**When Less Is More:**
The Art of Deprescribing and Medication Considerations for Older Adults

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**Objectives**

**Provided:**
1: Identify potential drug therapy problems (DTPs) affecting older adults
2: Explain possible interventions to optimize medication use in older adults

**Additional:**
3: Compare systematic approaches to deprescribing
4: Discuss ways to overcome barriers to deprescribing

**Disclosures:**
I have no financial interests to disclose
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- Dr. Peggy Odegard, PharmD, CDCES

**Outline**
- Medications and Aging
- Drug Therapy Problems (DTPs)
- AGS Beers Criteria® overview
- Deprescribing
- Sample cases
The 4 Ms

If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.

Assess your use of the 4Ms - Medication
Specifically, look for how you:
- Review for high-risk medication use and document it
- Deprescribe and dose-adjust high-risk medications, and avoid their use whenever possible

Medication Consumption

Older adults are the highest consumers of medications
- 90% of people aged 65+ reported using one or more prescription drugs in the past 30 days
  - 40% = 5 or more medications
  - 20% = 10 or more medications
- 42% take at least one Over-The-Counter (OTC) medication
- 49% take at least one supplement
- “Polypharmacy” = 5 or more medications daily

Adverse Health Outcomes Associated with Polypharmacy

- Adverse drug events (ADEs)
- Falls
- Exhaustion
- Frailty
- Cognitive impairment
- Disability
- Mortality
- Decreased physical function

These issues occur at thresholds between 3.5 and 6.5 regular medications
- Risk of harm increases with each additional medication prescribed
- High-risk prescribing and polypharmacy are closely linked
Consequences of Adverse Drug Events (ADEs)

- Adverse drug events are among the top five greatest threats to the health of older adults
  - Major cause of morbidity and mortality
- ~10% of hospitalizations for older adults are due to ADEs
- The impact and management of ADEs in the US is estimated to cost over $30 billion annually
- Most ADEs are preventable!

“Normal” Aging Or Medication Side Effect?

- Some medications may cause side effects that could be perceived as a normal part of aging:
  - Falls and fractures
  - Confusion
  - Poor memory
  - Urinary incontinence
  - Constipation
  - Heartburn

Individualization of Goals and Therapies

- Things to consider (especially in frail older adults):
  - Goals of care
    - Treatment vs. Prevention vs. Palliation
  - Treatment targets
    - Aggressiveness of therapy
  - Remaining life expectancy
  - Time until benefit
    - E.g., some medications for secondary prevention require ~2 years before expected benefit

Physiologic Considerations

- In order for all medications to work effectively, they must be:
  - Absorbed into the body
  - Distributed to where they are needed
  - Metabolized
    - (a chemical change needed to become effective or to be eliminated)
  - Eliminated from the body
    - (through the urine, for example)
- All of these things can be affected by changes that occur in the body as we age
### Physiologic Considerations

- **Fat distribution**
  - Older adults tend to have a higher percent fat versus lean tissue
  - Fat-soluble drugs/vitamins (drugs that absorb and distribute into the fat) will stick around longer
    - Can continue to have an effect, or lead to possible toxicity or overdose
- **Liver function**
  - There is often some reduction in liver metabolism (likely from decreased blood flow to the liver)
    - Can impact the activation or inactivation of some drugs
- **Kidney Function**
  - We see a gradual decline in the ability of kidneys to eliminate drugs or their metabolites
    - After age 50, approximate 1% decline in renal function (eGFR) per year
  - Medications which rely on the kidneys for elimination may build up more quickly

### Lack of Research

- Older adults often lack proper representation in research of medications (especially new drugs)
  - Clinical trials - often trialed in one population and data extrapolated to additional populations
    - Often doesn’t include older adults
    - May exclude past a certain age or with certain diagnoses or current treatments

