I. Rotation Description

The Mission of the Edward Via College of Osteopathic Medicine (VCOM) is "to provide medical education and research that prepares globally minded, community-focused physicians and to improve the health of those most in need." Among the goals of the college include the education of students on their responsibilities to be professional, ethical, dutiful, compassionate, and knowledgeable and the emphasis of patient-centered care, collaborative approaches to care, and a sense of community responsibility throughout the curriculum to prepare the student for practicing in rural and underserved areas. Southwestern Virginia, particularly the Roanoke Valley and far Southwest Virginia, has a population that is older than the nation's average. Considering this demographic reality in light of the mission of the college, one can understand the prominence that Geriatric Medicine plays in the curriculum at VCOM.

During the third year geriatrics rotation, students expand their knowledge of Geriatric Medicine conditions and gain the ability to apply this knowledge in the clinical setting. The curriculum is taught through VCOM TV on-line lectures, on-line case modules and presentation, assigned readings, grand rounds, and through one-on-one student-preceptor experience in caring for patients in the clinical setting. The practice of geriatric medicine occurs in the outpatient office setting, in long-term care facilities and in the inpatient setting. Due to the variety of practice opportunities and formats in geriatric medicine, students should review their specific site instructions for a more detailed description of their specific practice setting.
II. Course Goals and Objectives

A. Goals of the Course
The primary goals for the geriatric rotation are three fold. First, to enjoy a fruitful and fulfilling career the physician must look forward to awaking each day, proceeding forward with the outlook that each day is a gift with many rewarding, challenging and personal growth experiences. Secondly the continual addition of knowledge is necessary to provide excellent patient care and personal life long growth fulfillment. Third each task must have a measurable goal or marker that the task was successfully completed. With the above thoughts the goals for the geriatric rotation is to: provide and enjoyable experience with significant addition of medical knowledge that culminates with the successful completion of the final geriatric exam.

B. Clinical Performance Objectives
While the end-of-rotation exam is derived from the didactic curriculum and objectives described above in the “Clinical Modules – Required Curriculum” section, the end-of-rotation evaluation completed by your geriatric medicine preceptor is based on clinical core competencies. These core competencies reflect student performance in 6 key areas: communication, problem solving, clinical skills, medical knowledge, osteopathic medicine and professional and ethical considerations. Your end-of-rotation evaluation from your preceptor will be based directly on your performance in these 6 core competencies as described below.

1. Communication - the student should demonstrate the following clinical communication skills:
   a. Effective listening to patient, family, peers, and healthcare team
   b. Demonstrates compassion and respect in patient communications
   c. Effective investigation of chief complaint, medical and psychosocial history specific to the rotation
   d. Considers whole patient: social, spiritual & cultural concerns
   e. Efficiently prioritizes essential from non-essential information
   f. Assures patient understands instructions, consents & medications
   g. Presents cases in an accurate, concise, well organized manner

2. Problem Solving – the student should demonstrate the following problem solving skills:
   a. Identify important questions and separate data in organized fashion organizing positives & negatives
   b. Discern major from minor patient problems
   c. Formulate a differential while identifying the most common diagnoses
   d. Identify indications for & apply findings from the most common radiographic and diagnostic tests
   e. Identify correct management plan considering contraindications & interaction

3. Clinical Skills - the student should demonstrate the following problem solving skills:
   a. Assesses vital signs & triage patient according to degree of illness
   b. Perform good auscultory, palpatory & visual skills
   c. Perform a thorough physical exam pertinent to the rotation

4. Osteopathic Manipulative Medicine - the student should demonstrate the following skills in regards to osteopathic manipulative medicine
   a. Apply osteopathic manipulative medicine successfully when appropriate
   b. Perform and document a thorough musculoskeletal exam
   c. Utilize palpatory skills to accurately discern physical changes that occur with various clinical disorders
   d. Apply osteopathic manipulative treatments successfully
5. **Medical Knowledge** – the student should demonstrate the following in regards to medical knowledge
   
   a. Identify & correlate anatomy, pathology and pathophysiology related to most disease processes
   b. Demonstrate characteristics of a self-motivated learner including demonstrating interest and enthusiasm about patient cases and research of the literature
   c. Are thorough & knowledgeable in researching evidence based literature
   d. Actively seek feedback from preceptor on areas for improvement
   e. Correlate symptoms & signs with most common disease

6. **Professional and Ethical Behaviors** - the student should demonstrate the following professional and ethical behaviors and skills:
   
   a. Is dutiful, arrives on time & stays until all tasks are complete
   b. Consistently follows through on patient care responsibilities
   c. Accepts & readily responds to feedback, is not resistant to advice
   d. Assures professionalism in relationships with patients, staff, & peers
   e. Displays integrity & honesty in medical ability and documentation
   f. Acknowledges errors, seeks to correct errors appropriately
   g. Is well prepared for and seeks to provide high quality patient care
   h. Identifies the importance to care for underserved populations in a non-judgmental & altruistic manner

---

III. **Rotation Design**

A. **Educational Modules**

   Educational modules using lectures, cases, and other forms of delivery are used for third year curriculum. Each student must complete a post-rotation exam to assure that the expected basic content or medical knowledge has been acquired during the rotation. In addition to the experiences received in the clinical training sites, students are expected to read the content of the assigned textbooks and on line materials in order to complete the entire curriculum assigned for the clinical module.

B. **Formative Evaluation**

   Student competency based rating forms are used by the preceptor to evaluate each student’s clinical skills and the application of medical knowledge in the clinical setting. These forms are only completed by the clinical faculty member or preceptor. Performance on rotations will be evaluated by the primary clinical faculty member precepting the student. VCOM uses a competency based evaluation form which includes the osteopathic core competencies. These competencies evaluated include:

   a. Medical knowledge;
   b. Communication;
   c. Physical exam skills;
   d. Problem solving and clinical decision making;
   e. Professionalism and ethics;
   f. Osteopathic specific competencies; and
   g. Additional VCOM values.

