Easy to Start, Hard to Stop: How do we Deprescribe?

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The speaker has no relationship to disclose.

Objectives

• Name 5 medication classes that should be considered for deprescribing in older adults.
• Develop a patient safety plan for deprescribing medications/classes.
• Evaluation of patient outcomes during/following course of deprescribing.
Outline
1. Assess anticholinergic load in older adults
2. Drugs that need to be tapered
3. Prescribing Cascades
4. 2 drugs that are BEGGING to be deprescribed

3 Terms Essential to our Discussion
• Adverse Drug Events
• Polypharmacy
• Deprescribing

Adverse Drug Event
• Serious consequences of inappropriate drug prescribing
• Examples: Falls, hospitalization, death
• Many ADEs are dose related!
What’s the most common predictor of adverse drug events (ADE)?

What’s Polypharmacy?
“Pill for every ill” mentality

Deprescribing
What’s Deprescribing?

• “planned and supervised process of dose reduction or stopping of medication that might be causing harm or might no longer be providing benefit”
• Deprescribing is part of good prescribing

Why Deprescribing?

• Reduce polypharmacy
• Reduce pill burden
• Improve patient outcomes
• Reduce potential for harm

Deprescribing: Not Easy

• Possible medical harm, adverse events
• Patients may resist describing
• Guidance for providers?


How do I start? Where do I look?

The Process

1. Perform the “Brown Bag test”
   Make sure you have the dosages!
   • Include dosing information, adherence, start date, and prescriber
   • Include PRN medications, herbal supplements, vitamins, and over-the-counter medications


The Process

2. Evaluate the medication list
   Does every med have an indication? And is it appropriate? (age, co-morbid, dose appropriate)
   Align with patient’s life expectancy
   Utilize guidelines:
   i. Beers criteria
   ii. STOPP
   iii. START
   iv. MAI

The Process
3. Deprescribing Plan
   a. Urgent Needs: those meds causing harm or suspected harm
   b. Those producing side effects (or suspected side effects)
   c. Meds without an indication or/are part of a prescribing cascade
   d. Create timeline
   e. Follow up and monitor

Obvious Ones!
1. Asthma and a beta blocker
2. Anticholinergic med and dementia, BPH
3. HF and NSAIDs, TZD, CCB
4. NSAIDs and HTN, gastric ulcer
5. Urinary incontinence and diuretic
6. Statin in a 95 year old

Prioritizing
1. Stop one med at a time
2. Highest risk to benefit ratio
3. Taper if needed
4. Monitor patient for worsening or withdrawal
Deprescribing is often driven by an Adverse Drug Event.

Mr. E is an 80 year old who has had progressive changes in memory over the past 4-5 months. He sometimes has difficulty finding words, remembering times of his NP appts. His family reports that his symptoms vary from day to day but are generally worse at the end of the day. He has not had noticeable changes in his ability to walk or perform his ADLs.

Take Home Point

Any new symptom in an older adult should be considered drug-related until proven otherwise!
Mr. E

MEDS
- Spiriva
- Albuterol PRN
- Lisinopril
- Amlodipine
- Metformin
- Amitriptyline
- Calcium/Vitamin D
- Benadryl PRN insomnia

MED HX
- COPD
- HTN
- DM
- Polyneuropathy
- Osteoporosis
- Insomnia

Why do older adults have Acetylcholine Issues?

✓ Increased permeability of blood brain barrier
✓ Decreased drug metabolism
✓ Decreased drug elimination
✓ Age related deficit in central cholinergic transmission

Evaluate the Anticholinergic Burden

- Anticholinergic meds may increase the risk of delirium, cognitive impairment, falls, hospitalization, etc.
- Evaluate the “anticholinergic burden” (multiple meds can add up!)

Assess the Anticholinergic Burden

- Not all anticholinergics have the same clinical effects
- Some have minor effects
- Others can have MAJOR effects


Why Variation in Anticholinergic Clinical Effects?

