Speaker Introduction

Katee Kindler, PharmD, BCACP

Current Practice:

- Clinical Pharmacy Specialist – Ambulatory Care, St. Vincent Indianapolis
- Assistant Professor of Pharmacy Practice, Manchester University, College of Pharmacy, Natural, and Health Sciences

Email: katee.kindler@ascension.org
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High Risk Medications in the Elderly
Katee Kindler, PharmD, BCACP

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Objectives

• Determine impact of high risk medications in elderly patients

• Identify medications that are high risk in elderly patients

• Develop strategies for alternative options for high risk medications
One-third of elderly patients have an adverse drug event

Higher prescribing in elderly patients
- Multiple medications
- Multiple comorbidities

Physiologic changes that predispose elderly patients to adverse drug events

Individualize care
- Therapeutic goals may be different

What is the impact?

Adverse drug events are the third or fourth leading cause of death in elderly patients that are hospitalized.

Analysis of adverse drug events in Medicare patients

28% of all events were preventable

>40% of serious events were preventable

Most errors occurred at prescribing or monitoring


“Any symptom in an elderly patient should be considered a drug side effect until proved otherwise.”

—Jerry Gurwitz, MD

ALL medications, prescription & over-the-counter (OTC), have potential risks which must be weighed with the benefits.

Some medications are potentially unsafe for continued use in older adults

- American Geriatrics Society: Beers Criteria for Potentially Inappropriate Medication Use in Older Adults, last updated 2015
### Overview of Potentially Unsafe Medications

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*Not an all-inclusive list

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Antihistamines

Risks associated:
• Confusion
• Falls
• Fatigue
• Dry mouth
• Constipation

Common Medications:
• Diphenhydramine
• Chlorpheneramine
• Doxylamine
• Meclizine
• Hydroxyzine
• Promethazine

Possible Alternative

Allergy products such as:
• cetirizine
• fexofenadine
• loratadine
Steroid nasal sprays such as:
• fluticasone

Benzodiazepines

Risks associated:
• Falls
• Confusion

Common Medications:
• Alprazolam
• Chlordiazepoxide
• Clonazepam
• Diazepam
• Lorazepam

Possible Alternative
For anxiety:
• sertraline
• citalopram
• buspirone

Sleep Medications

Risks associated:
• Falls
• Confusion

Common Medications:
• Diphenhydramine
• Zolpidem
• Zaleplon
• Eszopiclone

Possible Alternative
Non-medication sleep hygiene techniques

## Muscle Relaxants

### Risks associated:
- Sedation
- Falls
- Fractures

### Common Medications:
- Carisoprodol
- Cyclobenzaprine
- Methocarbamol

### Possible Alternative

Avoid use, little evidence that they work well

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Non-steroidal Anti-inflammatory Agents

Risks associated:
• Gastrointestinal bleeding
• Gastric ulcers
• Kidneys?

Common Medications:
• Ibuprofen
• Naproxen
• Meloxicam

Possible Alternative
• Switch to acetaminophen
• May need to add a medication (proton-pump inhibitor) to protect the stomach
Proton Pump Inhibitors

Risks associated:
- Clostridium difficile
- Bone loss and fractures

Common Medications:
- Omeprazole
- Esomeprazole
- Lansoprazole
- Pantoprazole

Possible Alternative

Important to discuss why patient is taking this medication and ensure strong reason to continue daily use.

Tricyclic Antidepressants

Risks associated:
• Highly anticholinergic
• Sedating
• Orthostatic hypotension
• Confusion

Common Medications:
• Amitriptyline
• Clomipramine
• Doxepin
• Imipramine
• Nortriptyline

Possible Alternative

For depression:
• SSRI (avoid paroxetine)
• SNRI
• bupropion

For neuropathic pain:
• SNRI,
• gabapentin, pregabalin
• lidocaine patch

Antipsychotics

Risks associated:
- Stroke
- Mortality
- Cognitive decline

Common Medications:
- Aripiprazole
- Haloperidol
- Olanzapine
- Prochlorperazine
- Quetiapine
- Risperidone
- Ziprasidone

Possible Alternative
- Non-pharmacological options such as behavioral therapy
- May be warranted if certain indications (schizophrenia, bipolar, etc.) or harm to self or others

Urinary incontinence medications

Risks associated:
• Anticholinergic
• Confusion

Common Medications:
• Darifenacin*
• Fesoterodine
• Oxybutynin
• Solifenacin*
• Tolterodine

Possible Alternative

Bladder specific agents:
• Darifenacin
• Solifenacin
M3 receptor agonist:
• mirabegron

Which of the following is an appropriate medications for an elderly patient?

A. acetaminophen
B. diphenhydramine
C. omeprazole
D. zolpidem
Conclusion

• Use caution when providing new medications to elderly patients

• Review current medication list carefully and consider safer alternatives

• Monitor high risk medications closely

• Individualize care for each elderly person


