



EDUCATIONAL RESOURCES

# POLYPHARMACY: EXPLORING RATIONAL PRESCRIBING & DEPRESCRIBING

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# OBJECTIVES

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- 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



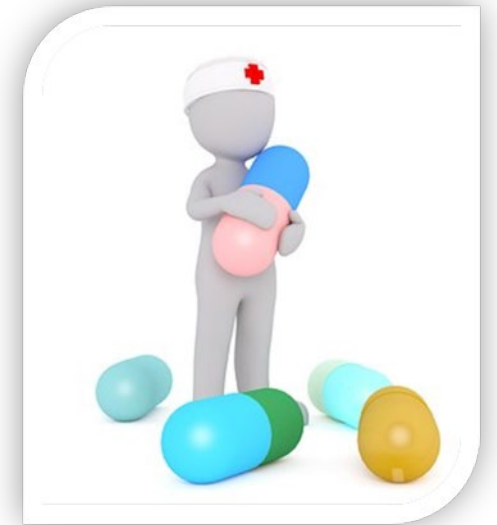
# MEDICATION APPROPRIATENESS

- 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

# ANTICHOLINERGIC MEDICATIONS

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

Cognitive  
Impairment

Dry Mouth

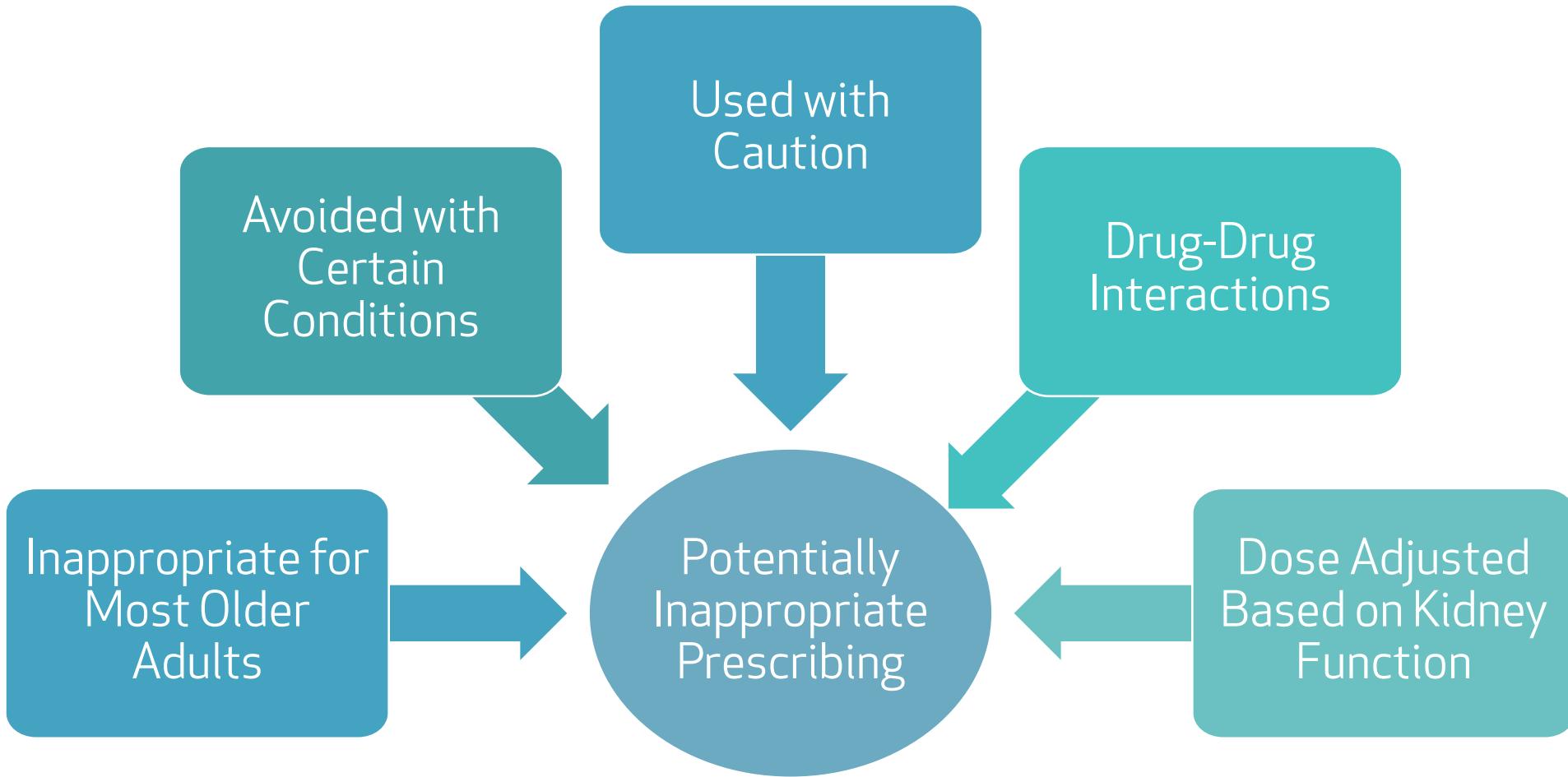
Blurred  
Vision

Constipation

Urinary  
Retention

Tachycardia

# BEERS CRITERIA



# MEDICATION APPROPRIATENESS INDEX

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



# PHARMACOKINETIC CHANGES

Absorption

Decreased rate through GI tract

Distribution

Decreased lean body mass

Metabolism

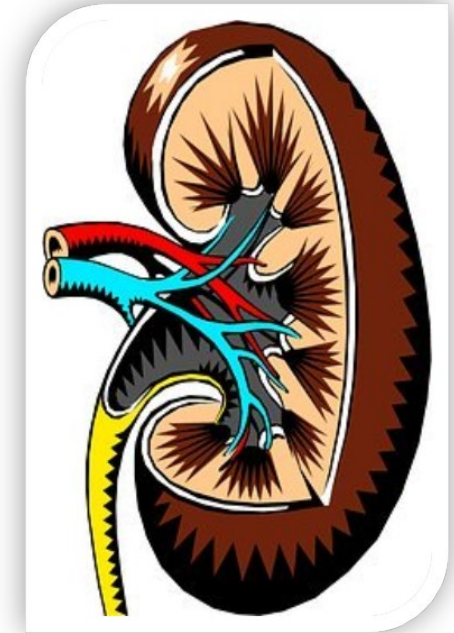
Decreased liver blood flow

Elimination

Decreased glomerular filtration rate (GFR)

