SA13- Innovative Approaches to Implement Evidence Based Deprescribing Practices in PA/LTC Setting

Saturday, March 24
2:30 PM- 3:30 PM

Session Description
This session will address problems associated with polypharmacy in PA/LTC setting and provide strategies to address these problems. The speakers will offer practical tools that can be helpful in deprescribing in the PA/LTC setting.

Learning Objectives
Discuss current evidence from deprescribing interventions in PA/LTC.
Explain how to overcome barriers to deprescribing in PA/LTC setting.
Explore deprescribing strategies for antipsychotics and opiates in PA/LTC setting.
Describe how to engage interprofessional team members in addressing deprescription in PA/LTC setting.

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Presenter(s) Disclosures: All speakers have reported they have no relevant financial relationships to disclose.
Innovative Approaches to Implement Evidence Based Deprescribing Practices in Post-Acute and Long-Term Care Setting

‘finding the medication ‘sweet spot’ for frail elders in the nursing home’

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Speaker Disclosures

All Speakers, Wagle, Mahajan and Derr, do not have any financial relationship(s) or conflict of interest in relation to this presentation

Objectives of the session

By the end of the session, participants will be able to:

• Discuss current evidence from deprescribing interventions in PA/LTC
• Explain how to overcome barriers to deprescribing in PA/LTC setting
• Explore deprescribing strategies for antipsychotics and opiates in PA/LTC setting
• Describe how to engage interprofessional team members in addressing deprescription in PA/LTC setting

What is Deprescribing?

Deprescribing is the process of intentionally stopping a medication or reducing its dose to improve the person's health or reduce the risk of adverse side effects.

Deprescribing is usually done because the drug may be causing harm, may no longer be helping the patient, or may be inappropriate for the individual patient’s current situation.


Justification for a Deprescribing Initiative in a Nursing Facility

• Polypharmacy
• Adverse Drug Events
• Aging Population and multiple co-morbidities
• Quality of Life
• OTC Medications
• Pharmacogenomics – Precision Medicine

Health Care Spending by Number of Chronic Conditions (2014)
**Annual Prescription Refills by Number of Chronic Conditions (2014)**

![Graph showing the relationship between number of chronic conditions and prescription refills.](image)

**Multi-morbidity, more medicines, more costs**

![Graph showing the relationship between number of chronic conditions and out-of-pocket expenditure for drugs.](image)

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**Prescription Cascade**

- Drug 1
  - ADE interpreted as new medical condition
- Drug 2
  - ADE interpreted as new medical condition
- Drug 3
  - ADE interpreted as new medical condition

ADE = Adverse Drug Effects


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**Barriers to Deprescription in PA/LTC setting**

**patient and family**

- “I have to ask my primary doctor after I finish my rehab”
- “My neurologist started this medicine”
- “I have been taking it for long time”
- “What is the alternative?”
- “It worked for the night shift’s CNA’s mom, why can’t I take it? The aide said I should ask for this medicine”
- “My daughter said I must take this medicine”

**Barriers to Deprescription in PA/LTC setting**

**provider level**

- “I don’t know this patient”
- “I’m not the PCP”
- “The specialist started this medication”
- “The family wants it”
- “Insurance covers it, so why not?”
- “They have been taking it for 35 years”
- “But the symptom is still there”
- “The guidelines say this patient should be on this medication”
Barriers to Deprescription in PA/LTC setting

**interdisciplinary team level**

- “That’s the provider’s role”
- “I dispense what order is written, I don’t question”
- “I don’t know what my role is in deprescription”

**system and policy level**

- Limitations on PA/LTC specific guidelines
- Lack of comprehensive approach to deprescription

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What are strategies to success despite many barriers?

Where are the opportunities to intervene?

Deprescription opportunities in PA/LTC: When, where and by whom?

