

# MiCMRC/MiPCT Care Manager Educational Webinar

## High Risk Medications in Older Adults – Beers Update 2015

February 10, 2016



MiCMRC/MiPCT Care Manager Educational Webinar

*High Risk Medications in Older Adults – Beers  
Update 2015*

***Expert Presenter:***

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# Instructions for Obtaining Nursing and Social Work CE

To receive CE 1.0 contact hour for the *High Risk Medications in Older Adults – Beers Update 2015*

- View the Live webinar 2/10/16 2-3pm
  - Login individually via your computer
- Complete the evaluation which will pop up as “Polling Questions” at the conclusion of the webinar
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- For technical assistance please e-mail
  - [mimrc-requests@med.umich.edu](mailto:mimrc-requests@med.umich.edu)

*\*Note:* This webinar will be recorded. CE for viewing the recorded webinar will be available on [www.mimrc.org](http://www.mimrc.org). The recorded webinar will be available for Nursing and Social Work CE until February 2, 2017



# Disclosure Statement of Financial Interest

- Kimberly Moon, Marie Beisel, Lauren Yaroch, and Betty Rakowski have reported no relevant conflict of interest for the purpose of the MiCMRC/MiPCT Webinar, “High Risk Medications in Older Adults – Beers Update 2015”
- There is no commercial support for this activity.



# Learning Objectives

- Describe the importance of the Beers Criteria.
- Implement strategies to decrease usage of potentially inappropriate medications in older adults.



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# 2015 American Geriatrics Society (AGS) Beers Criteria Update

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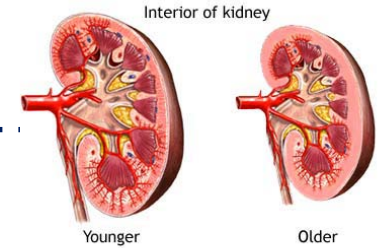
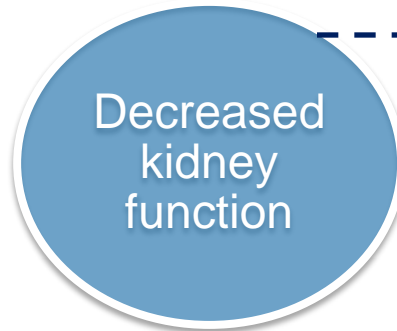
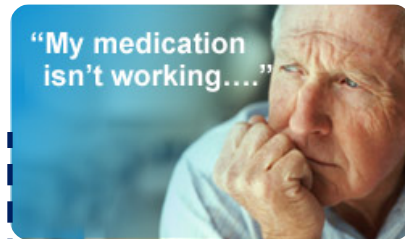
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# NEW 2015 Highlights

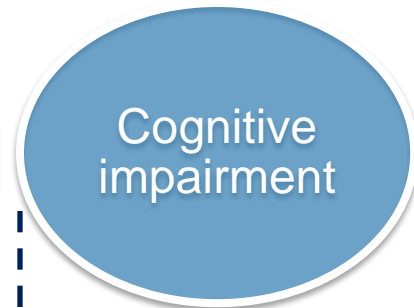
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- The 2015 American Geriatrics Society (AGS) Beers Criteria has been published to reflect changes made to the 2012 list of potentially inappropriate medications (PIMs) for patients 65 and older.
- Lists within the Beers Criteria include Drugs to be Used with Caution, Drug-Disease Interactions, Highly Anticholinergic Drugs, etc.
- The Beers Criteria does not apply to hospice/palliative care patients
- What's new?
  - Addition/removal of medications
  - Select drug-drug interactions
  - Renal dosage adjustments
  - Alternative medications list
  - Usage guide

# Why Are Older Patients At Risk?



ADAM.





