I. **Rotation Description**

Primary Care is a field that is beloved by physicians because of the variety of opportunities offered. In rural areas, not only will primary care trained physicians work in outpatient settings, but often in emergency rooms, hospitals, specialty clinics, and urgent care centers. They also often assist in surgery and provide obstetrical and newborn care. In medically underserved urban areas, primary care physicians care for patients with a host of complicated medical illnesses. A vast array of settings exist for primary care in a medically underserved area, including rural and inner city experiences. The primary care clinic is also a place where many office based procedures occur including but not limited to biopsies, laceration repairs, and minor fracture treatment. Working with patients on preventive health care management, such as vaccinations, preventive screening tests and measures to prevent disease, and one on one health counseling occur during this rotation. Students have the opportunity to incorporate the “whole-person” approach, a principle valued in osteopathic medicine, and to develop their osteopathic manipulative medicine skills through clinical case-based OMM workshops.

The curriculum is taught through structured reading assignments, on-line case modules and lectures, and through the student-preceptor experience. Students are expected to complete their assignments for both the Clinical Primary Care – Rural and MUA setting, and the longitudinal OMM course. Due to the variety of practice opportunities and formats, 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

Our goal is to educate students on all the aspects of being a rural physician or a physician caring for a medically underserved population. The core values of partnering with the patient, practicing continuous healing relationships, whole person orientation, and the resources of the community context is embodied in the comprehensive care of the patient.

B. Clinical Performance Objectives

While the end-of-rotation exam is derived from the didactic curriculum and objectives described below in the “Clinical Modules – Required Curriculum” section, the end-of-rotation evaluation completed by your 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 an 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 Clinical Key
  Available in electronic format on the VCOM Library – on LWW Osteopathic Medicine Collection

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.
- Completion of the assigned Aquifer cases listed below in the Clinical Modules. Summary of Case Credit button must be clicked at the end of each case in order to receive credit for the case.
  - Register for the Aquifer cases:
    - Go to [https://www.aquifer.org](https://www.aquifer.org)
    - If you are a first-time user:
      - Click “Sign in” in the top right corner.
      - Enter your institutional email address in the email box. Then click on the “Register” button at the bottom of the page.
      - You will be sent an email with a link to complete registration. Upon receipt of the registration email, click on the link “Click Here“. You will then be brought to the profile setup page. An email will be sent to you. Follow the instructions in the email to setup your account.
      - You will be asked to fill in your profile information and set up a password (8 character minimum). Once you have completed your user profile and created a password, you will receive a welcome email with links to useful information and guides. You would also be logged into the Aqueduct learning management system.
      - Once your profile is completed successfully, you will be brought to your institution’s Course page.
      - You will also receive a “Thank you for registering with Aquifer” email with links to tools, resources, and Aquifer news.
  - If you are a returning user:
    - Click “Sign in” in the top right corner.
    - Please log in with your institutional email and account password and click “Sign In”.

3rd Year Clinical Rotation: Primary Care: Rural/Medically Underserved Setting Syllabus
• Logging Patient Encounters and Procedures in CREDO:
  o 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:
  o 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.
  o 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.
  o 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 Primary Care 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>Clinical Grading Scale and GPAs</th>
</tr>
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<tbody>
<tr>
<td>OMS 3 End-of-Rotation Exam Grades</td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>A  90-100</td>
</tr>
<tr>
<td>B+  85-89</td>
</tr>
<tr>
<td>B    80-84</td>
</tr>
<tr>
<td>C+   75-79</td>
</tr>
<tr>
<td>C    70-74</td>
</tr>
<tr>
<td>F    &lt;70</td>
</tr>
</tbody>
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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

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
    - Student 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 to 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](http://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](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](http://www.vcom.edu/handbooks/catalog/index.html)

IX. Clinical Modules

1. Osteopathic Manipulative Treatment for the Primary Care Patient

   **Reading Assignment:** Somatic Dysfunction in Osteopathic Family Medicine (2nd ed.), Chapters 4-6, pages 16-49

   **Learning Objectives:**
   i. Know the elements of a complete structural exam and screen for patients presenting to a primary care office
   ii. Recall the evidence-based indications for manipulative treatment
   iii. Recall the basic mechanics of various somatic dysfunctions commonly encountered in a primary care setting
iv. Describe appropriate consent for a patient before performing OMT
v. List the indications and contraindications for OMT
vi. Recall the viscerosomatic responses to various disease processes
vii. Consider appropriate osteopathic manipulative treatments on a patient with somatic dysfunction
viii. Recall the importance of continuity of care when treating a patient with OMT
ix. Be able to appropriately document the structural exam and somatic findings found during the physical exam