- Admission (Transitions of Care from a Hospital or other provider)
- Medication Reconciliation - Sources and Review of Medication List (Admission Nurse, Consultant Pharmacist, Primary Care Physician, Medical Director, Family meeting, Community Pharmacy)
- Entering medications in facility EMR and medication reviews in EMR
- Interdisciplinary team meeting and team members’ rounds
- Review of medicines by consultant pharmacist
- Discharge planning and discharge team

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Process mapping for deprescription

1. Prepare patient (expectation, Outcome, goal)
2. Set deprescription goals
3. Communicate
4. Identify Medication(s) to deprescribe
   - Preferences/Potential benefits/Potential harms/Drug utilization
5. Develop weaning strategy
6. Monitor, Review and Support

Engage the Interdisciplinary Team

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Current Evidence in Deprescribing

Systematic Evidence Based Review was conducted

Key words in search engine (Polypharmacy, Inappropriate Medication, Deprescription, Subacute Care, Long term care, Nursing home) for literature before 12/1/2017:

Total studies 41 (experimental, quasi-experimental) and 6 Systematic Evidence based Review (SER)

12 out of 41 studies (30%) were from US

Systematic Evidence Based Review (N=6)

- Unclear evidence for long term effects on deprescription
- Further studies with robust design and large randomized controlled trials needed

Strategies

Strategies from literature review (N=41):

- Education Based Strategy (11)
- Education Outreach Initiatives (7)
- Interdisciplinary Team (9)
- Pharmacist driven review and intervention (8)
- Specialist involvement (geriatric psychiatrist, psychiatrist, infectious disease specialist) (4)
- Physician driven (2)

Ingredients of Team work

Think of a sports team and health care team

In these two settings what are the similarities and differences on following:

- role clarity
- trust and confidence
- the ability to overcome adversity
- the ability to overcome personal differences
- collective leadership

1. Leadership and management
2. Communication
3. Personal rewards, training and development
4. Appropriate resources and procedures
5. Appropriate skill mix
6. Climate
7. Individual characteristics
8. Clarity of vision
9. Quality and outcomes of care
10. Respecting and understanding roles

Enhanced Interdisciplinary Team Work for Deprescription

Concept of Motivational Interview and de-prescription initiative

“The healthcare provider’s role is to facilitate, rather than dictate, and what may have once felt like a struggle is now a collaborative and egalitarian relationship”

5 principles of Motivational Interview:

- Express and Show Empathy
- Support and Develop Discrepancy
- Deal with Resistance
- Support Self-Efficacy
- Autonomy


http://work.chron.com/5-principles-motivational-interviewing-1636.html

http://startupmanagement.org/2017/12/26/13
BEERS Criteria – how to use it?

Medications in the AGS 2015 Beers Criteria are potentially inappropriate, not definitely inappropriate. The AGS 2015 Beers Criteria should be a starting point for a comprehensive process of identifying and improving medication appropriateness and safety.

Dr. B uses Beers criteria

- Amiodarone is on the AGS 2015 Beers Criteria because of its multiple toxicities and is considered a potentially inappropriate medication for the management of atrial fibrillation because there are safer alternatives.
- Dr. B. asks about any side effects of amiodarone and discovers Ms. A's symptoms of malaise and anorexia.
- Dr. B. e-mails Ms. A's cardiologist to discuss options for using another medication; he concurs this would be reasonable.
- Dr. B contacts Ms. A to suggest substituting another medication for management of her atrial fibrillation and following her symptoms to see whether they improve.

Consider the situation of Ms. A

- Ms. A is an 82-year-old woman.
- Dr. B reviews the patient's medication list and sees that she is taking amiodarone to treat atrial fibrillation. She has been on this medication for several years and reported “no problems” with it during visits with her previous provider.