# Antihistamines

## Concern:

- Clearance reduced with advanced age
- Highly anticholinergic; increased risk of confusion, dry mouth, constipation
- Tolerance develops when used as a hypnotic

Medications	Alternative for older patients
brompheniramine carbinoxamine chlorpheniramine clemastine cyproheptadine dexbrompheniramine dexchlorpheniramine dimenhydrinate <b>Benadryl® (diphenhydramine)</b> doxylamine hydroxyzine meclizine promethazine triprolidine	<p><b>For acute treatment of severe allergic reaction, use smallest dose possible.</b></p> <p>Second generation antihistamines: <b>Zyrtec® (cetirizine), Claritin® (loratadine), Allegra® (fexofenadine)</b> or intranasal steroid s</p> <p>For nausea, consider <b>Zofran® (ondansetron), Compazine® (prochlorperazine)</b></p>

# Sleep Medications

## Concern:

- Increases delirium, risk of fall and fractures
- Offers minimal improvement in sleep latency and duration
- Addictive potential

## Medications

### **Ambien® (zolpidem)**

Lunesta® (eszopiclone)

Sonata® (zaleplon)

Silenor® (doxepin)

Benadryl® (diphenhydramine)

## Alternative for older patients

**Avoid use for ANY duration**

Use **low dose trazodone**  
(25mg) intermittently.

USP-certified over-the-counter  
**melatonin** supplements

Also, **sleep hygiene education, cognitive behavioral therapy.**

# Parkinson's Medications

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## Concern:

- Highly anticholinergic
- Dry eyes/mouth, urinary retention, constipation, cognitive changes

Medications	Alternative for older patients
<b>Benztropine</b> <b>Trihexyphenidyl</b>	carbidopa/levodopa selegilene ropinirole amantadine (for EPS)

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# Antidepressants

## Concern:

- Used off-label for insomnia, neuropathic pain, fibromyalgia, etc.
- Anticholinergic side effects - can cause cognitive impairment, dry mouth/eyes, constipation, sedation
- Can cause orthostatic hypotension

## Medications

### **Elavil® (amitriptyline)**

Asendin® (amoxapine)  
Anafranil® (clomipramine)  
Norpramin® (desipramine)  
Silenor® (doxepin) >6 mg/day  
Tofranil® (imipramine)  
Pamelor® (nortriptyline)

### **Paxil® (paroxetine)**

Vivactil® (protriptyline)  
Surmontil® (trimipramine)

## Alternative for older patients

Consider an agent with less potential for anticholinergic effects:

**Cymbalta® (duloxetine)**

**Effexor® (venlafaxine)**

**Topamax® (topiramate)**

For depression: **SNRI, bupropion**

For neuropathic pain: **SNRI, Neurontin® (gabapentin), Lyrica® (pregabalin), capsaicin topical, lidocaine patch**

# Benzodiazepines (NEW)

## Concern:

- Increased sensitivity and decreased metabolism of long-acting agents
- Increase risk of cognitive impairment, delirium, falls, fractures, and motor vehicle crashes

Medications	Alternative for older patients
<u>Short &amp; immediate-acting:</u> <b>Xanax<sup>®</sup> (alprazolam)</b> , estazolam, lorazepam, oxazepam, <b>Restoril<sup>®</sup></b> <b>(temazepam)</b> , triazolam	For anxiety: <b>buspirone, SNRI</b>
<u>Long-acting:</u> chlorazepate, chlordiazepoxide, <b>Klonopin<sup>®</sup></b> <b>(clonazepam)</b> , diazepam, flurazepam, quazepam	For sleep: USP-certified over-the-counter <b>melatonin</b> supplements. Also, <b>sleep hygiene education, cognitive behavioral therapy</b>

# Butalbital

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## Concern:

- No evidence to show analgesic effect of barbiturate component of migraine medications
- Addictive potential
- Tolerance can lead to medication overuse headache

Medications	Alternative for older patients
<b>Fioricet<sup>®</sup></b> <b>(butalbital/APAP/caffeine)</b>	For migraine headaches:
<b>Fiorinal<sup>®</sup></b> <b>(butalbital/ASA/caffeine)</b>	<b>Triptans (Imitrex<sup>®</sup>, etc)</b> <b>Topamax<sup>®</sup> (topiramate)</b> <b>Effexor<sup>®</sup> (venlafaxine)</b>

# Skeletal Muscle Relaxants

## Concern:

- Can cause anticholinergic adverse effects and sedation
- Increases fall risk
- Effectiveness at dosages tolerated by older adults is questionable
- “Holy Trinity”

Medications	Alternative for older patients
Soma <sup>®</sup> (carisoprodol) Parafon Forte <sup>®</sup> (chlorzoxazone) <b>Flexeril<sup>®</sup> (cyclobenzaprine)</b> Skelaxin <sup>®</sup> (metaxalone) Robaxin <sup>®</sup> (methocarbamol) Norflex <sup>®</sup> (orphenadrine)	Alternatives may include: <b>Zanaflex<sup>®</sup> (tizanidine)</b> <b>baclofen</b>  For acute mild or moderate pain: <b>acetaminophen, ibuprofen or naproxen</b>

