The UConn ASCP chapter has been off to a great start this semester. Our annual "What Not to Wear" event (see photo below) was a huge hit. Students modeled professional attire to be judged by faculty members Dr. Jeffery and Dr. Fitzgerald and special guest Melissa Smola. The event was attended by both pre-pharmacy and pharmacy students. The chapter is also happy to announce the election of their incoming executive board: President: Casandra Holveck, Vice President: Kelsey Fontneau, Secretary: Chelsea McDonnell, Treasurer: Bethany Carrington, Historian: Stephanie Brady and PSG Representative: Alexa Angerami. We congratulate our new board and are so excited to begin transitioning and training them to take over after the semester ends. UConn ASCP will be volunteering at brown bag events this coming spring as well as continuing work with the Hebrew Home in West Hartford. The chapter also looks forward to the Schwarting Senior Symposium in April. We will be supplying and selling the handout booklets for the symposium.
The American Geriatrics Society (AGS) Beers Criteria is one of the most frequently utilized resources in geriatrics. In Fall 2015, the AGS released an update to its Beers Criteria for Potentially Inappropriate Medication Use in Older Adults, with the goal of continuing to enhance the care of the elderly population. Originally, the AGS Beers Criteria was intended for use in the long term care patient population, however, over the years has expanded its application to the geriatric population as a whole. Its purpose is to identify potentially inappropriate medications to be avoided in the elderly, reduce adverse drug events and drug related problems, and improve medication selection and medication use in older adults. The specific aim of the 2015 AGS Beers Criteria update is to utilize an interdisciplinary panel to perform a comprehensive, systematic review of the 2012 Beers Criteria with the goal of incorporating new evidence, sections on drug-drug interactions and renal dose adjustments, and clinically appropriate exceptions to the recommendations provided. The 2015 AGS Beers Criteria differentiates between high, moderate, and low quality of evidence, as well as strong, weak, and insufficient strength of recommendation.

Additions to the Beers Criteria:

The most significant changes to the AGS Beers Criteria were the addition of a table of non-anti-infective drug-drug interactions (Table 1) and a table of medications that require a dose adjustment based on kidney function (Table 2). Regarding Table 1, the recommendation for each of the identified drug-drug interactions is to avoid concurrent use of the medications. Of note, anti-infective medications were not included in both of these tables because the aim of the AGS Beers Criteria is to emphasize recommendations for chronic medications. Another noteworthy addition is that the AGS has provided alternative suggestions to medications included in the current Use of High-Risk Medications in the Elderly and Potentially Harmful Drug-Disease Interactions in the Elderly.

Table 1. Drug-Drug Interactions Table Summary

<table>
<thead>
<tr>
<th>Medication or Medication Class</th>
<th>Interacting Medication or Medication Class</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angiotensin converting enzyme inhibitors</td>
<td>Amiloride</td>
<td>Increased risk of hyperkalemia</td>
</tr>
<tr>
<td></td>
<td>Triamterene</td>
<td></td>
</tr>
<tr>
<td>Anticholinergic</td>
<td>Anticholinergic</td>
<td>Increased risk of cognitive decline</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>More than 2 CNS-active medications</td>
<td>Increased risk of falls</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>More than 2 CNS-active medications</td>
<td>Increased risk of falls</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>More than 2 CNS-active medications</td>
<td>Increased risk of falls and fractures</td>
</tr>
<tr>
<td>Non-benzodiazepine hypnotics</td>
<td>More than 2 CNS-active medications</td>
<td>Increased risk of falls and fractures</td>
</tr>
<tr>
<td>Corticosteroids</td>
<td>Nonsteroidal anti-inflammatory drugs</td>
<td>Increased risk of peptic ulcer disease or gastrointestinal bleeding</td>
</tr>
<tr>
<td>Lithium</td>
<td>Angiotensin converting enzyme inhibitors</td>
<td>Increased risk of lithium toxicity</td>
</tr>
<tr>
<td></td>
<td>Loop diuretics</td>
<td></td>
</tr>
<tr>
<td>Opioid receptor agonists</td>
<td>More than 2 CNS-active medications</td>
<td>Increased risk of falls</td>
</tr>
<tr>
<td>Peripheral alpha-1 blockers</td>
<td>Loop diuretics</td>
<td>Increased risk of urinary incontinence in elderly women</td>
</tr>
<tr>
<td>Theophylline</td>
<td>Cimetidine</td>
<td>Increased risk of theophylline toxicity</td>
</tr>
<tr>
<td>Warfarin</td>
<td>Amiodarone</td>
<td>Increased risk of bleeding</td>
</tr>
<tr>
<td></td>
<td>Nonsteroidal anti-inflammatory drugs</td>
<td></td>
</tr>
</tbody>
</table>
Out with the Old, In with the New: 2015 Beers Criteria Update
Jagoda Misniakiewicz, PharmD, PGY-1 Pharmacy Practice Resident, VA Connecticut Healthcare System