   Student competency is judged on clinical skill performance. Each skill is rated as to how often the student performs the skill appropriately (i.e. unacceptable, below expectation, meets expectation, above expectation, exceptional).
C. Logging Patient Encounters and Procedures
Students are required to maintain a log to identify the procedures performed and the number of essential patient encounters in the CREDO application. All students must review these logs with their preceptors prior to the end of the rotation period, as required by the final preceptor evaluation form. Students are encouraged to periodically review their CREDO entries with their preceptor during the rotation period.

IV. Credits
5 credit hours

V. Course Texts
A. Required Textbooks
  Available in electronic format on the VCOM Library – on R2 Library, Archives
  Available in electronic format on the VCOM Library—on Access Medicine
  Available in electronic format on the VCOM Library – on LWW Osteopathic Medicine Collection
  Available in electronic format on the VCOM Library

B. Recommended Textbooks

VI. Course Grading and Requirements for Successful Completion
A. Requirements
- Attendance according to VCOM and preceptor requirements as defined in the College Catalog and Student Handbook.
- Completion of all Clinical Modules in the required curriculum.
- Logging Patient Encounters and Procedures in CREDO:
  - Students are required to log all patient encounters and procedures into the CREDO application. All students must review these logs with their preceptors prior to the end of the rotation period, as required by the final preceptor evaluation form. Students are encouraged to periodically review their CREDO entries with their preceptor during the rotation period. These reviews should stimulate discussions about cases and learning objectives, as well as identify curriculum areas the student may still need to complete. CREDO can be accessed at: https://credo.education/
- Rotation Evaluations:
  - Student Site Evaluation: Students must complete and submit at the end of rotation. See the VCOM website at:
http://intranet.vcom.edu/clinical/Login/index.cfm?fuseaction=LoginInfo&LoginPage=ViewStudentSchedule to access the evaluation form.

- Third-Year Preceptor Evaluation: It is the student's responsibility to ensure that all clinical evaluation forms are completed and submitted online or turned in to the Site Coordinator or the Clinical Affairs Office at the completion of each rotation. Students should inform the Clinical Affairs Office of any difficulty in obtaining an evaluation by the preceptor at the end of that rotation. See the VCOM website at: www.vcom.edu/academics/clinical-forms to access the evaluation form.

- Mid-Rotation Evaluation: The mid-rotation evaluation form is not required but highly recommended. See the VCOM website at: www.vcom.edu/academics/clinical-forms to access the mid-rotation evaluation form.

- Successful completion of the end-of-rotation written exam. The end-of-rotation exam questions will be derived directly from the specific objectives presented in each of the below modules.

B. Grading
Students must pass both the "module" and "rotation" portions of the course. All rotations have a clinical rotation grade and clinical modules/exam grade. The clinical rotation grade uses the Honors, High Pass, Pass, Fail system; these grades are not calculated in the GPA. The rotation modules are assigned an exam grade.

<table>
<thead>
<tr>
<th>OMS 3 End-of-Rotation Exam Grades</th>
<th>OMS 3 AND OMS 4 Clinical Rotation Grades</th>
<th>Other Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 90-100</td>
<td>H Honors</td>
<td>IP In Progress</td>
</tr>
<tr>
<td>B+ 85-89</td>
<td>HP High Pass</td>
<td>INC Incomplete</td>
</tr>
<tr>
<td>B 80-84</td>
<td>P Pass</td>
<td>CP Conditional Pass</td>
</tr>
<tr>
<td>C+ 75-79</td>
<td>F Fail</td>
<td>R Repeat</td>
</tr>
<tr>
<td>C 70-74</td>
<td></td>
<td>Au Audit</td>
</tr>
<tr>
<td>F &lt;70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. Remediation
Students who fail one or more rotations or one or more end-of-rotation exams twice will be referred to the Promotion Board. If a student fails the professionalism and ethics portion of the evaluation he or she may be removed from the rotation and referred to the Professionalism and Ethics Standards Board. No grade will be changed unless the Office of Clinical Affairs certifies to the Registrar, in writing, that an error occurred or that the remediation results in a grade change.

- Failure of an End-of-Rotation Exam
Students must pass each end of rotation exam with a C (70%) or better to receive a passing grade for the clinical medical knowledge module. Students who fail an end of rotation exam but pass the clinical rotation evaluation component have a second opportunity to pass the exam within 28 days of notification. If the student passes the remediation exam, the remediated exam grade will be the grade recorded on the transcript and be GPA accountable. If the student fails the end of rotation exam a second time, the student will receive an “F” grade for the rotation and will be brought before the Promotion Board. If the student is allowed to repeat the rotation, all components of the rotation must be repeated. In this case, the “F” grade remains the permanent grade for the initial rotation and the student will receive a new grade for the repeated rotation. The grade will be recorded in a manner that designates that it is a repeated rotation (eg. R-pass).
• **Failure of a Rotation**
  If a student fails the clinical rotation evaluation the student will receive an “F” grade for the rotation and will be brought before the Promotion Board. If the student is allowed to repeat the rotation, all components of the rotation must be repeated. In this case, the “F” grade remains the permanent grade for the initial rotation and the student will receive a new grade for the repeated rotation. The grade will be recorded in a manner that designates that it is a repeated rotation (eg. R-pass).