### Health System Factors Compound Complexity

- **Multiple prescribers**
  - May not be aware of the “full picture”
  - Lack of willingness to “step on toes” of other prescribers to stop medications
    - May not know why they were initiated
- **Multiple sets of guidelines**
  - Limited overlap for those with multiple comorbidities
    - Focused on one specific disease
    - May contain contradictory information for those with multiple diagnoses

### Drug-Therapy Problems (DTPs)
Drug-Therapy Problems (DTPs)

- “An event or circumstance involving medication therapy that actually or potentially interferes with an optimum outcome for a specific patient”
  - Often used interchangeably with “Medication-Related Problems” or “Drug-Related Problems”
- Common in older adults
- Associated with poor outcomes
  - Morbidity
  - Mortality
  - Increased cost


Drug Therapy Problems (DTPs)

- **Dose too high**
  - Duration or frequency inappropriate, drug interaction, monitoring needed to determine safety
- **Dose too low**
  - Duration or frequency inappropriate, monitoring needed to determine if dose is appropriate, incorrect administration
- **Adverse drug reaction**
  - Unsafe drug for patient, allergic reaction, contraindication to medication, incorrect administration, undesirable effect
- **Adherence**
  - Product not available, patient cannot afford medication, cannot administer correctly, does not understand instructions, prefers not to take, forgets to take, expired drug


Transitions of Care

- “Most medication errors stem from a lack of effective communication between health care providers during transitions of care”
- Focus needs to be on accurate medication reconciliation


Common Medication Errors at TOC

- Missing medications
  - Consider topicals, devices (inhalers, injections, etc.) as well
- Untreated conditions
  - Whether a new diagnosis or existing condition
- Same medication, but listed differently
  - E.g., brand and generic

AGS Beers Criteria ®

- List of certain medications that may not be the safest or most appropriate options for older adults
  - Is it NOT a “do not take” list
  - It IS a list of medications that may be “potentially” inappropriate for older adults
  - Merits scrutiny
- Doesn’t necessarily apply in all cases for all people
- Many caveats and rationales accompany this list
AGS Beers Criteria®

- 5 Types of “Criteria” (5 Tables or “Lists”)
  - Medications that are potentially inappropriate in most older adults (Table 2)
  - Medications that should typically be avoided in older adults with certain conditions (Table 3)
  - Drugs to use with caution (Table 4)
  - Drug-drug interactions (Table 5)
  - Drug dose adjustment based on kidney function (Table 6)

- Extra: Drugs with strong anticholinergic properties (Table 7)

Show Me “The List”

- It’s not as easy as sharing a list of medications
- Many caveats
  - E.g., “as primary treatment for xxx diagnosis”
  - E.g., many but not all medications in a particular class

AGS Beers Criteria®: Use For Clinicians

- Think of Beers Criteria as a Warning Light
  - Should be applied/referenced at the time of the initial prescription AND at follow-up
  - Why is this patient taking this drug
  - Are there safer and/or more effective alternatives?
  - Does this patient have particular characteristics that increase or mitigate the risk associated with this medication?

- Actively assess for symptoms
  - Assess whether these could be related to medications
MTGEC: Age-Friendly Healthcare in the New Normal

### Table 1 (Cont.)

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Recommended Actions</th>
<th>Risk Level</th>
<th>Type of Interventions</th>
</tr>
</thead>
</table>
| Depression   | Increase social support, mobilize community resources | High | Regular follow-up visits, psychological counseling
| Substance Use| Reduce access to alcohol and drugs | Moderate | Medication management, counseling
| Falls        | Implement fall prevention programs | Moderate | Physical therapy, home modifications
| Vision Loss  | Provide low-vision aids | Low | Glasses, magnifiers
| Hearing Loss | Provide hearing aids | Low | Hearing aids, assistive devices