Table 2. Dose Adjustments Based on Kidney Function Summary

<table>
<thead>
<tr>
<th>Medication</th>
<th>Creatinine Clearance Cutoff (mL/min)</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amiloride</td>
<td>Less than 30</td>
<td>Avoid use</td>
</tr>
<tr>
<td>Apixaban</td>
<td>Less than 25</td>
<td>Avoid use</td>
</tr>
<tr>
<td>Dabigatran</td>
<td>Less than 30</td>
<td>Avoid use</td>
</tr>
<tr>
<td>Edoxaban</td>
<td>30 – 50</td>
<td>Reduce dose</td>
</tr>
<tr>
<td></td>
<td>Less than 30</td>
<td>Avoid use</td>
</tr>
<tr>
<td></td>
<td>Greater than 95</td>
<td>Avoid use</td>
</tr>
<tr>
<td>Enoxaparin</td>
<td>Less than 30</td>
<td>Reduce dose</td>
</tr>
<tr>
<td>Fondaparinux</td>
<td>Less than 30</td>
<td>Avoid use</td>
</tr>
<tr>
<td>Rivaroxaban</td>
<td>30 – 50</td>
<td>Reduce dose</td>
</tr>
<tr>
<td></td>
<td>Less than 30</td>
<td>Avoid use</td>
</tr>
<tr>
<td>Spironolactone</td>
<td>Less than 30</td>
<td>Avoid use</td>
</tr>
<tr>
<td>Triamterene</td>
<td>Less than 30</td>
<td>Avoid use</td>
</tr>
<tr>
<td>Duloxetine</td>
<td>Less than 30</td>
<td>Avoid use</td>
</tr>
<tr>
<td>Gabapentin</td>
<td>Less than 60</td>
<td>Reduce dose</td>
</tr>
<tr>
<td>Levetiracetam</td>
<td>Less than or equal to 80</td>
<td>Reduce dose</td>
</tr>
<tr>
<td>Pregabalin</td>
<td>Less than 60</td>
<td>Reduce dose</td>
</tr>
<tr>
<td>Tramadol</td>
<td>Less than 30</td>
<td>Immediate release: reduce dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Extended release: avoid use</td>
</tr>
<tr>
<td>Cimetidine</td>
<td>Less than 50</td>
<td>Reduce dose</td>
</tr>
<tr>
<td>Famotidine</td>
<td>Less than 50</td>
<td>Reduce dose</td>
</tr>
<tr>
<td>Nizatidine</td>
<td>Less than 50</td>
<td>Reduce dose</td>
</tr>
<tr>
<td>Ranitidine</td>
<td>Less than 50</td>
<td>Reduce dose</td>
</tr>
<tr>
<td>Colchicine</td>
<td>Less than 30</td>
<td>Reduce dose</td>
</tr>
<tr>
<td>Probencid</td>
<td>Less than 30</td>
<td>Avoid use</td>
</tr>
</tbody>
</table>

Medication Changes Made in the AGS Beers Criteria:

With regards to the table of Potentially Inappropriate Medication Use in Older Adults, proton-pump inhibitors, desmopressin, and meclizine have been added to the AGS Beers Criteria. Proton-pump inhibitor use beyond 8 weeks without an appropriate indication should be avoided. The basis for this recommendation is the literature demonstrating an association between the use of proton-pump inhibitors and Clostridium difficile infection, bone loss, and fractures. Desmopressin for the treatment of nocturia or nocturnal polyuria due to its significant risk of hyponatremia should also be avoided. There are safer alternatives compared to desmopressin. Lastly, meclizine was added into the group of first-generation antihistamines to be avoided in the elderly population due to its highly anticholinergic profile.

Medications added to the table of Potentially Inappropriate Medication Use in Older Adults with Specific Diseases or Syndromes to avoid include: opioids, armodafinil, modafinil, eszopiclone, zaleplon, and antipsychotics. The recommendation has been made to avoid opioids in individuals with a history of falls or fractures. Eszopiclone and zaleplon should be avoided in individuals with dementia or cognitive impairment. The recommendation against the use of antipsychotics as first-line treatment of delirium was made due to the lack of clear evidence of effectiveness and known adverse drug profile.
Out with the Old, In with the New: 2015 Beers Criteria Update
Jagoda Misniakiewicz, PharmD, PGY-1 Pharmacy Practice Resident, VA Connecticut Healthcare System

Medication Modifications since 2012 Beers Criteria:

The recommendation and/or rationale were modified for the following medications: nitrofurantoin, dronedarone, digoxin, benzodiazepines, nonbenzodiazepine hypnotics, meperidine, indomethacin, ketorolac, antipsychotics, estrogen, and insulin sliding scale.

The creatinine clearance at which nitrofurantoin should be avoided was lowered from less than 60mL/min to less than 30mL/min given evidence supporting its safe use in individuals with a creatinine clearance between 30 and 60mL/min. However, the recommendation to avoid long term use of nitrofurantoin due to irreversible pulmonary fibrosis and liver toxicity still remains.

A noteworthy change in regards to antiarrhythmic medications is that dronedarone should be avoided in individuals with permanent atrial fibrillation or with severe or recently decompensated heart failure.

Additionally, digoxin should not be utilized as a first-line agent for atrial fibrillation or heart failure. Of note, there are more effective treatment options for atrial fibrillation and digoxin has questionable effects on the risk of hospitalization when used for heart failure. The 2015 AGS Beers Criteria also specifies that digoxin doses greater than 0.125mg daily should not be prescribed for any indication.

The recommendation was made to avoid the use of nonbenzodiazepine hypnotics regardless of intended duration of use due to the fact that these are minimally effective and have a concerning adverse event profile.

Another change made in the 2015 AGS Beers Criteria was the clarification of the definition of sliding scale insulin. Sliding scale insulin is defined as the use of short or rapid acting insulin to manage hyperglycemia in the absence of a basal of long-acting insulin and does not apply to the titration of basal insulin or use of additional short or rapid-acting insulin in conjunction with scheduled insulin.

Lastly, the recommendation has been made to avoid the use of meperidine especially in those with chronic kidney disease due to lack of evidence for its effectiveness at current dosages and its increased risk of neurotoxicity.

This article has highlighted some of the modifications made to the AGS Beers Criteria, however it is important to note that the Beers Criteria should be used along with one’s clinical judgment. Although medications identified on the Beers Criteria are potentially inappropriate, this does not mean that they are always inappropriate. It is important to understand the rationale behind why a medication is included on the Beers Criteria and to use the rationale to justify one’s recommendations. Lastly, the AGS Beers Criteria is just one constituent of ensuring appropriate medication use in the elderly population and should be utilized in conjunction with guidelines, consensus statements, and clinical judgment.