• **Failure to Make Academic Progress**
  Repeated poor or failing performance in a specific competency area on the evaluation form across more than one rotation may also be a reason for a required remediation at the discretion of the Associate Dean for Clinical Affairs in consultation with the clinical chair, the preceptor, and the Promotion Board. In general, rotations should show a progression of improvement in clinical performance. Those students who receive a mere “Pass” on multiple rotations and/or maintain a “CP” on one or more rotations after final grades are received, will be counseled about overall performance and may be required to complete an additional rotation at the end of the year. Any additional curriculum or required remediation will be based on the performance measure. In general, rotations should show a progression of improvement in performance. Those students who continually score in the "unsatisfactory" category or repeated "performs some of the time, but needs improvement" consistently and do not improve over time or who fail one or more rotations may be deemed as not making academic progress and, as a result, may be referred to the Promotion Board and be required to complete additional curriculum. Multiple rotation failures may result in dismissal.

Poor ratings on the clinical rotation evaluation in the professional and ethical areas of the assessment are addressed by the Associate Dean for Clinical Affairs. The Associate Dean may design a remediation appropriate to correct the behavior or if needed may refer the student to the Professionalism and Ethics Board. In the case of repeated concerns in a professional and/or ethical area, the Associate Dean for Clinical Affairs may refer the student to the Campus Dean for a Behavioral Board or Promotion Board hearing. The Campus Dean will act upon this referral depending on the severity and the area of the performance measure. Poor ratings in this area will include comments as to the exact nature of the rating. Repeated poor or failing performance in a specific competency area on the evaluation form across more than one rotation may also be a reason for a required remediation at the discretion of the Associate Dean for Clinical Affairs in consultation with the clinical chair and the preceptor, and the Promotion Board. In general, rotations should show a progression of improvement in clinical performance.

**VII. Academic Expectations**

Grading policies, academic progress, and graduation requirements may be found in the College Catalog and Student Handbook at: [http://www.vcom.edu/handbooks/catalog/index.html](http://www.vcom.edu/handbooks/catalog/index.html)

**A. Attendance**

Attendance for all clinical rotation days is mandatory. The clinical site will determine the assigned days and hours to be worked within the rotation period. Students are required to attend any orientation the clinical site sets as mandatory prior to any rotation or the clinical year. The orientation sessions vary by site and are required to maintain assignment to the site. Although the clinical site determines the assigned days and hours to be worked, VCOM has established the following guidelines:

- 4 week rotations may not be less than 20, eight hour days for a total of a minimum of 160 hours and often average 180 hours or greater.
  - Students may be required to work up to 24 days in a 4-week period or 25 days in a 1-month rotation, including call and weekends at the discretion of the clinical site.
If the clinical site requires longer daily hours or shift work, the student may complete the required hours in less than 20 days with the following specifications:

- Students should not work greater than 12 out of every 14 days.
- Students should not work more than 12 hours daily, exclusive of on-call assignments.
- If on-call hours are required, the student should not be on duty for greater than 30 continuous hours.
- Students may be required to work weekends but in general should have 2 weekends per month free and 2 of 7 days per week free.

2 week rotations may not be less than 10, eight hour days for a total of a minimum of 80 hours and often average 100 hours or greater.

If the clinical site requires longer daily hours or shift work, the student may complete the required hours in less than 10 days with the following specifications:

- Students should not work greater than 12 out of every 14 days.
- Students should not work more than 12 hours daily, exclusive of on-call assignments, and may not complete the 2 week rotation in less than 1 week.
- If on-call hours are required, the student should not be on duty for greater than 30 continuous hours.
- Students may be required to work weekends but in general should have 2 of 7 days per week free.

It should be noted that preceptors will have final determination of the distribution of hours, which may vary from this policy but should not in general be less than 160 hours for a 4 week rotation or less than 80 hours for a 2 week rotation. The institution’s DSME and assigned clinical faculty determine clinical duty hours. Students are responsible to the assigned clinical faculty and are expected to comply with the general rules and regulations established by the assigned clinical faculty, and/or the core hospital(s), or facility associated with the rotation.

The average student clinical day begins at 7 am and ends at 7 pm. Students are expected to work if their assigned clinical faculty is working. Some rotations assign students to shifts and in such cases the student may be required to work evening or night hours. If on-call hours are required, the student must take the call; however, the student should not be on duty for greater than 30 continuous hours. Students may be required to work weekends, but in general should have two weekends per month free and two of seven days per week free. Student holidays are determined by the clinical site and follow those of other students and/or residents from the clinical site. Students must be prompt and on time for the clinical rotation.

Students are expected to arrive on time to all clinical rotations. If a student is late, he or she must notify the site coordinator and the preceptor prior to or at the time they are scheduled arrive. Students must have a reason for being late such as illness or vehicle issues and it is not anticipated that this would occur more than one occasion AND it is important the student call in prior to being late. Repeated tardiness is considered as unprofessional behavior and is a reason for dismissal from a rotation. Students with repeated tardiness will be referred to the PESB. Tardiness is defined as more than 5 minutes after the scheduled time the preceptor designates as the expected arrival time.

The Office of Clinical Affairs requires that the medical student complete and submit an Excused Absence Clinical Rotations Approval form for any time "away" from clinical rotations. Forms are available at: www.vcom.edu/academics/clinical-forms . The student must have this form signed by their preceptor and others designated on the form to obtain an excused absence and must be provided to the DSME and the Office of Clinical Affairs through the site coordinator. The form must be completed prior to the beginning of the leave. If an emergency does not allow the student to submit this prior to the absence, the “Excused Absence Clinical Rotations Approval” form must be submitted as soon as the student is physically able to complete the form. In addition to completion of the form,
students must contact the Department of Clinical Affairs, the Site Coordinator, and the preceptor’s office by 8:30 AM of the day they will be absent due to an illness or emergency. No excused absence will be granted after the fact, except in emergencies as verified by the Associate Dean for Clinical Affairs.

