University of South Florida
GERIATRIC WORKFORCE ENHANCEMENT PROGRAM (GWEP)
Learn@Lunch
Geriatric Education Series
Kathryn Hyer, PhD, MPP
Principal Investigator

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For additional information about this and other USF GWEW events, email amaynard@health.usf.edu

Making Life Better®
AGHE’S 43RD ANNUAL MEETING
AND EDUCATIONAL LEADERSHIP CONFERENCE

2017

AGHE

THE FUTURE IS HERE

Educating a New Generation of Professionals in Aging Worldwide

Miami, Florida
March 9-12, 2017
Geri-Active Learning

Carol Fox, Pharm.D., CGP, CRPh
Angela M. Hill, Pharm.D., CRPh
University of South Florida College of Pharmacy
USF College of Pharmacy

- Dr. Kevin Sneed, Dean
- Two Departments
- Five Associate Deans

- Founded in 2010
- First class admitted in 2011
• Principles of Geriatric Pharmacotherapy:
  • Required course in the curriculum
  • A 2hr combined course in the 2nd year of the program
  • Closely aligned with topics being covered in concurrent courses:
    Pharmacotherapeutics II, Clinical Pharmacokinetics and Pharmacodynamics,
    and Pharmacy Skills IV
  • Pre-requisites include: Pharmacotherapeutics I, Pharmacokinetics 1, and
    Pharmacy Skills III
Course Objectives:

- Compare and contrast pharmacotherapy principles in older adults versus middle-aged adults;
- Identify, resolve, and prevent medication-related problems and manage medication therapy to ensure that medications are appropriate, safe, effective, and used correctly;
- Describe the changes in physiology and drug disposition that occurs as part of the aging process;
- Discuss the psychosocial and ethical issues associated with aging;
- Analyze medication therapy to determine the clinical and economic appropriateness when given a geriatric patient case;
- Apply principles of geriatric assessment, geriatric pharmacology, rehabilitation, and long-term care to the patient setting;
- Discuss the pathophysiology, signs, symptoms, and treatment options for common diseases seen in older adults; and
- Describe appropriate methods for selecting medications in the elderly.
• In class focus:
  • Active Learning activities to enhance pre-class readings or lectures
  • Clinical Case presentations by students
  • Simulation activities
• Assessments:
  • Objective structured clinical examinations (OSCEs)
  • Written examination
  • Quizzes
  • Reflection papers
  • Simulation performance
  • Clinical Case Notebook and Chapter presentations
  • Service Learning
    • Giving a presentation on a health related topic at local senior centers
    • Performing a medication review with a local senior volunteer, reviewing with a licensed pharmacist, then presenting any findings/counseling to the volunteer
## Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Disease State Module</th>
<th>Date</th>
<th>Topic</th>
<th>Contents</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>1/5/17</td>
<td>Psychosocial Issues in the Geriatrics Patient</td>
<td>Discuss Movie assignment, Service Learning, Simulation, Group presentation</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Watch pre-class lecture</td>
<td>Active Learning</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>1/12/17</td>
<td>Psychosocial Issues in Geriatrics Part I (cont)</td>
<td>nve Learning</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Watch pre-class lecture</td>
<td><em>Reading Quiz</em> Materials Posted</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>1/19/17</td>
<td>Pre-Class Reading Medication Use Issues in Geriatrics</td>
<td>Chapter 7 Discussion! Criteria for Selecting Appropriate and Inappropriate Medications in the Elderly Identification of Medication Related Problems</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Movie assignment due</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>1/26/17</td>
<td>Medication Use Issues in Geriatric Patients</td>
<td>Herbs, Nonprescription Medications</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chapter 10 Discussion *Reading Quiz #1</td>
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<tr>
<td>5</td>
<td></td>
<td>2/2/17</td>
<td>LTC Consultation Practice Sites for Geriatric Patient</td>
<td>Drug Regimen Review* Simulation</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Service Learning for those assigned everyone else will present to class</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>2/9/17</td>
<td>Clinical Intervention in Geriatrics</td>
<td>Geriatric Assessment Measures Fall Prevention Active Use in ILHr</td>
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<tr>
<td></td>
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<td></td>
<td><em>Reading Quiz</em> Materials Posted</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>2/16/17</td>
<td>Final Exam</td>
<td>From 11-1 today only</td>
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</table>
• Life In the Day
Second Life Simulation
USF Byrd Alzheimer’s Institute Reception Area