Beers Criteria: Application of Key Principles for Clinicians

- Don't let Beers Criteria distract you from closely attending to other elements of prescribing that are not addressed by the criteria.
- These include
  - Other high-risk medications (e.g. warfarin, hypoglycemics)
  - Medication adherence
  - Unnecessary medication use
  - Underuse of medications
Nurses' role in BEERS criteria

- Major role in counseling patient and caregiver regarding medication safety
- Nursing can check if medicine is on Beers List, review alternatives, trigger discussion with providers


STOPP and START

- STOPP (Screening Tool of Older Persons’ Prescriptions) is comprised of 65 clinically significant criteria for potentially inappropriate prescribing in older people
- START (Screening Tool to Alert doctors to Right, i.e. appropriate, indicated Treatment) consists of 22 evidence-based prescribing indicators for commonly encountered diseases in older people


Examples of STOPP and START criteria

Examples of STOPP
1. Loop diuretic for dependent ankle edema only i.e. no clinical signs of heart failure (no evidence of efficacy, compression stocking usually more appropriate)
2. Loop diuretic as first-line monotherapy for hypertension (safer, more effective alternatives available)

Examples of START
1. ACE Inhibitor following acute MI
2. Aspirin in the presence of chronic atrial fibrillation, where warfarin is contraindicated, but not aspirin

The Anti Cholinergic Burden (ACB) Scale

- ACB scale can be used to ascertain anticholinergic burden of patient in nursing home
- Easy tool to alert provider on the anticholinergic burden
- Each one point increase in the ACB total score, has been correlated with a 26% increase in risk of death, and a decline in MMSE score of 0.33 points over 2 years.

## ACB Scale

- Possible Anticholinergics = 1
- Definite Anticholinergic score = 2 (moderate) and 3 (severe)
- Each definite anticholinergic may increase risk of cognitive impairment by 46% over 6 years
- Each one point increase in ACB total score has been correlated with a 26% increase in risk of death

[http://www.agingbraincare.org/](http://www.agingbraincare.org/)

## Medication Appropriateness Index

- Is there an indication for the drug?
- Is the medication effective for the condition?
- Are the dosage correct?
- Are the directions correct?
- Are the directions practical?
- Are there clinically significant drug-drug interactions?
- Are there clinically significant drug-disease interactions?
- Is there unnecessary duplication with other drugs?
- Is the duration of therapy acceptable?
- Is this drug the least expensive alternative compared to others of equal utility?


## Norwegian General Practice Nursing Home (NORGEP-NH) criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Single Substance Criteria (11 Criteria)</td>
<td>Regular Use should be avoided</td>
</tr>
<tr>
<td>Example: use of hypnotics</td>
<td>Over-sedation, falls</td>
</tr>
<tr>
<td>B. Combination Criteria (14 criteria)</td>
<td>cominations to avoid</td>
</tr>
<tr>
<td>Example: Bisphosphonate + proton pump inhibitors</td>
<td>Increased risk of fractures</td>
</tr>
<tr>
<td>C. Deprescribing Criteria (8 criteria)</td>
<td>Need for continued use to be reassessed</td>
</tr>
<tr>
<td>Example: urologic spasmolytic</td>
<td>Risk of anticholinergic side effects</td>
</tr>
</tbody>
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## ARMOR – A tool to Evaluate Polypharmacy in Geriatric Patients

- Assess
- Review
- Minimize
- Optimize
- Reassess


## Clinical Decision Support

- www.medstopper.com
- https://deprescribing.org/

## PPI Deprescription Algorithm

[www.medstopper.com](http://www.medstopper.com) • [https://deprescribing.org/](https://deprescribing.org/)
Pharmacogenomics

- Initial assessments/implementation efforts have lead to positive outcome in deprescription and cost saving
- Study by Salidvar et al: (N = 132):
  - Elimination of one to three drugs per patient
  - Estimated US$621 in annual savings per patient
- Barriers: Physician training, clear clinical pathways, evidence-based guidelines, and patient education materials (Finkelstein et al, 2016)