References:
UCONN School of Pharmacy and CT-ASCP invite you to attend

The 3rd Annual
SCHWARTING SENIOR SYMPOSIUM

SAVE THE DATE
Thursday, April 7, 2016
The Aqua Turf Club
Plantsville, CT

Register online: https://web2.uconn.edu/pharmacyce/program_register.php

TWO GREAT NAMES IN CONTINUING EDUCATION
ONE AMAZING MEETING!
The University of Connecticut School of Pharmacy, Office of Pharmacy Professional Development and the CT Chapter of the American Society of Consultant Pharmacists present:

The 3rd Annual Schwarting Senior Symposium
A multi-disciplinary conference focused on senior care and certificate programs for pharmacists and APRN’s as well as other healthcare providers

Thursday, April 7th 2016
6:30am – 7:00pm
Aqua Turf Club, 556 Mulberry Street, Plantsville, CT

Senior Symposium – Track #1
Arthur E. Schwarting Pharmacy Practice Symposium

6:30 – 7:00 am—Registration
7:00 – 8:00 am—Management of Heart Failure in Older Adults
8:00 – 9:00 am—Breakfast Product Theater – Sponsor: Sunovion
9:00 – 9:15 am—Opening Remarks
10:15 – 11:15 am—Exhibit Hall
11:15 – 12:15 pm—Law: 2016 Long Term Care Update

**Nurse Practitioner Break Out Session – Not ACPE accredited**
11:15 – 12:15 pm—Hospice: Why it is Letting Go and Not Giving Up
12:15 – 1:45 pm—Lunch Product Theater – Sponsor: Novo Nordisk
1:45 – 2:45 pm—Management of Antibiotic-Resistant Bacterial Infections in the Elderly
2:45 – 3:00 pm—Break in Exhibit Hall Area
3:00 – 5:00 pm—New Drug Update
5:00 – 7:00 pm—Product Theater Dinner—Allergan

Arthur E. Schwarting Pharmacy Practice Symposium – Track #2
Medication Therapy Management for Patients with Respiratory Disease

7:00 – 7:30 am—Registration & Breakfast
7:30 – 9:30 am—Communication Skills Development for Health Behavior Change in Respiratory Disease Management
9:30 – 10:30 am—Respiratory Disease Management Guidelines and Medication Update
10:30 – 10:45 pm—Exhibit Hall
10:45 – 11:45 pm Drug Delivery in Respiratory Disease
11:45 – 12:45 pm—Product Theater Luncheon
12:45 – 2:45 pm—Application of MTM Concepts to the Patient with Respiratory Disease—Case Discussion
2:45 – 3:00 pm—Break in Exhibit Hall Area
3:00 – 5:00 pm—Application of MTM Concepts to the Patient with Respiratory Disease—Case Discussion (continued)

Immunization Training for Pharmacists – Track #3

7:15 – 8:00 am—Registration & Breakfast
8:00 – 10:00 am—Identifying Patients who May Need Vaccines, Schedule-based assessment
10:00 – 11:00 am—Identifying Patients who May Need Vaccines, Medication-based assessment
11:00 – 11:45 pm—Break in Exhibit Hall
11:45 – 12:15 pm—Schedule Review and Immunization Updates
12:15 – 1:30 pm—Product Theater Luncheon
1:30 – 2:30 pm—Administration and Technique Workshop
2:30 – 3:30 pm—Identifying and Resolving Barriers for Pharmacist Immunizers
3:30 – 4:00 pm—Break in Exhibit Hall
4:00 – 5:00 pm—Legal and Practical considerations for Pharmacist Immunizers
SPONSOR RECOGNITION
Sponsorship: Allergan – Carriann Kumor

REVIEW OF PAST MINUTES
The 1/11/16 minutes were reviewed and approved (BP/KR).

CHAPTER NEWS
Special Welcomes: University of St. Joseph’s pharmacy students: Adeel Kadeer, Khris Welch, Catherine Bobea, Sarah McLarty

USJ Networking and Career Panel: A huge thank you to A. Leschak and S. McLarty for planning and executing the USJ Networking and Career Panel student event. It was held 2/1/16 at 4pm with a networking session and career panel with CT ASCP members. The 4 volunteers for the panel were: B. Pelletier, K. Daley, L. Manganiello, and K. Rubinfeld. The event was a huge success! There were about 50 students along with some faculty. The students remarked that it was great to hear about different fields of pharmacy aside from community and institutional and that they would like more sessions like this in the future. M. Fortin remarked that he always willing to take students.