Regardless of an excused absence, students must still complete a minimum of 160 hours for a 4 week rotation and 80 hours for a 2 week rotation in order to pass the rotation. Any time missed must be remediated during the course of the rotation for credit to be issued. Students may remediate up to four missed days or 48 hours missed during any rotation period by working on normal days off. OMS 3 and OMS 4 students who have any unexcused absences will be referred to the PESB.

VIII. Professionalism and Ethics
It is advised that students review and adhere to all behavioral policies including attendance, plagiarism, dress code, and other aspects of professionalism. Behavioral policies may be found in the College Catalog and Student Handbook at: [http://www.vcom.edu/handbooks/catalog/index.html](http://www.vcom.edu/handbooks/catalog/index.html)

A. VCOM Honor Code
The VCOM Honor Code is based on the fundamental belief that every student is worthy of trust and that trusting a student is an integral component in making them worthy of trust. Consistent with honor code policy, by beginning this exam, I certify that I have neither given nor received any unauthorized assistance on this assignment, where “unauthorized assistance” is as defined by the Honor Code Committee. By beginning and submitting this exam, I am confirming adherence to the VCOM Honor Code. A full description of the VCOM Honor Code can be found in the College Catalog and Student Handbook at: [http://www.vcom.edu/handbooks/catalog/index.html](http://www.vcom.edu/handbooks/catalog/index.html)

IX. Clinical Modules

1. Acute Delirium
   Reading Assignment: Essentials of Clinical Geriatrics, Confusion: Delirium and Dementia
   Online PowerPoint Presentation: Acute Delirium
   Online Case: Acute Delirium
   Learning Objectives:
   i. Define Delirium.
   ii. Identify details of these clinical presentations of delirium
      a. Delirium 2° to medication
      b. Delirium 2° to lorazepam withdrawal
      c. Delirium 2° the stress of a new place
      d. Delirium 2° to an infection
      e. Delirium 2° to surgery/hip fracture
   iii. List details of the epidemiology of delirium.
   iv. Define the adverse consequences of delirium.
   v. Discuss the timeline of delirium.
   vi. List delirium synonyms.
   vii. Identify diagnostic criteria of delirium
      a. General clinical features
      b. DSM-IV criteria
   viii. List and define elements of the CAM scale
   ix. Select aspects of these delirium clinical types
      a. Hypervigilant
      b. Hypersomnolent
      c. Mixed
   x. Identify aspects of the concept of “Brain Failure”.

3rd Year Clinical Rotation: Geriatric Medicine Syllabus
xi. List aspects of the pathophysiology of delirium
   a. Metabolic threshold
   b. Cholinergic model

xii. Select details of these causes of delirium
   a. Metabolic or Endocrine
   b. Infections
   c. Drug Toxicity
   d. Central Nervous system insults

xiii. List treatments of delirium including details of:
   a. Nonpharmacologic management: Restraints & Environment
   b. Pharmacologic management
      1. Benzodiazepine use: Clinical consequences
      2. Antipsychotic use: Haldol dosage and side effects

2. Aging Changes, Functional Ability, and Safety

Reading Assignment:

Online PowerPoint Presentation: Aging Changes, Functional Ability, and Safety
Online Case: Iowa Geriatric Education Center

Learning Objectives:
   i. Explain impact of age-related changes on drug selection and dose based on knowledge of age-related changes in
      a. Renal
      b. hepatic function
      c. GI Function
      d. body composition
      e. central nervous system sensitivity
   ii. Discuss Functional ability in the elderly
      a. Activities of daily living
         1. Basic ADL
         2. instrumental ADLs (IADLs)
      b. Exercise and function implications
   iii. Discuss aging changes associated with safety
   iv. Incorporate adaptive interventions and involvement of interdisciplinary team in care of the elderly
   v. Delineate specific nutritional concerns of the elderly

3. Constipation

Reading Assignment: Hazzard’s Geriatric Medicine and Gerontology, Chapter 93 Constipation
Online PowerPoint Presentation: Constipation
Online Case: Constipation Cases

Objectives:
   i. List the impacts of constipation.
   ii. Define constipation.
   iii. State normal stool frequency.
   iv. State the cause of diarrhea in constipation.
   v. List the relationships of diet, activity, and pregnancy to constipation.
   vi. List the steps in the vicious cycle of laxative abuse.
   vii. List systemic medical conditions causing constipation.
   viii. List colon lesions causing constipation.
 ix. List GI medical conditions causing constipation.
x. List anal conditions causing constipation.
xi. List medications causing constipation.
 xii. List red flags indicating something more serious is going on as well.
 xiii. List common risk factors for constipation.
 xiv. State the steps in the proper workup for constipation.
 xv. List the various treatments for constipation.
 xvi. Define and characterize impaction.
 xvii. OMM techniques are in an accompanying Power Point

4. Constipation: An OMM Approach

Online PowerPoint Presentation: Constipation & OMM

Objectives:
i. List the location of Chapman points specifically as related to the colon and its function.
ii. Describe and demonstrate Myofascial Release of the Iliotibial Band.
iii. Describe and demonstrate Myofascial Release and soft tissue technique for the Fascia Lata.
iv. List the sympathetics and parasympathetics to the colon and their segmental levels.
v. Explain lymphatic congestion by the rib raising technique.
vi. Address paraspinal muscle dysfunction by kneading and stretching.
vii. Describe and demonstrate the restoration of autonomic balance:
   a. by suboccipital decompression
   b. by manipulating the sacrum: rocking
viii. Describe and demonstrate the Mesenteric Release technique for constipation.
ix. Describe and demonstrate Redoming of the diaphragm.
x. Describe and demonstrate the Abdominal Ganglion Release technique

5. Contractures

Reading Assignment:
- Diagnosis & Treatment: Surgery, Chapter 41 Plastic & Reconstructive Surgery, read the page on Contractures
- Diagnosis & Treatment in Orthopedics, Chapter 13 Rehabilitation, read the first section: General Principles of Rehabilitation

