTITUTE.ORG/PILLS

What is Deprescribing?

Systematic process of identifying and discontinuing drugs in instances in which existing or potential harms outweigh existing or potential benefits within the context of an individual patient's care goals, current level of functioning, life expectancy, values, and preferences

- Part of the good prescribing continuum
- Not about denying effective treatment to eligible patients
- Should be a positive, patient-centered intervention with shared decision making and close monitoring

Skaggs School of Pharmacy and Pharmaceutical Sciences

JAMA INTERN MED. 2015 MAY;175(5):827-34

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

Skaggs School of Pharmacy and Pharmaceutical Sciences

JANSEN J ET AL. BMJ 2016;353:I2893 DOI: 10.1136/BMJ.I2893

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

--Doug Danforth

Skaggs School of Pharmacy and Pharmaceutical Sciences

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?

Skaggs School of Pharmacy and Pharmaceutical Sciences

SCOTT IA ET AL. JAMA INTERN MED. 2015 MAY;175(5):827-34

To Taper or Not to Taper?

Taper Needed	Generally No Taper Needed
Beta-blockers	Anticoagulation
Clonidine	Anticholinergics
Benzodiazepines	NSAIDs
Antidepressants	Insulin, sulfonylureas, metformin
Opioids	Cholinesterase inhibitors
Pregabalin/gabapentin	Statins
PPIs	OTCs and supplements

Common Barriers to Deprescribing

- Clinician
  - » Lack of resources
  - » Time
- Patient
  - » Knowledge gap for options
  - » No desire or concern over stopping medications

Audience Response Question

1) I feel comfortable deprescribing:
2) I have time to deprescribe:
   - ✓ Opioids
   - ✓ Insulin
   - ✓ Benzodiazepines
   - ✓ Anticoagulation
   - ✓ PPIs

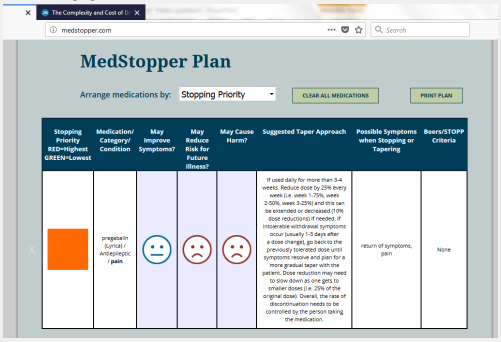
Deprescribing Resources

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

Skaggs School of Pharmacy and Pharmaceutical Sciences

MedStopper.Com

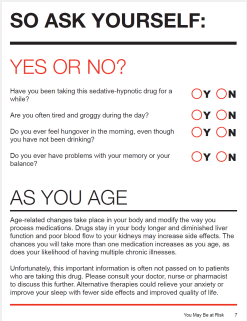


Deprescribing.org, deprescribingnetwork.ca

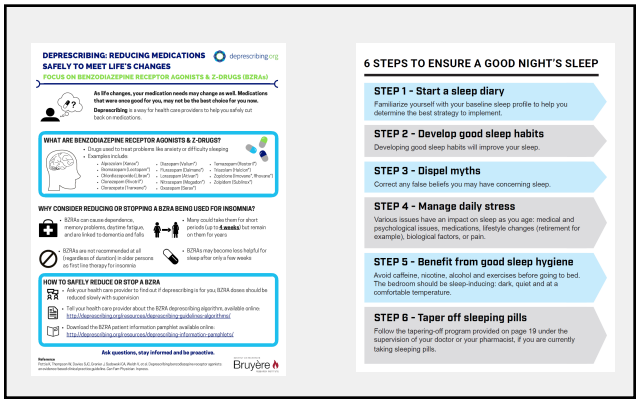
- Deprescribing educational tools for patients and caregivers
- Deprescribing patient decision aids
- Deprescribing algorithms for clinicians

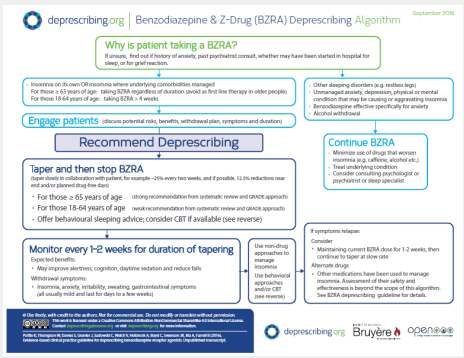
- PPIs, benzodiazepines, Z-drugs, antihyperglycemic agents, antipsychotics, antihistamines, NSAIDs, cholinesterase inhibitors/memantine