### Table 2 (Cont.)

<table>
<thead>
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</thead>
</table>
| Diabetes    | Maintain healthy diet, increase physical activity | High | Nutrition counseling, exercise programs
| Hypertension| Manage blood pressure with medication | Moderate | Monitoring, lifestyle modifications
| Asthma      | Use prescribed medication and avoid triggers | Low | Inhalers, medications
| COPD        | Use prescribed medication and avoid triggers | Low | Inhalers, medications
| Incontinence| Use devices and lifestyle modifications | Low | Incontinence supplies, therapy

### Table 3 (Cont.)

<table>
<thead>
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<th>Recommended Actions</th>
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</tr>
</thead>
</table>
| Cognitive    | Implement cognitive enrichment activities | High | Memory classes, mental stimulation programs
| Physical     | Keep active, stay engaged | High | Exercise classes, community activities
| Social       | Foster social connections | High | Volunteer opportunities, community groups
| Emotional    | Provide emotional support | High | Counseling, support groups

### Table 4 (Cont.)

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Recommended Actions</th>
<th>Risk Level</th>
<th>Type of Interventions</th>
</tr>
</thead>
</table>
| Nutrition   | Ensure adequate intake of nutrients | High | Nutritional counseling, meal planning assistance
| Physical Activity | Increase physical activity | High | Exercise classes, lifestyle interventions
| Social       | Foster social connections | High | Volunteer opportunities, community groups
| Emotional    | Provide emotional support | High | Counseling, support groups

### Table 5 (Cont.)

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Recommended Actions</th>
<th>Risk Level</th>
<th>Type of Interventions</th>
</tr>
</thead>
</table>
| Education   | Increase educational opportunities | High | Scholarships, training programs
| Employment   | Secure employment opportunities | High | Job training, job placement assistance
| Income       | Increase income through employment or social programs | High | Government assistance, social programs

### Table 6 (Cont.)

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Recommended Actions</th>
<th>Risk Level</th>
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</tr>
</thead>
</table>
| Housing     | Secure stable housing | High | Affordable housing options, rent assistance
| Transportation | Secure transportation | High | Public transit, ridesharing services
| Access      | Ensure access to services | High | Public transportation, taxis
| Technology   | Provide access to technology | High | Assistive technology, training programs

### Table 7 (Cont.)

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Recommended Actions</th>
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<th>Type of Interventions</th>
</tr>
</thead>
</table>
| Communication | Improve communication skills | High | Language classes, communication training
| Information   | Increase access to information | High | Information technology, online resources
| Technology   | Provide access to technology | High | Assistive technology, training programs
| Access      | Ensure access to services | High | Public transportation, taxis

*Note: The information provided is for illustration purposes only and may not reflect current guidelines or best practices.*
### Table 3: MTGEA: Age-Friendly Healthcare in the New Normal

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Recommendation</th>
<th>Evidence Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Rate</td>
<td>Normal Bradycardia</td>
<td>Moderate</td>
<td>Strong</td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>Normal Blood Pressure</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Body Mass Index</td>
<td>Normal BMI</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Vital Signs</td>
<td>Normal Vital Signs</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Laboratory Tests</td>
<td>Normal Laboratory Tests</td>
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### Table 4: MTGEA: Age-Friendly Healthcare in the New Normal

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<tr>
<th>Category</th>
<th>Description</th>
<th>Recommendation</th>
<th>Evidence Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutritional Status</td>
<td>Normal Nutritional Status</td>
<td>Strong</td>
<td>Moderate</td>
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<tr>
<td>Physical Activity</td>
<td>Normal Physical Activity</td>
<td>Moderate</td>
<td>Strong</td>
</tr>
<tr>
<td>Social Integration</td>
<td>Normal Social Integration</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Cognitive Function</td>
<td>Normal Cognitive Function</td>
<td>Moderate</td>
<td>Strong</td>
</tr>
</tbody>
</table>