# Antispasmodics (NEW)

## Concern:

- Highly anticholinergic
- Uncertain effectiveness

Medications	Alternative for older patients
Atropine (excludes ophthalmic)	Constipation:
Belladonna alkaloids	<b>Metamucil (psyllium fiber)</b>
Clidinium-chlordiazepoxide	<b>Miralax (polyethylene glycol)</b>
Dicyclomine	Diarrhea:
Hyoscyamine	<b>Imodium (loperamide)</b>
Propantheline	
Scopolamine	



# Cardiac drugs

## Concern:

- Alpha agonists increase risk of adverse CNS effects
- Risk of toxicity
- Some drugs can cause dizziness, slow heart rate

Medications	Alternative for older patients
<b>Clonidine</b> Guanfacine Guanabenz Methyldopa Reserpine (>0.1 mg/d)	Consider an alternative treatment for hypertension ( <b>ACE/ARB or long-acting calcium channel blocker</b> ).
<b>Nifedipine immediate release</b>	Consider use of <b>extended release nifedipine</b> .
<b>Avoid Dronedaron and Amiodarone as first line for Atrial Fibrillation (NEW)</b>	

# Digoxin

## Concern:

- Eliminated renally
- Narrow therapeutic index
- 75% of estimated digoxin toxicity ED visits result in hospitalization
- Possible increased mortality risk when used for atrial fibrillation

## Medications

## Alternative for older patients

**Avoid as 1st line in atrial fibrillation**

**Avoid as 1st line in heart failure**

**Avoid doses greater than 0.125 mg/day.**

**Renal dose adjustment needed for CKD 4 or 5**

**Digoxin**

# Proton Pump Inhibitors (Long Term Use - NEW)

## Concern:

- Increased risk of *Clostridium difficile* infection, bone loss and fractures

Medications	Alternative for older patients
Dexilant <sup>®</sup> (dexlansoprazole) <b>Nexium<sup>®</sup> (esomeprazole)</b> Prevacid <sup>®</sup> (lansoprazole) <b>Prilosec<sup>®</sup> (omeprazole)</b> Protonix <sup>®</sup> (pantoprazole) Aciphex <sup>®</sup> (rabeprazole)	Avoid use for >8 weeks unless: <ul style="list-style-type: none"><li>•High-risk (oral corticosteroid or chronic NSAID use)</li><li>•Hypersecretory conditions (erosive esophagitis, Barrett's esophagus)</li><li>•Needed for maintenance treatment (failure of discontinuation or H2 blockers)</li></ul>

# Desiccated Thyroid Hormone

## Concern:

- Natural is better?
- Poor batch-to-batch consistency
- Can be very dangerous for cardiac patients
- No evidence that desiccated thyroid is superior to synthetic levothyroxine

Medications	Alternative for older patients
<b>Armour Thyroid® (desiccated porcine thyroid hormone)</b>	<b>levothyroxine</b>

# Growth Hormone (NEW)

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## Concern:

- Associated with edema, arthralgia, carpal tunnel syndrome, gynecomastia, impaired fasting glucose
- Impact on body composition is small

Medications	Alternative for older patients
<b>Growth Hormone</b>	Avoid, except as hormone replacement after pituitary gland removal

# Estrogen

## Concern:

- Increased risk of breast cancer and blood clots
- Lack of cardioprotective effect in older women
- Not a first-line treatment for osteoporosis

## Medications

**Systemic Estrogen** (tablets, patches, gels, sprays) with or without progestins (Vivelle Dot<sup>®</sup>, Premarin<sup>®</sup>, etc.)

## Alternative for older patients

Use lowest dose for the shortest amount of time.

For vasomotor symptoms, use **venlafaxine, gabapentin, Femring<sup>®</sup>**.

