POLYPHARMACY: EXPLORING RATIONAL PRESCRIBING & DEPRESCRIBING

Ellen Fulp, PharmD, MSPC, BCGP
Director of Pharmacy Education, AvaCare, Inc.
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OBJECTIVES

- Explore rational prescribing and deprescribing
- Review available tools for evaluating medication appropriateness in geriatric and seriously ill patient populations
- Discuss over-the-counter (OTC) utilization and recommendations for an aging, seriously ill patient population
POLYPHARMACY: WHAT’S THE BIG DEAL?

- Mrs. P.
  - 75-year-old female
  - BP average = 138/84 mm Hg
    - Started on amlodipine 5mg po once daily (8/3/20)
    - Started on furosemide 20mg po once daily (8/17/20)
  - Follow-up visit in September 2020
    - Electrolyte imbalance, recent fall, confusion
    - Hospice referral considered
POLYPHARMACY: WHAT'S THE BIG DEAL?

- Emphasis on treatment, not prevention
- Chronic conditions = 90% of healthcare spending in America
- 60% of adults in the U.S. have at least one chronic condition
- 40% of adults in the U.S. have at least two chronic conditions
POLYPHARMACY: WHAT’S THE BIG DEAL?

- Regular use of five or more drugs to treat medical conditions
- Risk increases with > five medications
- Polypharmacy is linked with:
  - Adverse drug events
  - Increased hospitalization
  - Physical and cognitive decline
  - Drug-drug interactions
  - Falls
  - Prescribing cascades
LONG TERM CARE (LTC) FACILITY RESIDENTS

- Monthly medications
- Preventable adverse drug events (ADE)
  - Medications frequently involved:
    - Antipsychotics
    - Warfarin
MEDICATION APPROPRIATENESS

- Evaluate need for medication through assessment of important factors
  - Remaining life expectancy
  - Time until therapeutic benefit of medication
  - Goals of care
  - Treatment target
- Recommend deprescribing as necessary
DEPRESCRIBING

- Planned, supervised process of dose reduction or discontinuation of medications that are potentially harmful or no longer necessary
- Essential part of good prescribing practices
- Reduce medication burden or harm while improving quality of life
# Deprescribing

## Barriers

- Clinician discomfort
- Resistance from patients
- Time expenditure
- Drug withdrawal adverse effects
- Lack of resources (i.e., clinical pharmacists, databases)

## Benefits

- Reduce adverse drug reactions
- Reduce pill burden
- Reduce risk of morbidity and mortality
- Improve quality of life
TOOLS

- Anticholinergic Activity
- Beers Criteria
- Screening Tool of Older Persons’ Prescriptions (STOPP)
- Fit for The Aged (FORTA)
- Medication Appropriateness Index
- CMS Drug Utilization Review Criteria
ANTICHLINERGIC MEDICATIONS

- Cumulative anticholinergic activity (AA)
- Adverse effects
- Dementia patients
- Over-the-counter availability
- Hospitalizations, falls, medical utilization

Cognitive Impairment
Dry Mouth
Blurred Vision
Constipation
Urinary Retention
Tachycardia
BEERS CRITERIA

- Potentially Inappropriate Prescribing
  - Avoided with Certain Conditions
  - Used with Caution
  - Drug-Drug Interactions
  - Inappropriate for Most Older Adults
  - Dose Adjusted Based on Kidney Function
MEDICATION APPROPRIATENESS INDEX

<table>
<thead>
<tr>
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<th>Question</th>
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<tbody>
<tr>
<td>1.</td>
<td>Is there an indication for the drug?</td>
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<td>2.</td>
<td>Is the medication effective for the condition?</td>
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<td>3.</td>
<td>Is the dosage correct?</td>
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<td>4.</td>
<td>Are the directions correct?</td>
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<td>5.</td>
<td>Are the directions practical?</td>
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<td>6.</td>
<td>Are there clinically significant drug-drug interactions?</td>
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<td>7.</td>
<td>Are there clinically significant drug-disease interactions?</td>
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<td>8.</td>
<td>Is there unnecessary duplication with other drugs?</td>
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<td>9.</td>
<td>Is the duration of therapy acceptable?</td>
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<td>10.</td>
<td>Is this drug the least expensive alternative compared with others of equal usefulness?</td>
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PHARMACOKINETIC CHANGES

Absorption
- Decreased rate through GI tract

Distribution
- Decreased lean body mass

Metabolism
- Decreased liver blood flow

Elimination
- Decreased glomerular filtration rate (GFR)
RENAL IMPAIRMENT

- Dose-related adverse events
- Renal impairment and advancing age
- Decreased muscle mass
- Dosing guidelines
OVER-THE-COUNTER (OTC) PRODUCT UTILIZATION

- Herbals and supplements
- Increasing frequency of use
- Omitted by clinicians and patients
- Accessibility
- Information transfer
- Lacking data
# OVER-THE-COUNTER (OTC) PRODUCT UTILIZATION

## Analgesics
- Acetaminophen
- Aspirin
- NSAIDs
  - Ibuprofen
  - Naproxen

## Antihistamines
- Chlorpheniramine
- Dimenhydrinate
- Diphenhydramine
- Meclizine

## Herbals
- Ginkgo biloba
- St. John’s Wart
- Echinacea
- Ginseng
- Garlic
- Saw palmetto
- Kava
- Valerian root
TIP FOR SUCCESS: TAKE A STEPWISE APPROACH

- Goals of Care
- Risk vs. Benefit
- Dose Reduction
- Simplified Schedule
- Drug Therapy Review
- Discontinue Drugs as Indicated
- Adverse Effects
- Non-Drug Therapy
- Know Common Drugs
COMMUNICATION TIPS

- Professional behavior
- Open-ended questions
- Acknowledge limitations
- Consistent messages
- Individualized care
QUESTIONS?

Ellen Fulp, PharmD, MSPC, BCGP
AvaCare, Inc.
ellenf@avacare.biz
1-866-794-1044
THANK YOU!
REFERENCES


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