Second Life

Actual
USF Byrd Alzheimer’s Institute Waiting Area

Second Life

Actual
USF Byrd Alzheimer’s Institute Waiting Area

Actual

Second Life
USF Clinical Evaluation Rooms

Second Life

Actual
Clinical Evaluation Rooms with Avatars
• Long Term Care Drug Regimen Review Simulation
• Transitions of Care Simulation
  • Use of Neehr Perfect to simulate an electronic health record
  • Students have to compare hospital records with home medication list or Nursing Home paper chart and answer questions i.e.:
    • What medication changes were made?
    • Were the changes intentional or erroneous?
    • Is there an indication for each medication?
    • Is he on the right medications for each disease state?
    • What other medication related problems are there?
Charles Bishop’s home medication list is as follows:

- **Tamulosin 0.4mg nightly**
- **Aspirin 325mg daily**
- **Furosemide 20mg twice daily**
- **KCl 20mEq daily**
- **Losartan 25mg daily**
- **St. John’s Wort 300mg three times a day**
- **Carvedilol 6.25mg twice daily**

### Meds & Administration History

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>DRUG DESCRIPTION</th>
<th>ORDER STATUS</th>
<th>FREQUENCY</th>
<th>ADMIN HISTORY</th>
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</thead>
<tbody>
<tr>
<td>ScheduledMed</td>
<td>Furosemide 100 MG per 10 ML Prefilled Syringe - Dose: 40 mg</td>
<td>Active</td>
<td>Q12H</td>
<td>No administrations.</td>
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<tr>
<td>ScheduledMed</td>
<td>Lisinopril 5MG Oral Tablet [Zestril] - Dose: 1 Capsule</td>
<td>Active</td>
<td>DAILY (80mg)</td>
<td>No administrations.</td>
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<tr>
<td>ScheduledMed</td>
<td>Coreg 3.125 Oral Tablet - Dose: 1 Tablet</td>
<td>Active</td>
<td>Q12H</td>
<td>No administrations.</td>
</tr>
<tr>
<td>ScheduledMed</td>
<td>Amiodarone hydrochloride 200 MG Oral Tablet (Pacerone) - Dose: 200MG</td>
<td>Active</td>
<td>DAILY (80mg)</td>
<td>No administrations.</td>
</tr>
<tr>
<td>ScheduledMed</td>
<td>Spironolactone 25MG Oral Tablet - Dose: 12.5 mg</td>
<td>Active</td>
<td>DAILY (80mg)</td>
<td>No administrations.</td>
</tr>
<tr>
<td>ScheduledMed</td>
<td>Coumadin 2.5MG Oral Tablet - Dose: 1 Tablet</td>
<td>Active</td>
<td>DAILY (80mg)</td>
<td>No administrations.</td>
</tr>
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</table>
Hello Carol. Charles Bishop Basic Session currently in progress. Don't forget! Close your session to save your work.