Online PowerPoint Presentation: Contractures

Online Case: Contractures Cases

Objectives:
i. State what contractures are.
ii. List the symptoms and consequences of contractures.
iii. Name the types of contractures.
iv. Recognize the causes of contractures.
v. Tell the steps in the exam needed for contractures.
vi. State how to diagnose a contracture.
vii. Repeat why prevention is the best “treatment” for contractures.
viii. Tell the roles of pain control in contracture treatment.
ix. State the roles of splinting in contracture management.
x. List the various modalities used in PT and OT to treat contractures.
xi. State the various procedures and surgery that can be done to address contractures.
xii. List the complications of contracture treatment.
6. Dehydration

**Reading Assignment:** Hazzard’s Geriatric Medicine and Gerontology, Chapter 88 Disorders of Fluid Balance

**Online PowerPoint Presentation:** Dehydration

**Online Case:** Dehydration Case

**Objectives:**

i. Define dehydration.

ii. List various etiologies of dehydration.

iii. List the clinical manifestations of dehydration.

iv. State the findings on physical exam in dehydration.

v. Tell the various laboratory findings in dehydration.

vi. Calculate the estimated glomerular filtration rate.

vii. Calculate the creatinine clearance.

viii. Calculate the free water clearance.

ix. Calculate the fractional excretion of Na.

x. List the special findings that apply in the elderly with dehydration.

7. Dementia

**Reading Assignment:** Essentials of Clinical Geriatrics, Part 2: Differential Diagnosis and Management, read Confusion: Delirium and Dementia

**Online PowerPoint Presentation:** Dementia

**Online Case:** Dementia Cases

**Objectives:**

i. List normal age related cognitive changes.

ii. Define dementia.

iii. Tell the differential diagnosis of dementia.

iv. List the common types of dementia.

v. Repeat the various aspects of Alzheimer’s Disease.

vi. Repeat the various aspects of Vascular Dementia.

vii. Repeat the various aspects of Lewy Body Dementia.

viii. List the steps in how to evaluate dementia.

ix. State the factors in the prognosis in dementia.

x. List steps in the non-medical management of dementia.

xi. List steps in the medical management of dementia.

xii. Tell aspects of the importance of caregiver support in dementia.

xiii. Define and distinguish among the clinical presentations of delirium, dementia, and depression. (slide 22)

xiv. Formulate a differential diagnosis and implement initial evaluation in a patient who exhibits dementia, delirium, or depression. (slides 21 – 25)

xv. Perform and interpret a cognitive assessment in older patients for whom there are concerns regarding memory or function. (slide 26)

8. Diverticulosis

**Reading Assignment:** Hazzard’s Geriatric Medicine and Gerontology, Chapter 92 Common Large Intestinal Disorders, read Diverticular Disease

**Online PowerPoint Presentation:** Diverticulosis

**Online Case:** Diverticulosis Case

**Objectives:**

i. Define diverticulosis.

ii. Define diverticulitis.

iii. Tell facts about the epidemiology of diverticular disease.

iv. List causes of diverticular disease.
v. State steps in the pathophysiology of diverticular disease.
vi. List the symptoms of diverticular disease.

vii. List physical and laboratory findings in diverticular disease.

viii. Repeat the radiology findings in diverticular disease.
ix. List the complications of diverticular disease.

x. Tell steps in nonpharmacologic management of diverticular disease.

xi. State possible antibiotic selections in diverticulitis.

xii. List dietary principles of diverticular disease.

xiii. State aspects of complicated diverticulitis and its management.

xiv. State the role of surgery in diverticular disease.

xv. Tell about the features and etiology of small bowel diverticula.

xvi. State criteria for the diagnosis of dehydration and its differential.

9. Elder Abuse

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 60 Elder Mistreatment

Online PowerPoint Presentation: Elder Abuse

Online Case: Elder Abuse Case

Objectives:

i. Define elder abuse.

ii. List aspects of the epidemiology of elder abuse.

iii. List the roles of Adult Protective Services in elder abuse.

iv. Tell the characteristics of typical elder abuse victims.

v. List and define types of elder abuse.

vi. List potential elder abuse perpetrators.

vii. Tell steps in the history recommended for elder abuse evaluations.

viii. Tell items in the documentation needed in elder abuse evaluations.

ix. List and define causative theories of elder abuse.

x. List laboratory and imaging studies useful in elder abuse evaluations.

xi. Define the role of mandated reporters of elder abuse.

xii. List who is a mandated reporter.

xiii. Tell when, what, and how do you report elder abuse.

xiv. Define the legal ramifications of being a mandated reporter of elder abuse.

10. Hypothyroidism

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 108 Thyroid Diseases, read Hypothyroidism

Online PowerPoint Presentation: Hypothyroidism

Online Case: Hypothyroidism Case

Objectives:

i. List each step in the function and physiology of the thyroid gland.

ii. Define hypothyroidism.

iii. List the risk factors and causes of hypothyroidism.

iv. List the signs and symptoms of hypothyroidism.

v. Define Hashimoto’s thyroiditis.

vi. Tell causes of drug induced hypothyroidism.

vii. Define central hypothyroidism.

viii. List details of the diagnosis of hypothyroidism and its subtypes.

ix. State steps in the treatment of hypothyroidism.

x. List details of myxedema coma.

xi. Tell the differences in hyperthyroidism and hypothyroidism.

xii. Define details of the euthyroid sick syndrome.
11. Infections

**Reading Assignment:** Hazzard's Geriatric Medicine and Gerontology, Chapter 124 Infection in the Elderly

**Online PowerPoint Presentation:** Infections

**Online Case:** Infections Cases

**Objectives:**

i. List common nursing home infections.
ii. List predisposing conditions for infection.
iii. State the clinical manifestations of infection in the elderly.
iv. Define the meaning and significance of rubor, kalor, dolor, and tumor.
v. List steps in the evaluation of infection.
vi. Tell about the use of a CBC in infections.
vii. Tell details about the use and evaluation of a UA, C&S.
viii. Tell about the use of a BMP in infection.
ix. Discuss sepsis and blood cultures.
x. Define pneumonia and steps in its evaluation.
xi. List findings and treatments of Influenza A.
xii. List findings and treatments of skin and soft tissue infections.
xiii. List findings and treatments of scabies.
xiv. Tell about findings in gastroenteritis and the role of stool testing in diagnosis.
xv. List the usual immunizations most of the elderly should have and their importance.
xvi. Explain the risks, indications, alternatives, and contraindications for indwelling (i.e., Foley) catheter use in the older adult patient.