### Table 5: MTGEA: Age-Friendly Healthcare in the New Normal

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<th>Category</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Emotional Well-being</td>
<td>Normal Emotional Well-being</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Sleep Quality</td>
<td>Normal Sleep Quality</td>
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<td>Strong</td>
</tr>
<tr>
<td>Geriatric Syndromes</td>
<td>Normal Geriatric Syndromes</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Medication Use</td>
<td>Normal Medication Use</td>
<td>Moderate</td>
<td>Strong</td>
</tr>
</tbody>
</table>

### Table 6: MTGEA: Age-Friendly Healthcare in the New Normal

<table>
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<th>Category</th>
<th>Description</th>
<th>Recommendation</th>
<th>Evidence Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls Risk</td>
<td>Normal Falls Risk</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Incontinence</td>
<td>Normal Incontinence</td>
<td>Moderate</td>
<td>Strong</td>
</tr>
<tr>
<td>Vision Problems</td>
<td>Normal Vision Problems</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Hearing Loss</td>
<td>Normal Hearing Loss</td>
<td>Moderate</td>
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<th>Category</th>
<th>Description</th>
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<th>Evidence Quality</th>
</tr>
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<tbody>
<tr>
<td>Skin Integrity</td>
<td>Normal Skin Integrity</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Oral Health</td>
<td>Normal Oral Health</td>
<td>Moderate</td>
<td>Strong</td>
</tr>
<tr>
<td>Urinary System Function</td>
<td>Normal Urinary System Function</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Respiratory Function</td>
<td>Normal Respiratory Function</td>
<td>Moderate</td>
<td>Strong</td>
</tr>
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### Table 8: MTGEA: Age-Friendly Healthcare in the New Normal

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<tbody>
<tr>
<td>Urinary Incontinence</td>
<td>Normal Urinary Incontinence</td>
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<tr>
<td>Cognitive Function</td>
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<td>Strong</td>
</tr>
<tr>
<td>Functional Status</td>
<td>Normal Functional Status</td>
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<td>Moderate</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>Normal Quality of Life</td>
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<td>Strong</td>
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</table>

### Table 9: MTGEA: Age-Friendly Healthcare in the New Normal

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<tr>
<td>Physical Activity</td>
<td>Normal Physical Activity</td>
<td>Strong</td>
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<td>Social Integration</td>
<td>Normal Social Integration</td>
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<td>Medication Use</td>
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### Table 10: MTGEA: Age-Friendly Healthcare in the New Normal

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<td>Strong</td>
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Implementation of the 4 Ms

● Should be regularly screening for high-risk medications:
  ○ Benzodiazepines
  ○ Opioids
  ○ Highly-anticholinergic medications
  ○ All prescription and OTC sedatives and sleep medications
  ○ Muscle relaxants
  ○ Tricyclic antidepressants
  ○ Antipsychotics

Deprescribing
Deprescribing Definition:

The systematic process of identifying and discontinuing or reducing the dose of medications...

... 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.


Approaching Deprescribing

“... over 90% of older people across a range of settings stat[ed] that they would like to stop one of their medications if their doctor said it was possible.”

When to Consider Deprescribing

- Medications have clear harms
  - Potential adverse effects / detrimental side effects
  - High risk or inappropriate medications


Approaching Deprescribing


% Agree or Strongly Agree

- 100%
- 65%
- 50%
- 20%
When to Consider Deprescribing

- Medications have uncertain benefits
  - Polypharmacy, multiple chronic conditions
  - Life-limiting or debilitating illness
  - Change in goals of care

Prescribing Cascade Example

When to Consider Deprescribing

- Medications are a part of a prescribing cascade
  - Drug 1 causes a side effect - misinterpreted as a new condition
  - Drug 2 gets added to treat, but Drug 2 then causes a side effect, etc.
Process of Deprescribing

- **Medication Review**
  - Obtain current, accurate list of all medications patient is taking and the reason for each one

- **Consider Overall Risk**
  - Is there risk of drug-induced harm for this individual patient?
  - Help determine the required intensity of deprescribing intervention

- **Assess Each Drug**
  - Assess for eligibility to be discontinued

- **Prioritize**
  - Which drug should be discontinued first, second, etc.

