



University of South Florida
**GERIATRIC
WORKFORCE
ENHANCEMENT
PROGRAM (GWEP)**
Learn@Lunch
Geriatric Education Series

Kathryn Hyer, PhD, MPP
Principal Investigator



Providers of
Continuing Education

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

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UNIVERSITY OF SOUTH FLORIDA

AGHE'S 43RD ANNUAL MEETING
AND EDUCATIONAL LEADERSHIP CONFERENCE

2017

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THE FUTURE IS HERE

Educating a New Generation of
Professionals in Aging Worldwide

Miami, Florida
March 9-12, 2017



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Geriatric Learning

Carol Fox, Pharm.D., CGP, CRPh

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University of South Florida College of Pharmacy



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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





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- **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

Week	Disease State Module	Date	Topic	Conunents
1		1/5/17	Psychosocial Issues in the Geriatrics Part 1 Watch pre-class lecture	Discuss Movie assignment, Service Learning, Simulation, Group presentation Active Learning
2		1/12/17	Psychosocial Issues in Geriatrics Part 1(cont) Watch pre-class lecture	Active Learning <i>*Reading Quiz Materials Posted</i>
3	1	1/19/17	Pre-class reading Medication Use Issues in Geriatrics	Chapter: 7 Discussion Criteria for Selecting Appropriate and Inappropriate Medications in the Elderly Identification of Medication Related Problems Movie assignment due
4	2	1/26/17	Medication Use Issues in Geriatric Patients	Herbals, Nonprescription Medications Chapter 10 Discussion <i>'Reading Quiz #1</i>
5	3	2/2/17	LT Consulting Practice Sites for Geriatric Pharmacists Credentialing View pre-recorded lecture	Drug Regulation Review Simulation Service Learning for those assigned, everyone else will report to class
6	4	2/09/17	Clinical Interventions in Geriatrics	Geriatric Assessment Measures Fall Prevention, Active and Illness <i>*Reading Quiz Materials Posted</i>
7		2/16/17	Final Exam	Final 11-1 today only

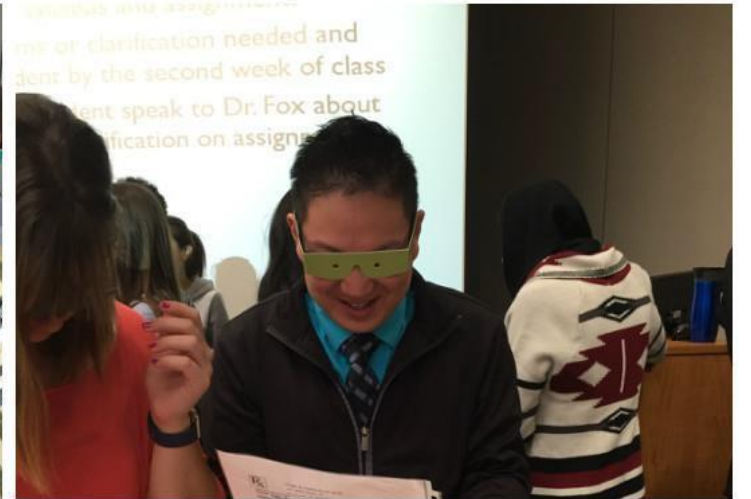
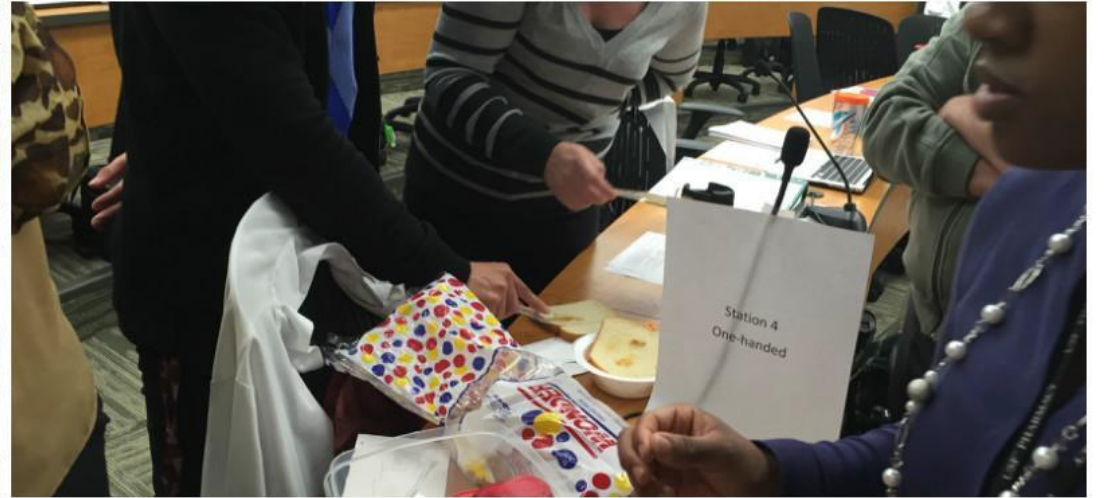