12. Medications and Polypharmacy

**Reading Assignment:** Essentials of Clinical Geriatrics, Part 3: General Management Strategies, read Drug Therapy

**Online PowerPoint Presentation:** Medications and Polypharmacy

**Online Case:** Medications and Polypharmacy Cases

**Objectives:**

i. Define polypharmacy and its associated problems.
ii. List ways that polypharmacy threatens healthcare.
iii. Tell how an understanding of drug interactions can help manage polypharmacy.
iv. List the hazards of ginkgo biloba.
v. List the hazards of St. John’s Wort.
vi. List the hazards of ginseng.
.vii. List the hazards of kava.
ix. List the main Cytochrome P450 enzymes and their influence on drug function in the body.
x. Define drug-drug pharmacodynamic interactions.
xi. List aspects about what disease-drug interaction are.
xii. List polypharmacy issues with warfarin.
xiii. List polypharmacy issues with fluoroquinolones.
xiv. List polypharmacy issues with seizure medications.
xv. List polypharmacy issues with lithium.
xvi. List polypharmacy issues with sildenafil.
xvii. List polypharmacy issues with cholesterol medications.
xviii. List polypharmacy issues with SSRI’s.
xix. List polypharmacy issues with selegiline.
xx. List polypharmacy issues with fluoxetine.
xxi. List polypharmacy issues with tramadol.
xxii. List polypharmacy issues with triptans.
xxiii. Explain impact of age-related changes on drug selection and dose based on knowledge of age-related changes in renal and hepatic function, body composition, and central nervous system sensitivity.
xxiv. Identify medications, including anticholinergic, psychoactive, anticoagulant, analgesic, hypoglycemic, and cardiovascular drugs that should be avoided or used with caution in older adults and explain the problems associated with each.
xxv. Document a patient’s complete medication list—including prescribed, herbal, and over-the-counter medications—and for each medication provide the dose, frequency, indication, benefit, side effects, and an assessment of adherence.
xxvi. Identify potential hazards of hospitalization for all older adult patients (including immobility, delirium, medication side effects, malnutrition, pressure ulcers, procedures, perioperative and postoperative periods, and hospital-acquired infections) and identify potential prevention strategies.

13. Multiple Myeloma
Reading Assignment: Hazzard’s Geriatric Medicine and Gerontology, Chapter 104 Non-Hodgkin’s and Hodgkin’s Lymphoma and Myeloma (you may skip the Non-Hodgkin’s Lymphoma subsection)
Online PowerPoint Presentation: Multiple Myeloma
Online Case: Multiple Myeloma Case
Objectives:
   i. Define multiple myeloma.
   ii. List aspects of the epidemiology of multiple myeloma.
   iii. Tell steps in the pathophysiology of multiple myeloma.
   iv. List the clinical manifestations of multiple myeloma.
   v. List the danger signals in multiple myeloma.
   vi. Repeat the laboratory evaluations of multiple myeloma.
   vii. List x-ray findings in multiple myeloma.
   viii. List each stage and its aspects in multiple myeloma.
   ix. Define each of the major variations of multiple myeloma.
   x. Define Waldenstrom’s Macroglobulinemia.
   xi. Define and list aspects of light chain disease.
   xii. List the treatments of multiple myeloma

14. Musculoskeletal Geriatrics
Reading Assignment:
   • Hazzard’s Geriatric Medicine and Gerontology, Chapter 112 Aging of the Muscles and Joints
   • Hazzard’s Geriatric Medicine and Gerontology, Chapter 116 Osteoarthritis
Online PowerPoint Presentation: Musculoskeletal Geriatrics
Online Case: Musculoskeletal Case
Objectives:
   i. List common musculoskeletal problems in the elderly.
   ii. List steps in the proper shoulder exam.
   iii. List the various sources and causes of knee pain in the elderly.
   iv. Tell about the various sources and causes of hip pain in the elderly.
   v. List the Activities of Daily Living.
   vi. List steps in the Tinetti Balance Assessment Tool.
   vii. List steps in the “Get up and go” test.
   viii. Define clinical details of osteoarthritis.
   ix. List findings in osteoarthritis of the hands.
   x. List findings in osteoarthritis of the spine.
   xi. List findings in osteoarthritis of the knee.
15. Osteoporosis

**Reading Assignment:** Hazzard's Geriatric Medicine and Gerontology, Chapter 117 Osteoporosis

**Online PowerPoint Presentation:** [Osteoporosis](#)

**Online Case:** [Osteoporosis Cases](#)

**Objectives:**

i. Define osteoporosis and osteopenia.

ii. Tell details about the prevalence of osteoporosis.

iii. List the changes in bones during one’s lifetime.

iv. List risk factors for osteoporosis.

v. Tell the clinical manifestations of osteoporosis.

vi. State the most important part of treatment.

vii. List steps in the evaluation of osteoporosis.

viii. Define bone mineral density testing and its use.

ix. List secondary causes of osteoporosis and screening for them.

x. List aspects of the prevention and treatment of osteoporosis.

xi. Tell about the importance of distinguishing disease oriented evidence from patient oriented evidence.

xii. Tell about the meaning and calculation of the NNT for a drug or treatment.

xiii. List the roles of calcium and vitamin D in treating osteoporosis.

xiv. List the roles of estrogen replacement in treating osteoporosis.

xv. Define the use of bisphosphonates in treating osteoporosis.

xvi. Tell about the role of calcitonin in treating osteoporosis.

xvii. Define the role of denosumab in treating osteoporosis.

xviii. Define the role of teriparatide in treating osteoporosis.

xix. Tell about the effects of fluoride in treating osteoporosis.

xx. Tell about the effectiveness of hip pads in treating osteoporosis.