- **Implement and Monitor**
  - Implement discontinuation regimen and monitor regularly

- **Communicate**
  - Explain these changes and future plans to the patient and/or caregiver

Questions To Consider / Ask Yourself

- **Clinical**
  - Are there any medications that are important for the patient to take for a clinical benefit?
Questions To Consider / Ask Yourself

● Psychological
  ○ What are the patient’s beliefs and understanding about the aims, benefits, and harms of their medications?
  ○ Have they previously asked about reducing or stopping medications?

Questions To Consider / Ask Yourself

● Social
  ○ Are there any other partners who need to be involved in the deprescribing process?
  ○ Who is the gatekeeper of care regarding the patient’s medications?

Questions To Consider / Ask Yourself

● Financial
  ○ Are there any financial aspects that influence the patient taking medications or their future care?

Questions To Consider / Ask Yourself

● Physical
  ○ Does this patient have a high pill burden?
  ○ Are there any physical barriers that prevent the patient from using their medication?
Questions To Ask Your Patients

● Clinical
  ○ Are there any medications that are really important to you?
  ○ If so, why are they important?

Questions To Ask Your Patients

● Psychological
  ○ What are the main reason(s) for taking your medications?

Questions To Ask Your Patients

● Social
  ○ How does your family feel about your medicines?
Questions To Ask Your Patients

Financial
- Are you worried about the financial cost of your care?

Also Look For …

- Anything that doesn’t seem right
  - Patient is concerned with the number of medications they take
  - Adherence ability seems challenged
  - Acute changes that could be related to medications
    - Confusion, disorientation, delirium, light headed, drowsy
  - Patient is overwhelmed
  - New onset changes in health

Physical
- Are there any medications that are a burden to you?
- If so, why are they burdensome?

Questions To Ask Your Patients

Deprescribing Guides

- 2017 Article - “Review of Structured Guides for Deprescribing”
  - Structured guides, algorithms, flow charts, or tables
  - Aim to guide decision making - what meds to target for discontinuation

- This study assessed 7 guides - We will look at 3 examples today
  - Ranging from a “set of principles” to “detailed processes and sub-steps” addressing multiple determinants of drug appropriateness

Deprescribing Guides

- Review is not exhaustive
- Some guides may help achieve more reduction in inappropriate medications than others
  - Strong evidence for efficacy and clinician acceptability for:
    - Good Palliative-Geriatric Algorithm
    - CEASE Protocol
- Growing interest exists for researchers to develop and evaluate tools for deprescribing due to the burden presented by polypharmacy in older adults

Studies of the Good Palliative-Geriatric Algorithm

- 119 patients vs 71 in control group
  - In geriatric nursing departments, same ward, and treating physicians
  - Median 2.8 meds discontinued per patient in intervention group
  - No adverse effects from discontinuation
  - 82% successful discontinuation rate
  - Mortality rate
    - Intervention group: 21%
    - Control group: 45%

- 70 community-dwelling older adults referred to hospital geriatric clinic for comprehensive geriatric assessment
  - Algorithm recommended discontinuation 4.4 medications per patient
  - 81% successful discontinuation rate
  - No significant adverse effects or deaths attributed to discontinuation
  - 88% of patients reported "global improvement in health"

The Good Palliative-Geriatric Algorithm

- Geriatrician-led group
- Developed for patients in Israeli nursing care facilities
- Focus on:
  - Base of evidence suggesting benefit?
  - Do benefits outweigh all known adverse effects?