For vaginal symptoms, use local treatments: **vaginal creams (Premarin<sup>®</sup>, Estrace<sup>®</sup>), vaginal rings (Estring<sup>®</sup>, Femring<sup>®</sup>), vaginal tablets (Vagifem<sup>®</sup>).**

# Megestrol

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## Concern:

- Minimal effect on weight gain
- Fat is the only constituent of weight gain
- Has an antiandrogenic effect
- Increases risk of thrombotic events, possibly death in older adults

## Medications

**Megace<sup>®</sup> (megestrol)**

## Alternative for older patients

**Remeron<sup>®</sup> (mirtazapine)**  
**Marinol<sup>®</sup> (dronabinol)**

# Glyburide

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## Concern:

- Increased risk of hypoglycemia due to prolonged half-life, especially with skipped meals, or with renal/hepatic impairment

**Medications**

**Alternative for older patients**

**Glynase<sup>®</sup>/Glucoavance<sup>®</sup>/  
DiaBeta<sup>®</sup> (glyburide)**

**glipizide  
metformin**



# Indomethacin

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## Concern:

- Increased risk of GI bleeding when compared to other NSAIDs
- Case reports of cognitive changes when used in older adults
- No proof of greater effectiveness in treating gout than any other NSAID

Medications	Alternative for older patients
<b>Indocin® (indomethacin)</b>	naproxen allopurinol

# Nitrofurantoin (Long Term Use)

## Concern:

- Not effective for urinary tract infections in patients with a creatinine clearance of <30 mL/minute.
- Case reports of pulmonary toxicity – pulmonary fibrosis/interstitial pneumonitis
- Peripheral neuropathy
- Hepatotoxicity

## Medications

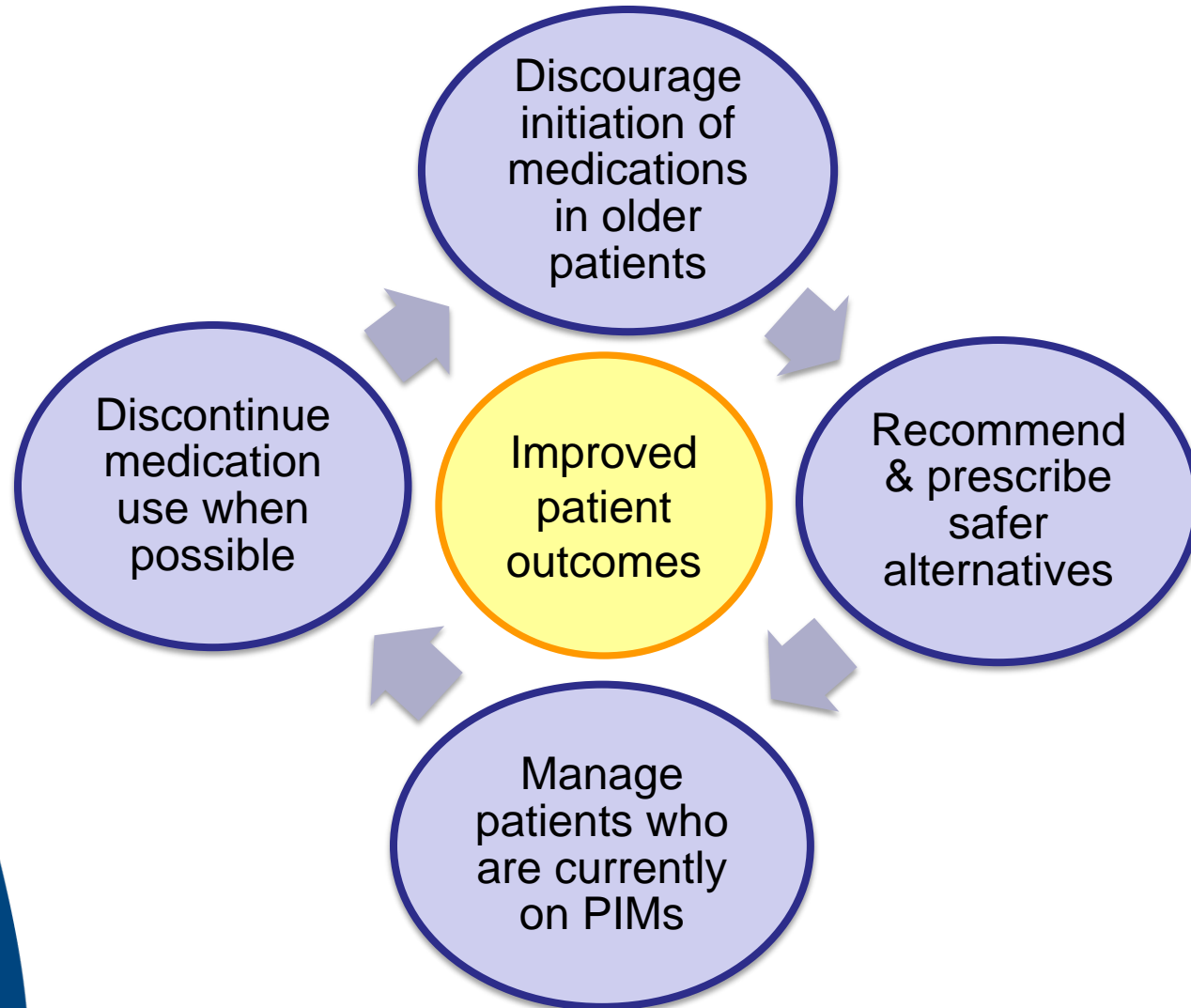
**Macrobid®/Macrochantin®  
(nitrofurantoin)**