SSS16 April 7, 2016: The speakers and the product theaters are set. B. Pelletier is waiting for paperwork from a few of the speakers. A. Huie-Li passed around a sign-up sheet for volunteers. K. Daley and K. Niehoff agreed to make the SSS16 marquee. J. Nault requested that the product theaters be open until 11:30 to allow for those pharmacists in immunization training to walk around. B. Pelletier asked the group to think about how to make our meeting bigger for next year. We discussed having a student track with resume/CV building/interview skills/residency panel. B. Pelletier suggested a Meeting of the Minds. J. Nault is going to follow up with the product theater for the VIP dinner to inquire about who the speaker will be. We want to align the invite list with a topic that is relevant (ie. Administration, LTC, etc). We discussed have the speakers repeat their lecture on WebEx as a live CE and then the presentation could be uploaded for home study. UConn is will to work with ASCP on sharing resources.

CPA, ASCP, CSHP: M. Gemma discussed that this group is having a follow up call on 2/11/16 to discuss moving forward with this collaboration and the listed project. There are a few groups providing sterile compounding training in Massachusetts already. The group talked about having a sterile compounding CE closer to southwest part of the state to draw New York pharmacists. A grant application would allow for the cost for attendees to be lower. A. Leschak and M. Gemma will follow up after the call. B. Pelletier announced that legislative issues will be discuss with CPA and CSHP on 2/2/16 call.

Updates: UConn ASCP student chapter is having a “What Not to Wear” Event on 2/11/16 at 6pm.

Meeting adjourned at 7:45pm

Next Meeting: 3/7/16 at 5:30pm at Flemings in West Hartford

Respectfully submitted,
Kristina Niehoff, PharmD, BCPS
CT-ASCP Secretary/Treasurer

\[ \text{MEMBER NAME & TITLE} \]
\[ \begin{array}{llll}
\text{Dec} & \text{Jan} & \text{Feb} \\
\hline
\text{Mike Gemma} & \text{X} & \text{X} & \text{X} \\
\text{Kevin Chamberlin} & \text{X} & \text{X} & \text{X} \\
\text{Brian Pelletier} & \text{X} & \text{X} & \text{X} \\
\text{Kristina Niehoff} & \text{X} & \text{X} & \text{X} \\
\text{Kim Daley} & \text{X} & \text{X} & \text{X} \\
\text{Anna Torda} & \text{X} & \text{X} & \text{X} \\
\text{Rachel Eyler} & \text{X} & \text{X} & \text{X} \\
\text{Andrea Leschak} & \text{X} & \text{X} & \text{X} \\
\text{Karen Rubenfeld} & \text{X} & \text{X} & \text{X} \\
\text{Anna Sampieri} & \text{X} & \text{X} & \text{X} \\
\text{Guests: Michel Fortin, Amy Huie-Li, Sarah McLarty, Joanne Nault, Jill Fitzgerald, Lauren Manganiello, Mark Wrabel, Sean Jeffery, Dolores Ciccone, Adeel Kadeer, Khris Welch, Dan Rocki, Amanda Mertz, Catherine Bobea} \]

\[ \text{Editorial Board} \]
\[ \begin{align*}
&\text{Amy Huie-Li, PharmD, CGP, FASCP} \\
&\text{Anna Torda, PharmD} \\
&\text{Kim Daley, PharmD} \\
&\text{Kevin Chamberlin, PharmD} \\
&\text{Brian Pelletier, PharmD, CGP} \\
&\text{Kristina Niehoff, PharmD, BCPS} \\
&\text{Jennifer Kloze, PharmD, BCPS} \\
\end{align*} \]