Case 1

- 78 years old female in nursing home for long term care.
- PMH: Dementia, hypertension, diabetes, falls, hypothyroidism, constipation
- HPI: In a month, she had two unwitnessed falls without injuries. Other histories: former smoker, former drinker, nephew is guardian.
- Labs: Creatinine CrCl 33 ml/min (CG), Vit D 30.2, K 3.8, Na 143, Creatinine 1.13, BUN 17 mg/dl, Hb 10.4 Hct 31.7, WBC 6.9, platelet 80,
- Wi 140lb, BP 154/63, HR 61, T 97.2F, RR 16, B sugar 168 mg/dl

Case 1 medication list

- Acetaminophen 650 mg po q 6 hour prn fever/pain,
- Amlodipine 10 mg daily
- Atorvastatin 80 mg po daily
- Carvedilol 25 mg po bid
- Docucate 100 mg po bid
- Hydrochlorothiazide 12.5 mg po daily
- Levothyroxine 50 mcg po daily

Antipsychotic was started when she was admitted in hospital 2 months ago and she had hyperactive delirium.

Case 1 discussion

Introduce Tool and Strategy

Tools:
- BEERS Criteria
- STOPP and START
- RACS Scale
- MAI
- NORSEPN-NH
- ARMOR
- Clinical Decision Support System

Deprescribing Antipsychotics

Withdrawal versus continuation of chronic antipsychotic drugs for behavioural and psychological symptoms in older people with dementia (Review)

Case 2

- 69 years old female, who was recently admitted in hospital for pneumonia and altered mental status; and now admitted in your skilled nursing facility.
- PMH significant for:
  - COPD
  - Charcot Arthropathy
  - Peripheral Neuropathy
  - Hepatitis C s/p Harvoni therapy
  - Cirrhosis of liver
  - Glaucoma
  - Hypertension
  - Depression
  - GERD

- How do you proceed about deprescribing opportunity for her?

Case 2 medication list

- Omeprazole 20 mg capsule twice daily
- Potassium chloride 20 meq CR tablet once daily
- Budesonide-Formeterol 160-4.5 mcg/actuation inhaler 2 puffs inhalation twice a day
- Timolol 0.5 % ophthalmic solution one drop daily in each eye
- Umeclidinium 62.5 mcg/actuation blister with device one spray daily
- Hydrocodone-acetaminophen 7.5-325 mg per tablet three times a day for pain
- Pregabalin 75 mg capsule twice a day
- Albuterol 2.5 mg/3 mL nebulizer solution four times a day
- Alpha lipoic acid 300 mg capsule once a day
- Aspirin 81 mg tablet once daily,
- Furosemide 40 mg tablet once a day
- Lactulose 10 gram/15 mL solution 20 g three times a day
- Metoprolol tartrate 25 mg tablet twice a day
- Mirtazapine 15 mg tablet once at bedtime
- Taper and stop AP
- Monitoring and history for duration of tapering
- 3 weeks to 6 weeks
- Be aware of patient's medications
- Deprescribing algorithm
- Deprescribing
- Introduce Tool and Strategy

Case 2 discussion

Introduce Tool and Strategy

- Tools:
  - BEERS Criteria
  - STOPP and START
  - ACB Scale
  - MAI
  - NORGEP-NH
  - ARMOR
  - Clinical Decision Support System

Deprescribing opiates

- Go Slow: decrease in 10% per week or 10% per month depending upon individual patient, use history
- Consult: interdisciplinary team, specialists as indicated
- Support: appropriate psychosocial support
- Encourage "Let patients know that most people have improved function without worse pain after tapering opioids."

Addressing Barriers for Deprescription

- Patient and Family
- Provider
- Interdisciplinary team
- System and policy

Take Home Message

- There is remarkable QI opportunity around medication safety in PA/LTC setting.
- Facilities are not unique, but some strategies work better in some environment i.e., a nurse vs director of nursing vs MDS coordinator vs provider (physician, NP, PA) may be your champion.
- Use tools to screen for polypharmacy and high risk medications and to weigh risks and for appropriateness of use for individual patient.
- Enhance interdisciplinary team work to improve medication safety in PA/LTC setting.
- Make a robust dashboard in your facility to track medication usage and interventions.