DOB: 04/18/1948   68 yo M
Admit Date: 02/21/2017 13:18

**Problems**

<table>
<thead>
<tr>
<th>PRIORITY</th>
<th>STATUS</th>
<th>DESCRIPTION</th>
<th>IMMEDIACY</th>
<th>DATE OF ONSET</th>
<th>PROVIDER</th>
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<tr>
<td>Acute</td>
<td>Active</td>
<td>Hypoxia</td>
<td>Acute</td>
<td>02/21/2017</td>
<td>Kerry West, MD</td>
</tr>
<tr>
<td>Acute</td>
<td>Active</td>
<td>Lower Extremity Edema</td>
<td>Acute</td>
<td>02/21/2017</td>
<td>Kerry West, MD</td>
</tr>
<tr>
<td>Acute</td>
<td>Active</td>
<td>Orthopnea</td>
<td>Acute</td>
<td>02/21/2017</td>
<td>Kerry West, MD</td>
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<tr>
<td>Acute</td>
<td>Active</td>
<td>Severe Dyspnea</td>
<td>Acute</td>
<td>02/21/2017</td>
<td>Kerry West, MD</td>
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<tr>
<td>Acute</td>
<td>Active</td>
<td>Weight Gain (10 pounds)</td>
<td>Acute</td>
<td>02/21/2017</td>
<td>Kerry West, MD</td>
</tr>
<tr>
<td>Chronic</td>
<td>Active</td>
<td>600.01 Hypertrophy (benign) of prostate with urinary obstruction and other lower urinary tract</td>
<td>Chronic</td>
<td>03/03/2015</td>
<td>Kerry West, MD</td>
</tr>
</tbody>
</table>
• Neehr perfect software allows:
  • Navigation throughout the different areas of the chart to assess vitals, labs, orders, notes, and imaging
  • 100s of pre-designed activities for all disciplines to practice different skills
  • Course instructor can edit any of the information in any section to meet the needs of the activity
  • Course instructor can assign the student to write a progress note in the chart, perform a particular assessment, or a group of interprofessional students could be assigned to come up with a care plan
• OSCE examinations at Midterm and Final involve use of our Center for Advanced Clinical Learning and standardized patients
• Ideally students would experience the encounter by themselves, however logistically this is not realistic
• Students are divided into small groups (2-3)
• The case is distributed to the students 24h in advance
• They are given 20 min with the standardized patient to ask questions and come up with the medication related problems presented and give solutions to them
• The standardized patients are provided with scripts for consistency
• Students are graded on professionalism, flow, and whether they mentioned the medication related problem and provided a solution
Mr/Mrs Noah/Norah Lane (or son, daughter, caregiver if less than 65) is a 70y/o patient presenting to the clinic today for a medication review by the pharmacist. They are coming to the clinic today for a full interdisciplinary assessment due to declining memory over the past three years. You are to assess their medication use for any medication related problems to report to the physician and patient/caregiver.

Medications:
- Donepezil 10mg daily (started 2yrs ago)
- Memantine XR 14mg daily (started 1yr ago)
- Calcium Citrate+ Vitamin D 600/400 twice a day (started about 5yrs ago)
- Centrum Silver multivitamin 1 tablet per day (started 5yrs ago)
- Glucosamine Chondroitin 1 capsule twice a day (started about 1yr ago for pain)
- Calcium Carbonate (Tums) 250mg as needed
- Aspirin 81mg (chewable) daily
- Co-Enzyme Q10 one capsule daily (started 2-3yrs ago)
- Fish Oil one capsule twice daily (started 2-3yrs ago)
- Melatonin 6mg at bedtime (started 2yrs ago for sleep)
- Metoprolol succinate 50mg daily (started 2yrs ago)
- Losartan 100mg daily (started 2yrs ago)
- Omeprazole 20mg daily (started 2yrs ago)
- Diclofenac ER 75mg twice daily (started one month ago)
- Alprazolam 0.5mg three times a day as needed (started 2yrs ago)
- Slow Magnesium Calcium 525mg once a day
- Acetaminophen 650mg three times per day

Medical History:
- Mild cognitive impairment (3yrs)
- Osteopenia (5yrs)
- Acute MI (2yrs ago)
- Osteoarthritis particularly knee pain on the left side (about 5-6yrs) recent ly worse and started on the diclofenac

Generalized anxiety disorder (2yrs - started after your heart attack)
Student recognized that the omeprazole does not have an infection.
Student recommendation regarding the Omeprazole (either die or if they realize it is being used with the diclofenac they could leave it).
Student recognized that Alprazolam is inappropriate (bonus if they need to discuss).
Student recommendation regarding the Alprazolam (either die or reduce dose).
Student recognized the duplication of therapy with multiple calcium-containing supplements.
Students recommendations for the supplements were Student recognized the bleeding bruising risk with the combination of fish oil, aspirin, and NSAID.
Student's recommendation for the patient on this combination of meds.
Student made a suggestion regarding Donepezil administration either time of day or with food and why.
Students recognize that there is no statin therapy post-MI and at least inquired if the patient had ever taken one.
• The rubric is fairly subjective which does present some issues with inter-rater reliability
• All encounters are videotaped and can be accessed by the course instructors and coordinator. The course coordinator can change a grade if it does not align with what was covered in the course
• Being subjective does allow for differences in student approach to problem solving, however does need to be correct
• Final OSCE is more related to the transitions of care simulations the students have performed in class
• Addresses important clinical pearls from across the entire semester both in class and as part of their clinical case notebooks
• Similar in design and logistics to the midterm
Mr. / Mrs. Johnson is a 69y/o patient who has just returned home from a 4wk stay at a SNF after being hospitalized with a small bowel obstruction and dehydration. The patient presents to the community pharmacy today thoroughly confused about what medications to take. You need to provide a medication reconciliation with the patient.