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- Life In the Day





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Second Life Simulation

Clinical Assessment, Research & Education





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USF Byrd Alzheimer's Institute Reception Area

Second Life



Actual





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USF Byrd Alzheimer's Institute Waiting Area

Second Life



Actual





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USF Byrd Alzheimer's Institute Waiting Area

Actual



Second Life





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USF Clinical Evaluation Rooms

Second Life



Actual





Clinical Evaluation Rooms with Avatars





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- 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

The screenshot shows a web browser window with the URL <https://goapp.neehrperfect.com/>. The page header includes the text "Hello Carol. Charles Bishop Basic Session currently in progress. Don't forget! Close your session to save your work." and the "MHE" logo. The patient information section displays: Patient: Charles Bishop, General Hospital; DOB: 04/18/1948, 68 yo M; MR#: PCS42000; Admit Date: 02/21/2017 13:18; and a warning: Full Code, Fall Risk. Anticoagulation protocol. The "Meds & Administration History" section contains a table with the following data:

CATEGORY	DRUG DESCRIPTION	ORDER STATUS	FREQUENCY	ADMIN HISTORY
ScheduledMeds	furosemide 100 MG per 10 ML Prefilled Syringe - Dose: 80 mg	Active	Q12H	No administrations.
ScheduledMeds	Lisinopril 5 MG Oral Tablet [Zestril] - Dose: 1 Capsule	Active	DAILY(0800)	No administrations.
ScheduledMeds	Coreg 3.125 Oral Tablet - Dose: 1 Tablet	Active	Q12H	No administrations.
ScheduledMeds	Amiodarone hydrochloride 200 MG Oral Tablet (Pacerone)-Dose: 200MG	Active	DAILY(0800)	No administrations.
ScheduledMeds	Potassium Chloride 20 MEQ Extended Release Oral Tablet [K-Tab]-Dose: 2Tabs	Active	Q12H	No administrations.
ScheduledMeds	Spironolactone 25 MG Oral Tablet- Dose: 12.5 mg	Active	DAILY(0800)	No administrations.
ScheduledMeds	Coumadin 2.5 MG Oral Tablet - Dose: 1 Tablet	Active	DAILY(0800)	No administrations.

At the bottom right of the interface, there is a button labeled "ADMINISTER".



Hello Carol. Charles Bishop Basic Session currently in progress.

Close Session

Don't forget! Close your session to save your work.



Patient: Charles Bishop
General Hospital

DOB: 04/18/1948 68 yo M

Admit Date: 02/21/2017 13:18

MR#: PCS42000 E:2

Full Code, Fall Risk. Anticoagulation protocol

- Problems
- Vitals
- Orders
- Meds
- Notes
- Care Plans
- Labs
- Pharmacy

Problems

PRIORITY	STATUS	DESCRIPTION	IMMEDIACY	DATE OF ONSET	PROVIDER
Acute	Active	Hypoxia	Acute	02/21/2017	Kerry West, MD
Acute	Active	Lower Extremity Edema	Acute	02/21/2017	Kerry West, MD
Acute	Active	Orthopnea	Acute	02/21/2017	Kerry West, MD
Acute	Active	Severe Dyspnea	Acute	02/21/2017	Kerry West, MD
Acute	Active	Weight Gain (10 pounds)	Acute	02/21/2017	Kerry West, MD
Chronic	Active	600.01 Hypertrophy (benign) of prostate with urinary obstruction and other lower urinary tract	Chronic	03/03/2015	Kerry West,

NEW



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- 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



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- 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/care giver.

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) recently worse and started on the diclofenac

Generalized anxiety disorder (2yrs - started after your heart attack)

Student recognized that the omeprazole does not have an indication
Student recommendation regarding the Omeprazole (either discontinue or if they realize it is being used with the diclofenac they could leave it),
Student recognized that Alprazolam is inappropriate (bonus if they mention dose) Student recommendation regarding the Alprazolam (either discontinue 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 patient had ever taken one

Yes/Correct 2pts No/Incorrect 0pts Comments



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- 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



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- 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 69yo patient who has just returned home from a 4wk stay at a SNIF 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 .5yrs

HTN x 10yrs

(on stipation

Hyperlipidemia x 10yrs

Hypothyroidism x 12yrs

Mild dementia x 3yrs M

ocular 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., Ref red 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:

Stalevo 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

Prescription Ared's formula twice daily

Thera tears eye drops 1-2 drops in each eye 4 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 500mg 1-2 tab let 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

Docusate 200mg at bedtime

MVI one tablet per day

Omeprazole 20mg daily

Miralax one capful with 8oz water daily



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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

Fundamentals of Geriatric Pharmacotherapy: An Evidence-Based Approach. by Hutchinson . American Society of Health-Systems Pharmacy 2nd Edition ISBN: 978-1-58528-228-9

- On-line quiz prior to class
- In-class discussions
- Presentations by students



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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



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Movie Reflection

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- 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



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Closing Statements