The Importance of Deprescribing for Older Adults

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Learning Objectives

- Identify common patterns of polypharmacy in the post-acute and long-term care patient
- Understand the importance of patient-centered pharmaceutical care
- Identify prescribing cascades and implement strategies to prevent them
- Plan and implement a facility-based interdisciplinary deprescribing program

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Deprescribing

Deprescribing involves intentionally decreasing or discontinuing medications that are potentially harmful or no longer beneficial

Continually reevaluate if a medication is causing more harm than benefit

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Why is deprescribing important?

- All medications can cause harm as well as benefit
- Older adults are particularly vulnerable to the adverse effects of medications
- The more complex the medication list, the more likely there will be interactions or adherence issues
- Personal and clinical goals of care can change over time and should be periodically reevaluated

Think about deprescribing as an important part of medication stewardship

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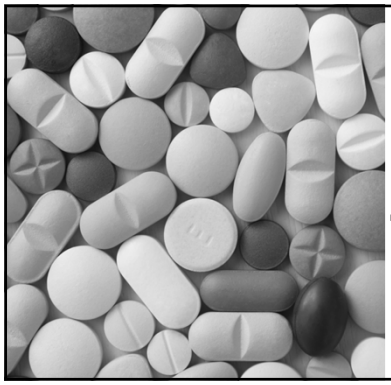

2019 Kaiser Family Foundation Health Tracking Poll

- 54% of patients over age 65 took 4 or more medications

Med D Prescription Drug Program Data Set (2014-2018)

- 43 billion doses of inappropriate medications dispensed (Beers Criteria medications)
- Spending of $25.2 billion on inappropriate medications
- Top three categories
  - Proton Pump Inhibitors
  - Benzodiazepines
  - Tricyclics

Lown Institute

- 750 older patients hospitalized each day due to serious side effect from one or more medications
- Each additional medication added to regimen increases risk of adverse drug event by 7-10%
- Over next decade estimate up to 150,000 premature deaths related to adverse drug events

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Negative Impact on Quality of Life

- Interference with activities
- Worry that a diuretic will cause incontinence in public
- Time it takes to administer nebulizers or other treatments
- Burden of excessive lab or vitals monitoring

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When to Look for Deprescribing Opportunities

- Admission
- Discharge
- Medication reconciliation
- Change of condition or adverse drug event
- Care planning, interdisciplinary meetings
- Discussions with family, caregiver, or resident

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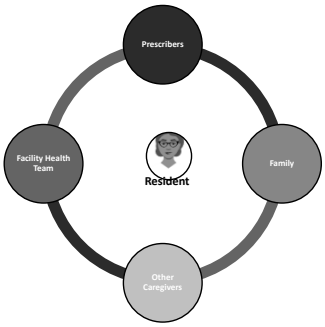
Who is Involved in Deprescribing Efforts

- Family members may have valuable historical information
- Front-line caregivers have more frequent interaction with residents
- Prescribers and specialists can use information obtained from others when making clinical decisions



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Identifying Opportunities for Deprescribing

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Looking at the Medication List

Have there been any changes in the medication list?

- Do we know the indication for each medication?
- Do we know why medication was stopped or started?
- Was the medication changed during a hospitalization or a change in setting?

Are there any apparent duplications?

- If a different medication was used in the hospital, was it continued after discharge? Was the original medication discontinued or is there now a duplication?

Does the medication need a stop date or should it be discontinued?

- Is this medication usually used for a limited duration (e.g., antibiotics, cough and cold, heparin) and has the full course of treatment been completed?
- Was the medication ordered for an illness that has now resolved (e.g., acute pain, acute behavior, wound)?

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Common Opportunities for Deprescribing

	Situation	Considerations
No Longer Required	Ciprofloxacin 500 mg twice daily for a bladder infection	Ask about a stop date
Duplicate Therapy	Lisinopril changed to fosinopril in the hospital. The discharge summary lists both.	Contact the pharmacist or prescriber if a duplication is suspected
Adverse Effects	Newly started on terazosin for enlarged prostate and has several falls	Check for orthostatic hypotension and alert the prescriber

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Looking for Changes in the Resident

Is there a new symptom or functional change?

- Is the new problem a known side effect of a medication (e.g., falls, weight loss)?
- Did it happen about the same time as a medication change?

Does the treatment seem to be having no impact?

- Is a drug-drug interaction causing the treatment to be less effective?
- Does the medication or current dose need to be reevaluated?

Has illness or frailty progressed significantly?

- Are all the chronic medications still needed?
- Is the current dose still safe and effective?
- What are the palliative or end of life wishes of the resident?