PMH:

Parkinson's disease x 5yrs

HTN x 10yrs

(on stipation

Hyperlipidemia x 10yrs

Hypothyroidism x 12yrs

Mild dementia x 3yrs

Macular degeneration

s/p SBO and dehydration 4wks ago

FH: Mother died of Alzheimer's disease, Father died of PD, brother with CHF and dementia

SH: No tobacco or illicit drugs, drinks an occasional glass of wine with dinner. Reflux mail carrier, lives at home with spouse. Has 3 children that live out of state and 5 grandchildren.
This time however, the students must reconcile three medication lists:
- Home meds prior to hospitalization
- Medications given in the hospital
- Medications upon discharge from the SNF

This OSCE serves several purposes:
- Assessment of disease state and drug knowledge
- Assessment of what medication related problems can occur across transitions of care and in general with the older adult population
- Assessment and realization of problems older adult face with navigating the medication use system
Medications before hospitalization:
- Salevo 125/31.5/200mg 3x daily
- Exelon patch 9.6mg/24h daily
- Docusate 200mg daily
- Levothyroxine 0.75mg daily
- HCTZ 50mg daily
- Diltiazem CR 240mg daily
- Calcium 600mg + Vit D 400IU twice daily
- Simvastatin 40mg at bedtime
- Preservision Areds formula twice daily
- Thera tears eye drops 1-2 drops in each eye times per day

Hospital D/C list
- Sinemet 25/100mg 2 tabs four times daily
- Entacapone 200mg four times daily
- Galantamine 8mg twice a day
- Levothyroxine 0.75mg daily
- Diltiazem CR 240mg
- Atorvastatin 40mg
- MVI one daily
- Ambien 10mg at bedtime
- Omeprazole 20mg daily
- Docusate 200mg at bedtime
- Milk of Magnesia 15ml twice a day PRN
- Tylenol SOOmg 1-2 tabs every 4-6h as needed for pain/ temperature
- Bisacodyl 5mg 1-2 tablets every 12h as needed for constipation
- Fleets enema one bottle as needed for no bowel movement >3d

SNF O/C list
- Sinemet 25/100mg 2 tabs four times a day
- Entacapone 200mg four times a day
- Galantamine 8mg twice a day
- Levothyroxine 0.125mg once a day
- Diltiazem CR 240mg daily
- HCTZ 2.5mg daily
- Atorvastatin 40mg daily
- Ambien 10mg at bedtime
- Omeprazole 20mg daily
- MVI one tab each day
- Docusate 200mg at bedtime
- Miralax one capful with 8oz water daily
Clinical Case Notebooks

- Disease States Addressed:
  - Cardiovascular Disorders
  - Endocrine Disorders
  - Gastrointestinal Disorders
  - Neurological Disorders
  - Nutrition
  - Respiratory Disorders
  - Musculoskeletal Disorders
  - Renal and Urologic Disorders
  - Ophthalmologic Disorders
  - Pain
  - Psychiatric Disorders
  - Infectious Disease
  - Substance Abuse

- Use course text for independent review of disorders


- On-line quiz prior to class

- In-class discussions

- Presentations by students
Service Learning Activities

- Drug Regimen Review of Community-Dwelling Senior
- Health-Related Workshop at Senior Centers
  - Osteoarthritis
  - Vitamins and Supplements
  - Stroke prevention
Other Activities

Reflective Writing

• Life in the Day
• Movie Assignment
• Service Learning Activities

Medicare Part D
Movie Reflection

- Driving Miss Daisy
- The Second Best Exotic Marigold Hotel
- The Awakening
- Up and Away
- Away from Her
- The Savages
- Last Vegas
- Grand Torino
- About Schmidt
- And So It Goes
- The Notebook
Closing Statements