Studies of the CEASE Protocol

- 119 patients vs 71 in control group
  - In geriatric nursing departments, same ward, and treating physicians
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Evaluation of CEASE Protocol

Study 1:
- 61 clinicians
- Given a hypothetical case, asked which meds they “felt strongly inclined” to discontinue
- Then, the 5-step guide was presented and applied
  - Repeated drug selection process
- Mean # of meds selected for D/C
  - 6.0 pretest
  - 9.6 post-test
  - Statistically significant difference

Study 2:
- Prospective study of 50 hospitalized patients - applied the algorithm
- Discontinuation of 186 out of 542 regular medications (34.3%)
  - Significant decrease in median number of medications per patient at discharge compared to presentation
    - 10 vs 7 medications
  - Reevaluated patients ~ 78 days later
    - Only 1.2% of stopped medications were restarted d/t symptom relapse


Geriatric Medication Evaluation Algorithm

- Target: high-risk meds considered to be strongly associated with exacerbations of common diseases in older adults, or causing excessive side effects
- Study of Algorithm
  - 41 patients in a US outpatient clinic
  - Average # of medications
    - Pre-algorithm = 5.8
    - Post algorithm = 5.6
  - P-value < 0.05, statistically significant
  - Of 22 medications discontinued, prevalence of high-risk meds decreased from 44% to 22%


It won’t always be easy ...

Barriers to Deprescribing (and overcoming those barriers ...)
- Unclear patient population
- Psychological connections With / To medications
- Time and confusion over discipline / specialty
- Lack of evidence
- Lack of tested alternatives (specifically non-pharmacologic)
- No obvious change in clinical status after discontinuation
- Resolution could take longer than expected
- Withdrawal syndromes
Overcoming Barriers

- Unclear patient population
  - AGS Beers Criteria® meant for patients 65 years and older
  - Consider other measures as well (e.g., frailty, comorbidities, number of medications, etc.)

Overcoming Barriers

- Psychological Connections to Medications
  - Deprescribing algorithm and taking into account patient concerns and patient perspective
  - Motivational Interviewing

Overcoming Barriers

- Time and Confusion Over Discipline / Specialty
  - Advocate for your patients!
  - Communication is key - reach out to other prescribers or caregivers, get a pharmacist involved, etc.

Overcoming Barriers

- Lack of evidence
  - Evidence is growing to support the practice of deprescribing when approached critically
Overcoming Barriers

Lack of alternatives

- Consider the following examples of alternatives (non-pharmacologic or less worrisome pharmacologic options):

<table>
<thead>
<tr>
<th>Drug / Class</th>
<th>Possible Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st generation antihistamines (chlorpheniramine, diphenhydramine)</td>
<td>Saline nasal rinse, Steroid nasal sprays, Other antihistamines (cetirizine, loratadine)</td>
</tr>
<tr>
<td>NSAIDs (in those with CKD or renal failure)</td>
<td>Physical Therapy, Chiropractor, Acetaminophen, Topical capsaicin products, Lidocaine patches</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>Sleep hygiene, Safer prescription alternatives (buspirone, SSRIs)</td>
</tr>
</tbody>
</table>


Overcoming Barriers

Resolution of adverse drug reaction may take longer than expected

- Some medications may see effect in 3-5 half-lives
  - (could vary from 1 to 5 days)
  - However, could take much longer (especially with delirium)
- Based on pharmacokinetics of the drug, how long it takes to be eliminated from the system
- Monitor regularly!

Overcoming Barriers

There may be no obvious change in clinical status

- Keep in mind, patient satisfaction is often increased
- Financial benefit still present
- Removes risk of adverse reaction from that particular medication

Overcoming Barriers

Withdrawal syndromes

- If approached appropriately, clinically significant adverse withdrawal reactions are rare, but still should be aware
- Rebound symptoms, discontinuation syndromes
- Reappearance of original disease/condition symptoms
- Unmasking of drug interactions
- Monitor regularly!
Summary

Key Concepts
- Older adults are higher medication consumers
  - More medications often leads to more adverse health outcomes (and higher healthcare costs!)
- It is important to individualize therapy and goals for each patient
  - Prioritize patient concerns and goals of care
- Communication is KEY!
  - With patient and caregivers
  - With prescribers and other providers
- There are many guides and algorithms available to help with deprescribing
  - The key is to use a systematic approach
  - Monitor and reevaluate often!
- Working through barriers and difficulties is ultimately worth it a majority of the time for the QOL improvement

Examples and Cases

TOC Case
- Your patient is discharged from a Skilled Nursing Facility back to their Assisted Living Community.