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Common Opportunities for Deprescribing

	Situation	Considerations
Lack of Clinical Benefit	Mirtazapine was added for crying that continues long after the medication was started	Discuss other causes with the prescriber such as pain
End of Life/Palliative Care	A person with end-stage cancer is admitted to hospice care and receives lovastatin	The lovastatin is not likely to contribute to comfort or prolong life. Ask about discontinuation.
Safer Alternative is Available	Diphenhydramine for sleep was noted upon admission	High risk medication. Initiate non-drug interventions for sleep-hygiene and ask about tapering off.

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Deprescribing Case Study #1

AB is a 91-year-old female residing in a SNF with a history of Alzheimer's, Depression HTN, Type 2 Diabetes, Osteoarthritis, Hyperlipidemia and Frequent Falls.

She has fallen several times over the past few months.

Her medications include
Memantine XR 28mg once daily, Aspirin 81mg once daily, Mirtazapine 7.5mg at bedtime, Losartan 50mg once daily, Amlodipine 5mg once daily, Metformin 500mg once daily, Glimepiride 1mg once daily, Insulin Detemir 18 units once daily

Poll Question:
Without any additional information, which medication would you discontinue first?

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Deprescribing Case Study #1

LABS
A1c 5.1%

Accu-checks
64-132mg/dL

Blood Pressures
Low 102/58 mmHg 3
High 158/79 mmHg

BIMS

Poll Question:
Considering vitals and labs which medication would you discontinue first?

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ADA Glycemic Targets in Older Adults

	Healthy Older Adult	Complex Older Adult	Very Complex Older Adult
General characteristics	Few coexisting chronic illnesses, cognitively and functionally intact	Multiple coexisting chronic illnesses, ADL impairments, mild-to-moderate cognitive impairment	LTC or end-stage chronic illness, moderate-to-severe cognitive impairment, 2 or more ADL dependencies
Reasonable A1C Goal*	< 7.5%	< 8%	< 8.5%†
Fasting or Preprandial Glucose Goal	80 to 130 mg/dL	90 to 150 mg/dL	100 to 180 mg/dL
Bedtime Glucose Goal	80 to 180 mg/dL	100 to 180 mg/dL	110 to 200 mg/dL

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Drugs Associated with ED Visits in Those 65 Years and Older – Antidiabetics

#2	#7	#8	#14	#15
Insulin	Metformin	Glipizide	Glyburide	Glimepiride

65 years+ with diabetes are more likely to be hospitalized after an ED visit than those without diabetes (34% vs. 26%)

75 years+ have the highest rate of ED visits for hypoglycemia and **2.5X higher** than the group aged 45-64 years

ED = emergency department

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Identifying Candidates for Deprescribing

D	• Dementia, especially with erratic eating patterns and abnormal behaviors
E	• Elderly, especially ≥ 80 years old
I	• Impaired renal function, especially end stage renal disease
N	• Numerous comorbidities, especially ≥ 5 comorbidities
T	• Tight glycemic control, especially A1C < 7%
E	• End of life, especially ≤ 1 year life expectancy
N	• Nursing home residents, especially with multiple comorbidities
S	• Significant weight loss, especially unintentional weight loss
I	• "Inappropriate" medications, especially insulin or sulfonylureas
F	• Frequent hypoglycemia, especially serious episodes needing assistance
Y	• Years of diabetes, especially those > 20 years since diagnosis

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Blood Pressure Targets for Older Patients

Table 1: A Comparison of Blood Pressure Thresholds and Targets between ACC/AHA, ACP/AAFP, and ESC/ESH Guidelines

	ACC/AHA 2017	ACP/AAFP 2017	ESC/ESH 2018
Definition of Older Patients	≥65 years	≥60 years	Elderly 65-79 years Very Old ≥80 years
BP Threshold for Initiation of Pharmacotherapy	≥130/80 mmHg	SBP ≥150 mmHg	Elderly ≥140/90 mmHg Very Old ≥160/90 mmHg
Blood Pressure Target	<130/80 mmHg	SBP <150 mmHg	SBP 130-139 mmHg DBP 70-79mmHg

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Other Medications Commonly Targeted for Deprescribing

- **Cholesterol lowering** (e.g., atorvastatin)
- **Dementia medications** (e.g., donepezil)
- **Osteoporosis agents** (e.g., alendronate given for 5 years)
- **Acid reducers** (e.g., famotidine, omeprazole)
- **Psychiatric medications** (e.g., lorazepam, olanzapine)
- **OTC and Herbals** (e.g., multivitamin, diphenhydramine, ginkgo biloba)