- Different affinities for the muscarinic receptor subtypes
- Different tissue distributions of the drugs
- Differences in ability to cross the blood-brain barrier


Take Home Point

Not all anticholinergics are created equally!
Strategy to Reduce the Anticholinergic Burden

- Identify meds with greatest anticholinergic activity
- Eliminate med when possible
- Reduce to lowest effective dose
- Substitute a drug for another with lower anticholinergic activity


Degree of AC Activity

- Low (+1)
- Medium/High (+2/3)


Some Analgesics

<table>
<thead>
<tr>
<th>Medium/High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultram</td>
<td>Codeine</td>
</tr>
<tr>
<td>Meperidine</td>
<td>Morphine</td>
</tr>
<tr>
<td>Amitriptyline</td>
<td>Oxycodone</td>
</tr>
<tr>
<td></td>
<td>Duloxetine</td>
</tr>
</tbody>
</table>

Some Antihistamines

- **Medium/High**
  - Fexofenadine
  - Cetirizine (controversial)
  - Diphenhydramine
  - Hydroxyzine

- **Low**
  - Loratadine
  - Desloratadine
  - Levocetirizine


Some Antidepressants

- **Medium/High**
  - Paroxetine
  - Amitriptyline
  - Nortriptyline

- **Low**
  - Sertraline
  - Trazadone
  - Venlafaxine
  - Citalopram
  - Escitalopram
  - Fluoxetine


Some Benzos

- **Medium/High**
  - None

- **Low**
  - Alprazolam
  - Diazepam
  - Lorazepam

Some H2 Blockers

Medium/High
- Zantac

Low
- Cimetidine
- Famotidine
- Nizatidine


Take Home Point
When evaluating the med list.....

Evaluate the anticholinergic load--especially in older adults!

Drug Tapering
Some drugs might need to be **tapered** as they are deprescribed!

**Might need a Taper**

- SSRIs
- Benzos
- Z drugs
- Beta blockers
- Steroids
- Many Others

**SSRIs/SNRIs**

(Selective Serotonin Reuptake Inhibitors)

(Serotonin, Norepinephrine Reuptake Inhibitors)
Rationale for SSRI Taper
Withdrawal symptoms (FINISH syndrome):
• Flu-like symptoms
• Insomnia
• Imbalance
• Sensory disturbances (electric shocks)
• Hyperarousal


SSRI/SNRI Withdrawal
• Symptoms usually begin and peak within 1 week, last 1-21 days and are usually mild
• Most common with paroxetine (Paxil) and venlafaxine (Effexor)


SSRI/SNRI Taper Strategy #1
• Taper most antidepressants over 4 weeks
• Taper over at least four weeks if taken for at least six weeks

SSRI/SNRI Taper Strategy #2

- Fluoxetine (Prozac) may NOT need tapering...due to its long half-life


SSRI/SNRI Taper Strategy #3

- Go slower for paroxetine or venlafaxine...due to their short half-lives


Paroxetine, Venlafaxine Tapering

- Consider reducing dose by 25% every four to six weeks
- Reduce the daily dose of venlafaxine ER by 37.5 to 75 mg weekly
- Paroxetine CR by 12.5 mg weekly

SSRI Tapering

• Tapering may not completely eliminate symptoms
• Symptoms are usually transient and mild. If symptoms are problematic, return to previous dose or switch to fluoxetine


SSRI Tapering: Panic Disorder (Gradually)

• In panic disorder, reduce by one dosage step every one to two months
• Ensure that panic disorder is in good control


SSRI Tapering: OCD (Gradually)

• Obsessive compulsive disorder, reduce by 10% to 25% every one to two months

Benzodiazepines and the “Z Drugs”

### Benzodiazepines

<table>
<thead>
<tr>
<th>Agent</th>
<th>Brand</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alprazolam</td>
<td>Xanax</td>
<td>Short/Intermediate</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>Ativan</td>
<td>Short/Intermediate</td>
</tr>
<tr>
<td>Oxazepam</td>
<td>Serax</td>
<td>Short/Intermediate</td>
</tr>
<tr>
<td>Clonazepam</td>
<td>Klonopin</td>
<td>Long</td>
</tr>
<tr>
<td>Diazepam</td>
<td>Valium</td>
<td>Long</td>
</tr>
<tr>
<td>Flurazepam</td>
<td>Dalmane</td>
<td>Long</td>
</tr>
</tbody>
</table>

**Tapering Benzodiazepines**

- Should usually be tapered to minimize withdrawal symptoms (anxiety, seizures, tremors, etc)
Benzo Risk factors for withdrawal