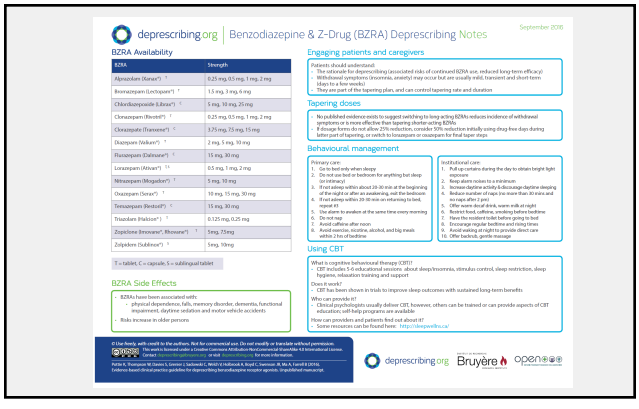
Skaggs School of Pharmacy and Pharmaceutical Sciences



www.deprescribingnetwork.ca







Evidence: Deprescribing Benzodiazepines EMPOWER and D-PRESCRIBE

- EMPOWER
  - Cluster RCT of 261 older adults for 6mo with intervention (education about benzodiazepine cessation) vs usual care
  - At 6 months, benzo discontinuation = 27% in the intervention group vs. 5% in control group
- EMPOWER-Inpatient
  - 50 moderate to severely frail older adults chronically taking sedative hypnotics admitted to clinical teaching unit in Montreal were provided EMPOWER brochures
  - 64% of participants who received the brochure had sedatives deprescribed at 30 days
  - No worsening in sleep quality as reported by study patients

Skaggs School of Pharmacy and Pharmaceutical Sciences

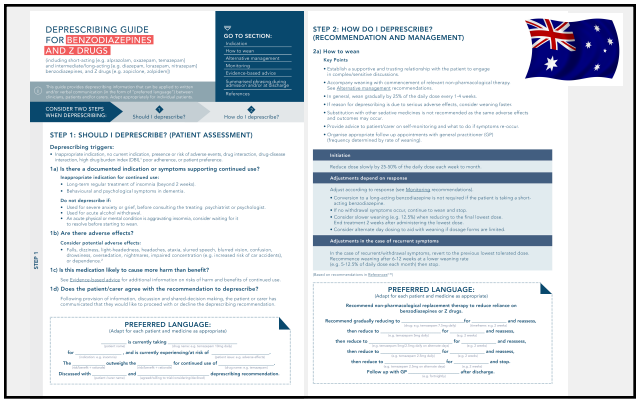
JAMA INTERN MED. 2014;174(6):890-898. J AM GERIATR SOC 2018;66:1186–1189.

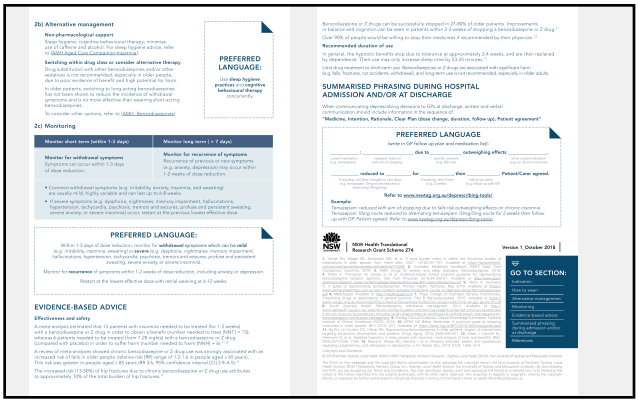
Evidence: Deprescribing Benzodiazepines EMPOWER and D-PRESCRIBE

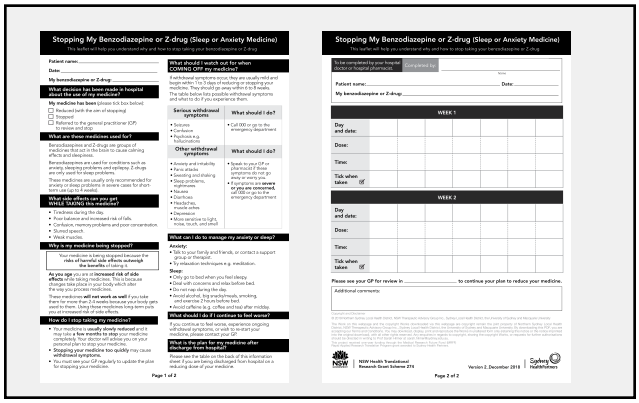
- D-PRESCRIBE
  - Cluster RCT of community pharmacies serving 489 long-term users of sedative hypnotics, 1st gen AH, glyburide or NSAIDs
  - Intervention: EMPOWER brochure provided by the pharmacist to the patient + accompanying pharmaceutical opinion (deprescribing) sent by the pharmacist to the physician; Control group: 6-month "waitlist"
  - At 6 months, 43% discontinued in the intervention group vs 12% in control group (risk difference 31%, 95% CI 23%-38%)

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







Stopping My Benzodiazepine or Z-drug (Sleep or Anxiety Medicine)

This leaflet will help you understand why and how to stop taking your benzodiazepine or Z-drug.