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Common Adverse Effects of Medication

- **morphine** — Constipation, delirium, over-sedation
- **alprazolam** — Falls, daytime sleepiness
- **oxybutynin** — Falls, dry mouth or eyes
- **clonidine** — Orthostatic hypotension, falls
- **glyburide** — Hypoglycemia, falls
- **levofloxacin** — Tendon tears, changes in mood or behavior

Negative Impact on Quality of Life

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The Prescribing Cascade

When a drug side effect is misinterpreted as a new medical condition and additional drug therapy is prescribed to treat this medical condition, we refer to it as a prescribing cascade

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Deprescribing A Team Effort

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Key Members Of The Optimal Deprescribing Meeting

Physician
PA or ARNP
Director of Nursing
Consultant Pharmacist
Social Worker
Dietician
Therapy

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Deprescribing Meeting Day

- Preselect 5-10 Residents to Review
- Ensure the entire team has access to the patient chart
- Assign a team member to document interventions
- Encourage interdisciplinary input during meeting
- Recap each patient's recommended interventions
- Create a deprescribing notebook

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Deprescribing Case Study #2

RD is an 84 yo resident residing in a SNF.
She has a PMH of GERD , DM Type 2, HTN , Alzheimer's Dementia, Major Depressive Disorder, General Anxiety Disorder, Chronic UTI, Osteoporosis, Back and Neuropathic Pain and Insomnia

Medications

Metoprolol 25 mg twice daily
Lisinopril 5 mg daily
KCL 20 mEQ daily
Losartan 100 mg daily
Trazodone 25 mg at bedtime
Remeron 7.5 mg at bedtime
Restoril 15 mg at bedtime
Paroxetine 20 mg daily
Citalopram 40 mg daily
Vit D3 2000u daily
Magnesium Oxide 400 mg daily
Nitrofurantoin 100 mg daily
MVI with Mineral daily
Clonidine 0.1mg q6h as needed
Amitriptyline 50 mg twice daily
Ferrous Sulfate 325 mg three times daily
Vit B12 1000 mcg daily
Omeprazole 20 mg daily (since 1/21)
Famotidine 40 mg daily (since 5/22),
Gabapentin 200 mg three times daily
Tramadol 50 mg three times daily
Colace 100 mg daily
Novolog Sliding Scale before meals and at bedtime
Metformin 500 mg twice daily
Senna S twice daily
Folate 1 mg daily
Megestrol ES 400 mg twice daily

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Labs and Vitals

K 5.2 mmol/L **HgA1c 5.6%**
SrCr 1.0 mg/dL **Hgb 13.8%**
Hct 42% **Mg 2.5 mg/dL**
Vit B12 > 1500 pg/mL **Folate > 22.5 ng/mL**
25 Hydroxy Vit D 89 ng/mL
Systolic blood pressure range 90-100 mmHg
Diastolic blood pressure range 60-64 mmHg
Blood Sugars 90-110 mg/dL
Weight gain of 24 pounds over past 30 days

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Case Study # 2

Deprescribing Opportunities

1. Discontinue Sliding Scale Insulin – A1C is 5.6%
2. Discontinue Potassium Chloride – Serum K was 5.2 ; No diuretic; On ACE and ARB
3. Discontinue Megace ES – therapy greater than 30 days and 24 pound weight gain
4. Discontinue Vit D – levels close to top of therapeutic Vit D range and risk of Vit D toxici
5. Evaluate opportunities with blood pressure medications
6. Evaluate opportunities with depression medications
7. Evaluate opportunities with GERD medications
8. Discontinue Nitrofurantoin 100 mg QD – Antimicrobial Stewardship Compliance
9. Evaluate opportunities with anemia medications

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Case Study # 2

Benefits of Deprescribing

1. Reduced medication burden for the patient
2. Reduced medication pass time requirements for nursing staff
3. Reducing the risk for falls and adverse events
4. Reduced medication costs
5. Reduced risk for F- Tags and Survey deficiencies

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Discussing Deprescribing with the Resident or Family

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Next steps

1	2	3
Involve consultant pharmacist in education to facility and family on deprescribing	Identify Team Members for participation on Deprescribing Team	Set a date and time for the Deprescribing meeting

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Clinical Pearls

- A successful deprescribing program involves the entire interdisciplinary team
- Deprescribing is a continual process of evaluating the appropriateness of medication based on patient specific clinical and personal goals
- Deprescribing efforts improve patient quality of life and reduce adverse medication events, hospitalizations and healthcare costs

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Questions?

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