16. Pain

**Reading Assignment:** Hazzard's Geriatric Medicine and Gerontology, Chapter 30 Pain Management

**Online PowerPoint Presentation:** [Pain](#)

**Online Case:** [Pain Cases](#)

**Objectives:**

i. List the definition of pain, characteristics of Total Pain, allodynia, hyperalgesia, consequences of pain, and the 5th vital sign.

ii. List the generation, neuroreceptors, neural circuits, perception, and types of physical pain and apply this understanding clinically.

iii. List the assessment of patients for pain by exams and scales.

iv. Tell how to overcome barriers to pain control in patients, medical staff, and yourself.

v. List and use non-pharmacologic strategies to treat pain.

vi. Tell how to use analgesics safely and effectively, applying proper principles and the WHO Analgesic Ladder.

vii. List and tell how to apply clinically a full understanding of the pharmacology, dosing, use, metabolism, risks, and side effects of the WHO Step 1 analgesics: APAP, NSAIDS, tramadol.

viii. List and tell how to apply clinically a full understanding of the pharmacology, dosing, use, metabolism, risks, and side effects of the WHO Step 2 analgesics: APAP combined with hydrocodone, codeine, and oxycodone.

ix. List and tell how to apply clinically a full understanding of the pharmacology, dosing, use, metabolism, risks, and side effects of the WHO Step 3 analgesics: morphine, oxycodone, fentanyl, hydromorphone, and methadone.
x. Convert opioids safely and effectively from one drug or dosage route to another, and tell when and why this would be needed.
xii. Tell how to manage difficult specific types of pain including neuropathy, bone pain, and bowel obstruction pain.
xiii. Tell how to avoid and effectively manage side effects of opioids including allergy, urticaria, constipation, nausea, vomiting, sedation, delirium, and respiratory depression.
xiv. Define and tell how to effectively manage opioid addiction, tolerance, dependence, and abuse.
xv. List the steps in proper documentation at every opioid prescription and pain encounter properly carried out in practice.
xvi. Define the principle in your practice that “Pain is inevitable. Suffering is optional.”

17. Palliative Care

Reading Assignment:
- Unipac, Vol. 1: The Hospice/Palliative Medicine Approach to End-of Life Care
- Hazzard's Geriatric Medicine and Gerontology, Chapter 3

Online PowerPoint Presentation: Palliative Care

Objectives:
- Define palliative care
- Define hospice
- Compare and contrast the dichotomous mode of healthcare delivery versus the integrated model of healthcare delivery
- Identify indications for palliative care
- Recognize common symptoms experience at the end of life including pain, dyspnea, hallucinations, anorexia, fatigue, nausea, constipation, xerostomia, dysphagia, etc. and treatment strategies for these
- Identify how to create Goals of Care for a patient
- Identify indications for artificial nutrition or hydration
- Identify the actively dying patient
- Define and differentiate among types of code status, health care proxies, and advanced directives in the state where one is training.
- Accurately identify clinical situations where life expectancy, functional status, patient preference, or goals of care should override standard recommendations for screening tests and/or treatment in older adults.
- Identify the psychological, social, and spiritual needs of patients with advanced illness and their family members, and link these identified needs with the appropriate interdisciplinary team members.
- Discuss palliative care (including hospice) as a positive, active treatment option for a patient with advanced disease.

18. Parkinsonism

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 66 Parkinson's Disease and Related Disorders

Online PowerPoint Presentation: Parkinson’s

Online case: Parkinson’s Cases

Objectives:
- List the aspects of Parkinson’s Disease and its etiology.
- List the clinical manifestations of Parkinson’s Disease.
- List the medications used to treat Parkinson’s Disease.
- Tell aspects of the pharmacology and use of Levodopa/Carbidopa.
- Tell aspects of the pharmacology and use of dopamine agonists.
vi. Tell aspects of the pharmacology and use of selegiline.
vii. Tell aspects of the pharmacology and use of COMT inhibitors.
viii. Tell aspects of the use of OMT in Parkinson’s Disease.
x. Define drug induced Parkinsonism.
x. Discuss the significance of Lewy bodies.
xi. List symptoms of Shy Drager Syndrome and distinguish it from Parkinson’s Disease.
xii. List other conditions with Parkinsonian features.

19. Polymyalgia Rheumatica

**Reading Assignment:** Hazzard's Geriatric Medicine and Gerontology, Chapter 119 Myopathy, Polymyalgia Rheumatica, and Temporal Arteritis

**Online PowerPoint Presentation:** [Polymyalgia Rheumatica](#)

**Online Case:** [Polymyalgia Rheumatica Cases](#)

**Objectives:**

i. Define polymyalgia rheumatica and its epidemiology.
ii. Tell aspects of the etiology of polymyalgia rheumatica.
iii. List the symptoms of polymyalgia rheumatica.
iv. List steps in the diagnosis of polymyalgia rheumatica.
v. Define what a sed rate is.
vi. Tell aspects of temporal arteritis, its symptoms, and complications.
vii. List aspects of the management of polymyalgia rheumatica.
viii. Tell aspects of the pathology underlying temporal arteritis.