Patient name: .....

Date: .....

My benzodiazepine or Z-drug: .....

What decision has been made in hospital about the use of my medicine?

My medicine has been (please tick box below)

- ☐ Reduced (with the aim of stopping)
- ☐ Stopped
- ☐ Referred to the general practitioner (GP)
- ☐ Continued as before

What are these medicines used for?

Benzodiazepines and Z-drugs are groups of medicines that act in the brain to cause calming effects and sleepiness.

Benzodiazepines are used for conditions such as anxiety, sleeping problems and epilepsy. Z-drugs are only used for sleep problems.

These medicines are usually only recommended for short-term use (up to 4 weeks) as severe cases for short-term use (up to 4 weeks).

What side effects can you get WHILE TAKING this medicine?

- Tiredness during the day
- Poor balance and increased risk of falls
- Confusion, memory problems and poor concentration
- Slurred speech
- Mood changes

Why is my medicine being stopped?

Your medicine is being stopped because the **risks of harmful side effects outweigh the benefits** of taking it.

As you age you are at **increased risk of side effects** while taking medicines. This is because your body and brain change, which alter the way you process medicines.

These medicines **will not work as well** if you take them for more than 2-4 weeks because your body gets used to them. Using these medicines long term puts you at increased risk of side effects.

How do I stop taking my medicine?

- Your medicine is **usually slowly reduced** and it may take **a few months to stop** your medicine completely. Your doctor will work with you on your personal plan to stop your medicines.
- **Stopping your medicine too quickly** may cause **withdrawal symptoms.**
- You must see your GP regularly to update the plan for stopping your medicines.

What should I watch out for when COMING OFF my medicine?

If withdrawal symptoms occur, they are usually mild and begin within 1 to 3 days of reducing or stopping your medicine. They usually last between 2 to 8 weeks.

The table below lists possible withdrawal symptoms and what to do if you experience them.

Serious withdrawal symptoms	What should I do?
• Seizures • Delirium • Psychosis e.g. hallucinations	• Call 000 or go to the emergency department

Other withdrawal symptoms	What should I do?
• Anxiety and irritability • Panic attacks • Sweating and shaking • Sleep problems, nightmares • Nausea • Diarrhoea • Headaches, muscle aches • Tinnitus • More sensitive to light, noise, touch, and smell	• Speak to your GP or pharmacist if these symptoms are mild, or worry you • If symptoms are **severe or you are concerned,** call 000 or go to the emergency department

What can I do to manage my anxiety or sleep?

Anxiety:
- Talk to your family and friends, or contact a support group or therapist.
- Try relaxation techniques e.g. meditation.

Sleep:
- Only go to bed when you feel sleepy.
- Avoid caffeine (e.g. coffee) before bed.
- Do not nap during the day.
- Avoid alcohol, big snacks/meals, smoking, and exercise 2 hours before bed.
- Avoid caffeine (e.g. coffee) and heat after midday.

What should I do if I continue to feel worse?

If you continue to feel worse, experience ongoing withdrawal symptoms, or wish to restart your medicine, please contact your GP.

What is the plan for my medicine after discharge from hospital?

Please see the table on the back of this information sheet. If you are being discharged from hospital on a reducing dose of your medicine.

Page 1 of 2

Stopping My Benzodiazepine or Z-drug (Sleep or Anxiety Medicine)

This leaflet will help you understand why and how to stop taking your benzodiazepine or Z-drug.

To be completed by your hospital doctor or hospital pharmacist.

Patient name: ..... Date: .....

My benzodiazepine or Z-drug: .....

	WEEK 1						
Day and date:							
Dose:							
Time:							
Tick when taken							

	WEEK 2						
Day and date:							
Dose:							
Time:							
Tick when taken							

Please see your GP for review in ..... to continue your plan to reduce your medicine.

Additional comments:

NSW Health Translational Research Grant Scheme 215

Version 2, December 2018

Sydney Health Partners

Page 2 of 2

Deprescribing Vitamins and Minerals

- What is the patient's life expectancy, indication, and benefit/risk?
- What brand of supplement are they using?
- How many ingredients are included?
- Some vitamins/minerals often indicated
  - ✓ Vitamin D (bone health)
  - ✓ Vitamin B12 (neurologic function)
  - ✓ Calcium (bone health)
  - ✓ Iron (anemia)—some patients won't benefit from oral though

Deprescribe the rest!