- Use > 1 year
- High dose
- Short duration of action med (triazolam [*Halcion*], alprazolam [*Xanax*; especially if daily dose >4 mg for >12 weeks], lorazepam [*Ativan*])


Benzo Withdrawal Sx

- Anxiety
- Agitation
- Nausea/vomit hallucinations
- Seizures
- Sweating
- Tachycardia
- Muscle cramps
- Tremor
- Insomnia


Benzo Taper Strategy #1

- Consider reducing the dose rather than extending the dosing interval to avoid between-dose withdrawal


**Benzo Taper Strategy #2**

- In general, second half of taper should take longer than first half of taper


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**Tapering Benzodiazepines**

**Option #1**

- In general, lower the dose by about 25% every week for two weeks...then taper by 10% weekly until stopped


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**Tapering Benzodiazepines**

**Option #2:**

- Taper to diazepam 10 mg or equivalent, maintain dose for one to two months, then taper over four to eight weeks

Tapering Benzodiazepines

**Option #3:**

- Taper by 10% every one to two weeks until 20% of the original dose is reached. Then taper by 5% every two to four weeks.


Tapering Benzodiazepines

**Option #4:**

- Taper by no more than diazepam 5 mg or equivalent every week. When diazepam 20 mg or equivalent is reached, slow the rate of taper to 1 to 2 mg diazepam or equivalent per week.


Benzo Strategy

- In panic disorder, discontinue over two to seven months, at a rate not more than 10% per week.
- Ensure that panic disorder is in good control.

The "Z Drugs"
Benzodiazepine Receptor Agonists

<table>
<thead>
<tr>
<th>Generic</th>
<th>Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eszopiclone</td>
<td>Lunesta</td>
</tr>
<tr>
<td>Zolpidem, Intermezzo, Zolpimist</td>
<td>Ambien</td>
</tr>
<tr>
<td>Zaleplon</td>
<td>Sonata</td>
</tr>
</tbody>
</table>

Tapering Z drugs

- Very similar issues as with stopping benzos
- Problematic: High doses and chronic use

Tapering Strategy #1

- Stop Z drug
- Use a different sleep medication (melatonin, trazodone, mirtazapine)


Tapering Strategy #2

• Taper to lowest effective dose
• Then gradually eliminate doses (M, W, F)
• Can take up to 2 months for patients who take Z drugs nightly


Tapering Strategy #3

• Switch to lorazepam and taper by 10% to 25% per week, or
• Switch to lorazepam and taper 10% every two to four weeks


The Beta Blockers

<table>
<thead>
<tr>
<th>Generic</th>
<th>Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atenolol</td>
<td>Tenormin</td>
</tr>
<tr>
<td>Labetalol</td>
<td>Trandate</td>
</tr>
<tr>
<td>Metoprolol</td>
<td>Lopressor, Toprol</td>
</tr>
<tr>
<td>Nebivolol</td>
<td>Bystolic</td>
</tr>
<tr>
<td>Propanolol</td>
<td>Inderal</td>
</tr>
</tbody>
</table>
Beta Blocker Withdrawal

In patients WITH coronary artery disease (CAD):

• Sudden withdrawal has been associated with angina, myocardial infarction, and arrhythmias

Beta Blocker Withdrawal

In patients WITHOUT coronary artery disease (CAD):

• Anxiety, tachycardia (mild, short lived), tachyarrhythmias
• Angina and myocardial infarction (have been reported)
• Hypertensive urgency has been reported

Beta Blocker Tapering

Overt CAD

• Taper over 1-2 weeks
• For post-MI patients, consider tapering over as long as three weeks, and having sublingual nitroglycerin available
• If withdrawal symptoms occur, reinstate therapy, at least temporarily
Beta Blocker Tapering

No Known CAD

• Taper beta-blockers over about 1 week

Corticosteroids

<table>
<thead>
<tr>
<th>Steroid</th>
<th>Duration of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cortisone</td>
<td>Short</td>
</tr>
<tr>
<td>Hydrocortisone</td>
<td>Short</td>
</tr>
<tr>
<td>Methylprednisolone, prednisolone, prednisone</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Dexamethasone</td>
<td>Long</td>
</tr>
</tbody>
</table>

Steroid Tapering

• HPA axis suppression possible with steroid use
• How much? How long? Unknown
• Likely suppression with Prednisone doses >7.5 mg daily for >3 weeks