## Alternative for older patients

Consider other anti-infective  
for UTI:

**Bactrim® (trimethoprim-  
sulfamethoxazole)  
ciprofloxacin**

# Decreasing Medication Use



# Deprescribing

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- Refers to the stopping of medications that may be no longer providing benefit, may be causing harm, or may be considered inappropriate.
- Optimizing medication use through targeted deprescribing is a vital part of managing chronic conditions, avoiding adverse effects and improving outcomes.
- There are barriers to deprescribing due to lack of prescriber confidence in discontinuing chronic medications.

# Other Factors To Consider

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## Socioeconomic Impact:

- Higher rates of PIM use was seen in elderly patients with lower personal income and socioeconomic status in a published 2012 U.S. study.
- CMS found a significant association between PIM use and low income status.
- However, in a U.K. study published in 2015 there was no association found between lower socioeconomic status and higher rates of PIM use.



# Medications Resources For Physicians

- AGS Beers List Pocket Card

<http://www.americangeriatrics.org/files/documents/beers/PrintableBeersPocketCard.pdf>



- AGS iGeriatrics app



*Beers Criteria*



*Geriatrics Cultural Navigator*



*GeriPsych Consult*



*AGS Pocket Guide to Common Immunizations in the Older Adult*



*AGS Management of Atrial Fibrillation*



*AGS Prevention of Falls Guidelines*

# Medications Resources For Physicians



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About

Lists

Partners

Grantees

Resources

↑ > Lists > American Geriatrics Society

## American Geriatrics Society

### Ten Things Physicians and Patients Should Question

Released February 21, 2013 (1-5) and February 27, 2014 (6-10)



Leading Change. Improving Care for Older Adults.

**4** Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.

**8**

Avoid using prescription appetite stimulants or high-calorie supplements for treatment of anorexia or cachexia in older adults; instead, optimize social supports, provide feeding assistance and clarify patient goals and expectations.



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# Medications Resources For Physicians



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About

Lists

Partners

Grantees

Resources

Home > Lists > American Academy of Neurology

## American Academy of Neurology

### Five Things Physicians and Patients Should Question

Released February 21, 2013



3

Don't use opioid or butalbital treatment for migraine except as a last resort.



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# Medications Patient Resources

- AGS Patient Documents

[http://www.americangeriatrics.org/health\\_care\\_professionals/clinical\\_practice/clinical\\_guidelines\\_recommendations/2012](http://www.americangeriatrics.org/health_care_professionals/clinical_practice/clinical_guidelines_recommendations/2012)



*AGS Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults (2012)*

#### Public Education Resources

- [AGS Beers Criteria Summary - For Patients & Caregivers \(PDF\)](#)
- [10 Medications Older Adults Should Avoid \(PDF\)](#)
- [10 Medications Older Adults Should Avoid - En Español \(PDF\)](#)
- [Avoiding Overmedication and Harmful Drug Reactions \(PDF\)](#)
- [What to Do and What to Ask Your Healthcare Provider if a Medication You Take is Listed in the Beers Criteria \(PDF\)](#)
- [My Medication Diary - Printable Download \(PDF\)](#)
- [Eldercare at Home: Using Medicines Safely - Illustrated PowerPoint Presentation \(PDF\)](#)

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# QUESTIONS?



*For more info contact Kim Moon, PharmD  
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# References

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