20. Pressure Ulcers

**Reading Assignment:** Hazzard's Geriatric Medicine and Gerontology, Chapter 58 Pressure Ulcers

**Online PowerPoint Presentation:** [Pressure Ulcers](#)

**Online Case:** [Pressure Ulcer Cases](#)

**Objectives:**

i. Define pressure ulcers.
ii. List typical locations of pressure ulcers.
iii. Define what stages of pressure ulcers are.
iv. List steps in typical pressure ulcer healing.
v. List aspects of the pathogenesis of pressure ulcers.
v. Define who is at most risk for pressure ulcers.
vii. List ways to prevent most pressure ulcers.
ix. List the dressings used in treatment of pressure ulcers.
ii. List steps in the debridement of pressure ulcers.
ix. State the roles of pain control in treatment of pressure ulcers.
xi. List steps in the treatment of Stage I pressure ulcers.
ii. List steps in the treatment of Stage II pressure ulcers.
iii. List steps in the treatment of Stage III & IV pressure ulcers.
ix. Tell the roles of surgery in treatment of pressure ulcers.

21. Psychiatry in the Elderly

**Recommended Reading Assignment:**
- DSM-5; American Psychiatric Association, 2013
- Essentials of Clinical Geriatrics; Kane
- Geriatric Review Syllabus; 6th edition; American Geriatrics Society

**Online PowerPoint:** [Psychiatry in the Elderly](#)

**Objectives:**

i. Define and Identify major depression in elderly patients.
ii. Discuss general principles in the treatment of depression.
iii. Distinguish bipolar disease from major depression.
iv. Discuss general principles in the treatment of bipolar disease.
v. Define and identify psychosis in elderly patients.
vi. Define and identify anxiety in elderly patients.
vii. Discuss general principles in the treatment of anxiety.
viii. Define and distinguish among the clinical presentations of delirium, dementia, and depression.
ix. Formulate a differential diagnosis and implement initial evaluation in a patient who exhibits dementia, delirium, or depression.
x. Explain the risks, indications, alternatives, and contraindications for physical and pharmacological restraint use.

22. Stroke

**Reading Assignment:** Hazzard’s Geriatric Medicine and Gerontology, Chapter 64 Cerebrovascular Disease

**Online PowerPoint Presentation:** Stroke

**Online Case:** Stroke Case

**Objectives:**

i. Define stroke.
ii. List and describe the kinds of stroke.
iii. List the risk factors of stroke.
iv. Tell about the symptoms of stroke.
v. List and describe the territorial stroke syndromes.
vi. List steps in the history taking in a stroke victim.
vii. List steps in the physical in a stroke victim.
viii. Assess and describe baseline and current functional abilities (instrumental activities of daily living, activities of daily living, and special senses) in an older patient by collecting historical data from multiple sources and performing a confirmatory physical examination.
ix. List the differential diagnosis of stroke.
x. List laboratory testing useful in stroke.
xi. Tell about aspects of imaging studies useful in stroke.
=xii. List steps in treatment of stroke.
xiii. Develop a preliminary management plan for patients presenting with functional deficits, including adaptive interventions and involvement of interdisciplinary team members from appropriate disciplines, such as social work, nursing, rehabilitation, nutrition, and pharmacy.
xiv. State steps in the prevention of stroke.

23. The H&PE And Transition of Care

**Recommended Reading Assignment:**
- Hazzard’s Geriatric Medicine and Gerontology, Chapter 16 Transitions
- Essentials of Clinical Geriatrics; Kane
- Geriatric Review Syllabus; 6th edition; American Geriatrics Society

**Online PowerPoint Presentation:** The H&PE & Transitions of Care

**Objectives:**

i. Explain the components of a full H&PE and how each contributes to good patient care.
ii. List all elements of a Review of Systems and provide 3 items to cover in each element.
iii. Conduct a surveillance examination of areas of the skin at high risk for pressure ulcers and describe existing ulcers.
iv. Perform and interpret a cognitive assessment in older patients for whom there are concerns regarding memory or function.
v. Perform a full H&PE.
vi. Identify the hazards transitions of care pose to patients.
vii. Communicate the key components of a safe discharge plan (e.g., accurate medication list, plan for follow-up), including comparing/contrasting potential sites for discharge.

viii. Identify potential hazards of hospitalization for the elderly (including immobility, delirium, medication side effects, malnutrition, pressure ulcers, procedures, perioperative and postoperative periods, and hospital-acquired infections) and identify potential prevention strategies.

24. Urinary Incontinence

Reading Assignment: Essentials of Clinical Geriatrics, Part 2: Differential Diagnosis and Management, read Incontinence

Online PowerPoint Presentation: Urinary Incontinence

Online Case: Urinary Incontinence Cases

Objectives:

i. Define urinary incontinence and how to uncover it.

ii. Repeat the steps in the neurology of urinary function.

iii. List the types of urinary incontinence.

iv. List causes of transient urinary incontinence.

v. Define urge incontinence.

vi. Define stress incontinence.

vii. Define overflow incontinence.

viii. Define functional incontinence.

ix. Define mixed urinary incontinence.

x. List the elements of the H&PE related to urinary incontinence evaluation.

xi. Tell about aspects of the use of a bladder diary.

xii. List aspects of the use of post voiding residual urine volume and urodynamic testing.


xiv. List and explain the medications useful for urinary incontinence.

xv. Tell about surgical treatments of urinary incontinence.

xvi. Define the use of vaginal pessaries for urinary incontinence.

xvii. List the uses and risks of Foley catheters in urinary incontinence.

Osteopathic Manipulative Medicine and the Osteopathic approach to clinical cases are covered in the monthly workshops and tested on the OMM end-of-rotation exams. Students are responsible for reviewing the OMM Syllabus and meeting the learning objectives covered in each month’s workshop.