Consider Steroid Tapering

- Treating poison ivy/oak/sumac
- Disease flare is of concern (e.g., autoimmune disease, rheumatoid arthritis)
- Patient frail or very ill (e.g., severe hematologic, inflammatory, or immune disease)
- Treating disease flare in patient taking systemic steroids prior to flare
- Patient has cushingoid symptoms (e.g., moon face, buffalo hump)


Steroid Tapering

- Consider tapering by 10% weekly or 2.5 to 5 mg prednisone weekly (adults) to a dose of 5 to 7.5 mg
- Then, switch to hydrocortisone 20 mg once daily in the morning, then reducing hydrocortisone in 2.5 mg steps over weeks to months


Steroid Tapering NOT usually needed

- Course lasts less than 2 to 3 weeks (and no reason for taper)
- Treating asthma or COPD flare for 1 to 2 weeks (patient not on systemic steroids prior to flare)
- Patient being treated for allergic reaction which has resolved

Prescribing Cascades

An adverse drug reaction that is misdiagnosed as another medical condition; and another medication is prescribed to treat it

https://www.nps.org.au/australian-prescriber/articles/the-prescribing-cascade#what-is-a-prescribing-cascade
<table>
<thead>
<tr>
<th>Drug</th>
<th>ADE</th>
<th>Second Drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholinesterase inhibitor</td>
<td>Incontinence</td>
<td>Oxybutynin</td>
</tr>
<tr>
<td>NSAID</td>
<td>Hypertension</td>
<td>Anti-hypertensive</td>
</tr>
<tr>
<td>ACE inhibitor</td>
<td>Cough</td>
<td>Antibiotic</td>
</tr>
</tbody>
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<thead>
<tr>
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<th>Second Drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiepileptic</td>
<td>Rash</td>
<td>Steroid cream</td>
</tr>
<tr>
<td>Paroxetine</td>
<td>Tremor</td>
<td>Levodopa/Carbidopa</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>Extrapyramidal effects</td>
<td>Levodopa</td>
</tr>
</tbody>
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<th>ADE</th>
<th>Second Drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiazide diuretic</td>
<td>Gout</td>
<td>Allopurinol</td>
</tr>
<tr>
<td>Metoclopramide</td>
<td>Movement disorder</td>
<td>Levodopa</td>
</tr>
</tbody>
</table>

Avoiding a Prescribing Cascade

Any new symptom in an older adult should be considered drug-related until proven otherwise!

Avoiding a Prescribing Cascade

• Monitor patient closely when new drug started
• Avoid problematic meds in older adults (BEERS list)
• Start low and go slow

Prescribing Cascades

• 90% of people report ADE within 4 months
• 75% report within 1 month

https://www.nps.org.au/australian-prescriber/articles/the-prescribing-cascade#what-is-a-prescribing-cascade
Preventing Prescribing Cascades

• Start at lowest dose!
• Tailor to symptoms


Some drugs are just BEGGING to be deprescribed!

Docusate (Colace)

• No evidence that softens stool or prevents constipation
• Stool softener: psyllium worked better on stool frequency, stool water content, total stool output, stool weight

Proton Pump Inhibitors

Indications for PPIs

• GERD, erosive esophagitis: 4-8 weeks
• Healing erosive esophagitis (Controlled studies do not extend beyond 6 months)
• Risk Reduction of NSAID-Associated Gastric Ulcer
• *H. pylori* Eradication to Reduce the Risk of Duodenal Ulcer Recurrence

Do NOT Deprescribe PPIs

• Barrett’s esophagus
• Chronic NSAID users with bleeding risk
• Severe esophagitis
• Documented history of bleeding ulcer

PPI Tapering

- Taper over four to six weeks
- Reduce dose every week or two
- Once lowest dose is reached, take it every other day for a week or more
- Can further increase the interval to every third day, etc.
- Consider stepping down to an H2 blocker


Wrap Up!

1. Perform the Brown Bag Test
2. Does every med have an indication?
3. Have a deprescribing plan!

Wrap Up
1. Assess anticholinergic load in older adults
2. Assess need to taper
3. Watch out for Drug Cascades
4. Most PPIs need deprescribing

Thank you!
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