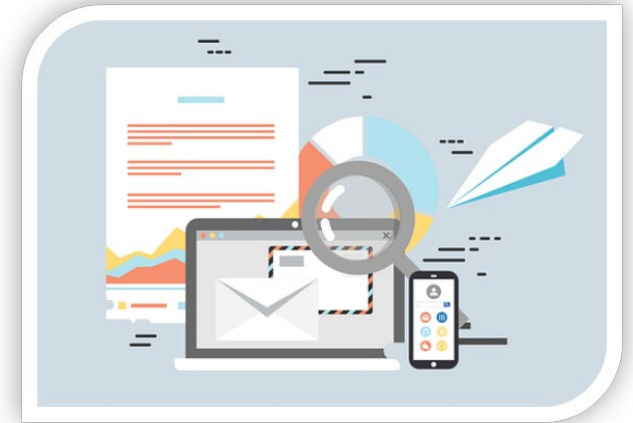
# RENAL IMPAIRMENT

- 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

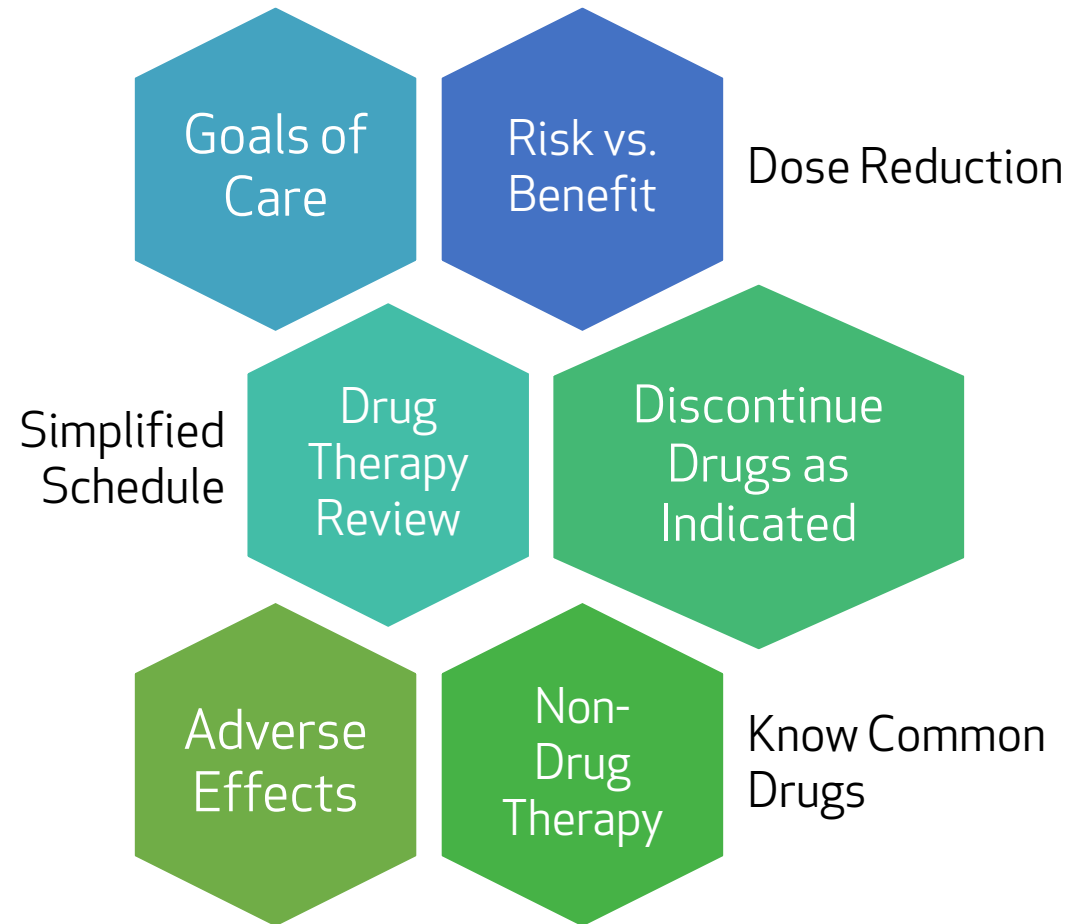
## Antihistamines

- Chlorpheniramine
- Dimenhydrinate
- Diphenhydramine
- Meclizine

## Herbals

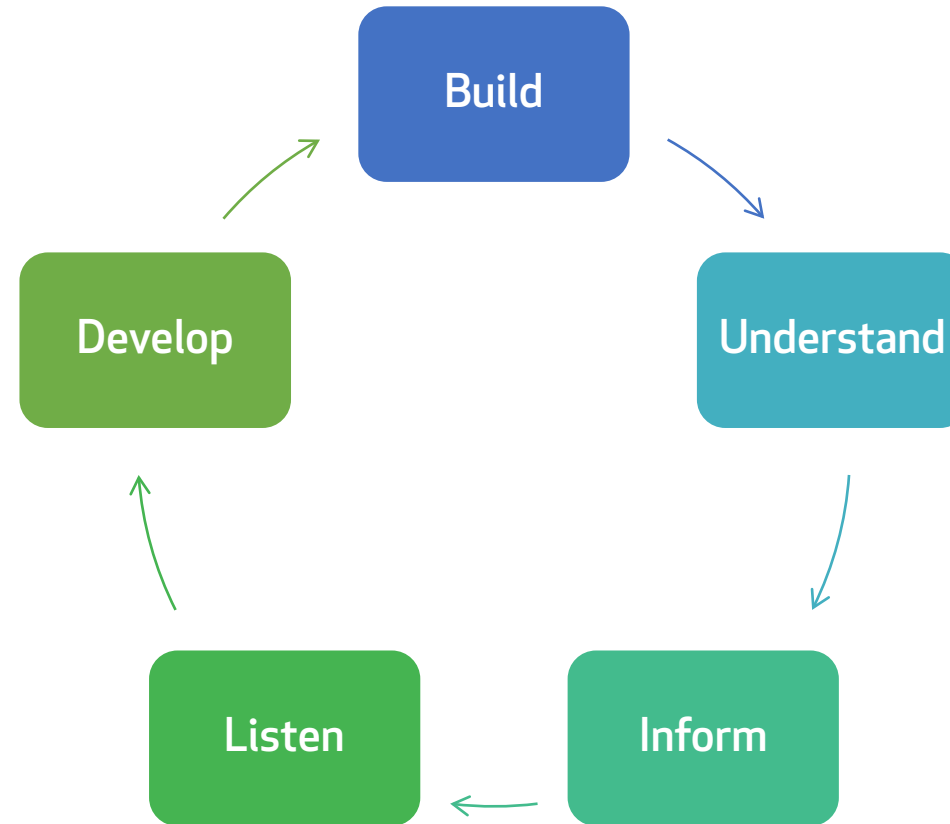
- Ginkgo biloba
- St. John's Wart
- Echinacea
- Ginseng
- Garlic
- Saw palmetto
- Kava
- Valerian root

# TIP FOR SUCCESS: TAKE A STEPWISE APPROACH



# COMMUNICATION TIPS

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





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# QUESTIONS?

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# THANK YOU!



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