2. TIA/CVA Prevention and Management

   Reading Assignment: Rakel Textbook of Family Medicine, Chapter 41, pages 1004-1009
   Online Case: FM II Case 02 – TIA/CVA

   Learning Objectives:
   i. Discuss the differential diagnosis of acute neurologic deficits
   ii. Discuss risk factors for TIA and strokes
   iii. Discuss the work-up, including imaging, and treatment options for TIA and CVA
   iv. Understand the varied presentations and definition of TIA
   v. Differentiate based on presenting symptoms of Bell’s Palsy vs. TIA
   vi. Know the criteria for TPA use in acute stroke setting and explore and discuss the availability of this treatment in the community the patient lives.
   vii. List the pharmacologic therapy in a patient with CVA
   viii. Know the initial treatment for patients presenting with stroke symptoms
   ix. Describe blood pressure management in suspected CVA
   x. Understand the use of anti-platelet medication in post-CVA care
   xi. Educate patients on the importance of timing when stroke symptoms present

3. Influenza and Pneumonia Prevention

   Reading Assignment: Rakel Textbook of Family Medicine, Chapter 15, pages 183-235
   Online Case: Aquifer fmCASES 21

   Learning Objectives:
   i. State who should receive an influenza and pneumococcal vaccine based on risks and age
   ii. List the types of vaccine available
   iii. State vaccine administration effect on pneumonia prevention
   iv. Know pneumonia vaccine schedule for patients over 65 years old
   v. Demonstrate a thorough history and perform an appropriate physical exam in the setting of an acute respiratory illness
   vi. List clinical signs and diagnostic studies performed (where indicated) to determine upper respiratory infections verses pneumonia, the cause of illness and severity of illness in a patient presenting with suspected influenza
   vii. Know the risk factors for various types of pneumonia according to age, lifestyle, and exposures
   viii. Know appropriate antibiotic coverage for different presentations of pneumonia
   ix. Understand the most important way to stop the spread of respiratory illness in health care settings
   x. State the common positive findings on physical exam for pneumonia and acute respiratory infection
   xi. Educate patients on the myths and facts of the influenza vaccine
   xii. Identify and when needed apply the osteopathic treatment for a patient with pneumonia
4. Dermatology I: Skin Infections and Dermatitis
Reading Assignment: Rakel Textbook of Family Medicine, Chapter 33, pages 740-781
Online Case: Aquifer fmCASES 16
Learning Objectives:
   i. Discuss the most common bacterial, viral, and fungal skin infections seen in the primary care setting
   ii. Differentiate bacterial vs. viral skin infections by presentation and testing when appropriate
   iii. Describe the etiology and treatment of erysipelas, impetigo, SSSS
   iv. Discuss the treatment for MRSA
   v. Discuss the diagnosis and management of T. versicolor, intertrigo
   vi. Discuss the etiology of Tinea Pedis and its management
   vii. Understand the distinction between dermatitis vs. eczema
   viii. Describe the differential diagnosis for allergic contact dermatitis and its treatment
   ix. Discuss the etiology of atopic dermatitis, its clinical manifestations and treatment
   x. Discuss the differential diagnosis for nummular eczema and its manifestations
   xi. Educate patients on the best prevention and treatment of stasis dermatitis
   xii. Differentiate stasis dermatitis from cellulitis
   xiii. Apply the above objectives when evaluating skin disorders and be familiar with the treatment for each.