Upon discharge, the following home medication list was provided.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose / Frequency</th>
<th>Indication</th>
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<tbody>
<tr>
<td>Metoprolol ER succinate</td>
<td>50mg BID</td>
<td>Heart failure</td>
</tr>
<tr>
<td>Vasotec</td>
<td>10mg daily</td>
<td>Blood pressure</td>
</tr>
<tr>
<td>Levothyroxine</td>
<td>100mcg daily</td>
<td>Hypothyroidism</td>
</tr>
<tr>
<td>Toprol XL</td>
<td>100mg daily</td>
<td>Heart failure</td>
</tr>
<tr>
<td>Enalapril</td>
<td>10mg daily</td>
<td>Blood pressure</td>
</tr>
<tr>
<td>Synthroid</td>
<td>88mcg daily</td>
<td>Hypothyroidism</td>
</tr>
<tr>
<td>Ambien</td>
<td>5mg HS</td>
<td>Sleep</td>
</tr>
<tr>
<td>STOP (sertraline)</td>
<td>(75mg QHS)</td>
<td>(Mood)</td>
</tr>
</tbody>
</table>
### TOC Case - Concerns

- **Same drug listed multiple times**
  - Brand and generic
- **Same drug with different doses**
- **Wrong drug**
  - Perception that sertraline is for sleep
  - Pt transitioned to a different sleep aid
  - Medication was actually for depression

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<td>Mood</td>
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</table>

### Questions to Ask/Consider When Obtaining Medication List

- **Questions to ask the patient**
  - What medications do they have a stockpile of?
  - Assess use of dulcolax - how many bowel movements per day? Is this more or less than “normal?” When was this medication started?
  - **Medication-specific questions**
    - How many times per week do you miss or forget a dose of your daily medications?
    - How many times per week are you using ibuprofen? Acetaminophen?
    - Were the medications on your medication list for your hip fracture?

- **Patient-provided answers**
  - Ibuprofen and acetaminophen Rxs keep coming by mail, but they aren’t using them anymore
  - Pt takes dulcolax every day, notes more loose stools in the last few months than usual. Medicine was started in the hospital because their pain pills “backed them up”
  - Pt misses metformin, lisinopril, atorvastatin, omeprazole less than 1 time per week.
    - Notes forgetting middle of the day dose of gabapentin about 1-2 times per week (if out and about)
  - Has only used 1 dose of acetaminophen (and no ibuprofen) in the last 6 weeks d/t headache
  - Patient was not on omeprazole prior to hip fracture - thought it was to help their bones be stronger so they don’t break a hip again so they take it every day, sometimes twice daily if they feel “weak”

### Deprescribing Case

- **EB is a 78 year old who presents to their Primary Care provider for their 6 month physical**
  - One hospitalization 4 months ago d/t hip fracture - surgery
- **Chronic conditions**
  - Type 2 diabetes (A1C 7.1% today)
  - Hypertension (BP 132/84 mmHg today)
  - Hypercholesterolemia (labs WNL today)
  - GFR 90 - mL/min (down from 65 mL/min 6 months ago)
- **Patient-specific concerns today**
  - Hip pain very minimal now
  - Has a build up of medications at home that he doesn’t know how to get rid of