Skaggs School of Pharmacy and Pharmaceutical Sciences

Additional Best Practices When Deprescribing

- ✓ D/C medication from the EMR (CancelRx)
- ✓ Make sure the patient/family understands the plan and has their questions answered
  - » Write it down and provide updated med list
- ✓ Follow-up to make sure it happened
- ✓ Communicate with the pharmacy
  - » Ask pharmacy to stop automatic refills and deactivate prescription if applicable
- ✓ Offer to properly dispose of the medication

Skaggs School of Pharmacy and Pharmaceutical Sciences

Problem List
- Dyslipidemia
- HTN
- Spinal stenosis
- Constipation
- Hypothyroidism
- Depression/anxiety
- Insomnia
- Fatigue
- Allergic rhinitis
- Mild cognitive impairment
- Stress urinary incontinence

Medication List
- Amlodipine 10 mg daily
- HCTZ 12.5 mg daily
- Lisinopril 40 mg daily
- Aspirin 81 mg daily
- Levothyroxine 100 mcg daily
- Duloxetine 40 mg daily
- Atorvastatin 40 mg daily
- Ibuprofen 200 mg BID prn
- Lorazepam 1 mg up to 3/day
- Gabapentin 900 mg TID
- Tramadol 50 mg BID as needed
- APAP 500 mg one tablet 1-2x/wk
- Tylenol PM one tablet 1-2x/wk
- Docusate one capsule BID
- PEG 17g capful once daily
- Pseudoephedrine 60 mg BID

Skaggs School of Pharmacy and Pharmaceutical Sciences

Evaluating Drugs for Deprescribing

- Actual or potential harms
  - Gabapentin: fatigue, confusion, respiratory depression
  - Lorazepam: fatigue, fall risk
  - Tramadol: fatigue, constipation
  - Pseudoephedrine: insomnia, HTN
  - Ibuprofen: stomach/duodenal ulcer, GI bleed, renal impairment
  - Tylenol PM: MCI, fatigue
- Actual or potential benefits
  - Gabapentin:?
  - Lorazepam: anxiety relief
  - Tramadol: pain relief
  - Pseudoephedrine: congestion relief, stress UI relief
  - Ibuprofen: pain relief
  - Tylenol PM: sedation

Skaggs School of Pharmacy and Pharmaceutical Sciences

Evaluating Drugs for Deprescribing

- Potentially unnecessary drugs
  - Aspirin
  - Atorvastatin
  - Docusate

Skaggs School of Pharmacy and Pharmaceutical Sciences

Deprescribing Statins At the End of Life

- N = 381 (189 randomized to discontinue statins; 192 to continue)
  - Mean age 74.1 years
  - 22.0% cognitively impaired
  - 48.8% had cancer
- No difference in the proportion who died w/in 60 days (23.8%-d/c vs 20.3%-continue)
- Few participants experienced CV events (n=13 d/c; n=11 continue)
- Total QOL was better for the group discontinuing statin therapy (mean McGill QOL score, 7.11 vs 6.85; *P* = .04).
- Mean cost savings were $3.37 per day and $716 per patient

Skaggs School of Pharmacy and Pharmaceutical Sciences JAMA INTERN MED. 2015;175(5):691-700.

Deprescribing Statins in 1º Prev Patients

- Population-based French cohort study
  - N = 120,173 subjects age 75+ followed for mean 2.4 years
  - 17,204 stopped statins; 5396 (4.5%) were hosp for CV event
- Clinical effects of statin discontinuation
  - Adjusted HR 1.33 [95% (CI) 1.18–1.50] (any cardiovascular event)
  - Adjusted HR 1.46 (95% CI 1.21–1.75) (coronary event)
  - Adjusted HR 1.26 (95% CI 1.05–1.51) (cerebrovascular event)
  - Adjusted HR 1.02 (95% CI 0.74–1.40) (other vascular event)
- Predictors of statin discontinuation: female, dementia, cancer

Skaggs School of Pharmacy and Pharmaceutical Sciences EUROPEAN HEART JOURNAL (2019) 40, 3516–3525

Taper or Abrupt Discontinuation?

Taper

- Lorazepam
- Gabapentin
- Tramadol ---depending on use
- Pseudoephedrine --- depending on duration

No Taper

- Aspirin
- Atorvastatin
- Ibuprofen
- Tylenol PM
- Docusate

Discuss patient's goals of care and make a deprescribing plan!

Skaggs School of Pharmacy and Pharmaceutical Sciences

Summary

- The medication burden facing older adults is high, often unnecessary, and has significant costs
- Deprescribing is one way to reduce medication burden at the patient level
- Deprescribing strategies and resources should be used to facilitate medication optimization for older adults

Skaggs School of Pharmacy and Pharmaceutical Sciences

Thank you!

Questions?

Skaggs School of Pharmacy and Pharmaceutical Sciences

100+ years of education, patient care & scientific discovery.