**Medication List** (8 medications) (up to 15 doses/day)

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metformin 500mg BID</td>
<td></td>
<td>Diabetes</td>
</tr>
<tr>
<td>Gabapentin 500mg TID</td>
<td></td>
<td>Foot and leg pain</td>
</tr>
<tr>
<td>Lisinopril 20mg daily</td>
<td></td>
<td>Blood pressure</td>
</tr>
<tr>
<td>Dulcolax 10mg daily</td>
<td></td>
<td>Constipation</td>
</tr>
<tr>
<td>Acetaminophen 500mg TID PRN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ibuprofen 400mg TID PRN</td>
<td></td>
<td>Hip pain</td>
</tr>
<tr>
<td>Omeprazole 20mg daily</td>
<td></td>
<td>Prophylaxis due to NSAID use</td>
</tr>
</tbody>
</table>

### Clinical Considerations

- **Disease-Specific Therapeutic Goals**
  - Diabetes (A1C - goal <7%, but d/t age, ok to be less strict)
  - Hypertension (Blood Pressure - goal <140/90 - pt at goal)
  - Hypercholesterolemia (lipid panel) - all within normal limits
- **Renal Function**
  - Slight decline since last visit
  - Now that it’s less than 60 mL/min, evaluate each medication for appropriate dosing
    - Gabapentin - max dose 1,800mg/day in 3 divided doses
    - Metformin - no dose adjustment necessary, but a max of 1.5g/day in 2 divided doses is suggested
- **Hip Pain**
  - As patient’s hip pain has subsided, consider need for pain medications
- **Prophylaxis**
  - Taking dulcolax secondary to “pain pills” (possibly opioid?) but no longer on this medication
  - Taking omeprazole secondary to ibuprofen/NSAID but no longer needing this medication
What Medications to Consider Deprescribing?

- **Ibuprofen**
  - Pt no longer using
- **Acetaminophen**
  - Pt no longer using
- **Omeprazole**
  - Pt no longer using medication that this was secondary to
- **Dulcolax**
  - Pt no longer using medication that this was secondary to
  - Pt having undesired effect of more frequent loose stools

Are Any Dose Adjustments Necessary?

- None at this time, but reevaluate in the future if dose increase is warranted or if renal function declines further:
  - **Metformin**
    - Max dose of 1500mg/day if CrCl 45-60 ml/min
  - **Gabapentin**
    - Max dose of 1800mg/day if CrCl 50-79 ml/min

Prioritize and Communicate Plan

- **Top priority**
  - **Omeprazole**
  - **Dulcolax**
  - Both medications are still being taken regularly, but causing adverse effects (dulcolax) or have the potential to cause adverse effects (omeprazole)

- **Secondary**
  - **Ibuprofen**
  - **Acetaminophen**
  - Pt has already discontinued both of these medications, so it's more of a clerical change and stopping automatic refills

Monitoring and Follow-Up

- Encourage pt to reach out if they experience rebound side effects
  - **Omeprazole**
    - Acid reflux (heartburn)
    - Signs of an ulcer (stomach pain, bloating, nausea/vomiting)
  - **Dulcolax**
    - Significantly decreased bowel movement frequency
    - Hard to pass stool
    - Dry stool
    - Decreased appetite

- Reevaluate at next visit
  - # of BMs per day
  - Gastric symptoms
  - Pain

Resources Available Online

- **Deprescribing.org**
  - For patients and healthcare providers
  - Evidence-based deprescribing algorithms
  - Information pamphlets
  - Helpful links to other resources

- **US Deprescribing Research Network**
  - Funded by the US National Institute on Aging
  - Develop and disseminate evidence about deprescribing for older adults
  - Clinician resources (guidelines, algorithms, tools, resources)
  - Patient resources (handouts, sample letter to patients about deprescribing)

Tools and Resources to Aid in Deprescribing

- **Deprescribing.org**
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  - **Evidence-based deprescribing algorithms**
  - **Information pamphlets**
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When Less Is More:
The Art of Deprescribing and Medication Considerations for Older Adults

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