5. Acute Confusion
Reading Assignment: Rakel Textbook of Family Medicine, Chapter 47, pages 1108-1118
Online Case: FM II Case 05 – Acute Confusion
Learning Objectives:
   i. Discuss the differential diagnosis for the patient who presents with confusion and the diagnostic evaluation
   ii. List the causes of delirium in the elderly
   iii. List the causes of acute confusion in the patient less than 50 versus a patient who is elderly
   iv. Describe the presentation and work-up for delirium
   v. Utilize the Mini-Mental status exam
   vi. Describe the symptoms of Alzheimer’s Disease
   vii. Understand the difference between delirium and dementia
   viii. List the evaluation and possible treatments for delirium
   ix. Utilize the Confusion Assessment Method (CAM) for the evaluation of delirium
   x. Describe the continuum for cognitive concern, age-associated memory impairment to mild cognitive impairment and dementia
   xi. List possible treatment for dementia
   xii. List a differential diagnosis for the causes of dementia
   xiii. Educate family members on care for a patient with dementia

6. Diarrhea and Dehydration
Reading Assignment: Rakel Textbook of Family Medicine, Chapter 38, pages 913-915
Online Case: FM II Case 06 – Dehydration
Learning Objectives:
   i. Describe the most common causes of dehydration and the differential diagnosis for diarrhea in children, adults, and the elderly
   ii. Describe the clinical presentation, diagnosis, and treatment of pediatric patients with various types of diarrhea
   iii. Describe the clinical presentation of pediatric patients with dehydration
   iv. Learn the 3 categories of dehydration characterized by EWL (Estimated Weight Loss)
   v. Discuss the signs and tests for state of hydration
   vi. Explain the risk factors for diarrheal diseases
vii. Know the diagnostic evaluation and outpatient treatment for traveler’s diarrhea
viii. List the components important in the history to obtain a differential diagnosis in a patient with diarrheal disease, and the laboratory tests as to when indicated.
ix. Know the risk factors for Clostridium Difficile and when to check for Clostridium Difficile
x. Calculate maintenance fluid requirements for patients with dehydration
xi. List the treatment for C. Difficile Colitis
xii. Educate patients on proper hand washing to decrease the spread of C. Difficile Colitis

7. Laceration and Suturing

Reading Assignment: Rakel Textbook of Family Medicine, Chapter 28, pages 602-608
Online Case: FM II Case 07 – Laceration and Suturing

Learning Objectives:

i. Know the elements of an initial evaluation of patients with lacerations
ii. Discuss the importance of tetanus vaccination and indications
iii. Describe local anesthetics and their duration of action
iv. Discuss the different types of suture techniques and their indications
v. Describe the different types of suture material according to site and extent of laceration
vi. Discuss management of complicated lacerations
vii. Understand the importance of the time of suture removal
viii. Know the use of tissue adhesive and when it can be utilized
ix. Describe the indications for and appropriate measures for biopsy of a lesion
x. Describe the indications for and appropriate use of cryotherapy
xi. Understand tension lines and the importance with skin closure
xii. Educate patients on proper wound care after laceration repair

8. Neisseria Meningitis

Reading Assignment: Rakel Textbook of Family Medicine, Chapter 15, pages 191-196
Online Case: FM II Case 08 – Neisseria Meningitis

Learning Objectives:

i. Know the elements of an initial evaluation of patients with suspected meningitis
ii. Discuss the initial management of the septic patient
iii. Describe the differential diagnosis of the febrile pediatric patient with rash
iv. List the risk factors for Neisseria Meningitis (N. Meningitis)
v. Discuss the complications of N. Meningitis and its prophylaxis of contacts
vi. Know treatment protocol and treatment options for Meningitis
vii. Determine if contacts should be treated for meningitis exposure
viii. Understand the use of the meningitis vaccine and age for vaccination
ix. Understand the difference and uses of the different meningitis vaccines
x. Educate patients on the use of prophylactic treatment for meningitis exposure

9. Insomnia

Reading Assignment:

- Rakel Textbook of Family Medicine
  - Chapter 16, pages 272-273
  - Chapter 23, pages 453-455

Online Case: FM II Case 09 – Insomnia

Learning Objectives:

i. Know the elements of an initial evaluation of patients presenting with insomnia
ii. Describe risk factors for insomnia
iii. Discuss common insomnia comorbidities
iv. Formulate a differential diagnosis for insomnia
v. List the future health risks of insomnia
vi. Understand the indications for and use of sleep studies for insomnia
vii. Learn the medications approved for use in insomnia
viii. Understand the side effects with the common medications used for insomnia
ix. List the whole person approach to care and discuss lifestyle changes that help patients with insomnia
x. Educate patients on proper sleep hygiene for insomnia

10. Knee Pain

Reading Assignment:
- Rakel Textbook of Family Medicine, Chapter 3, pages 669-677

Online Case: FM II Case 10 – Knee Pain

Learning Objectives:
i. Discuss the etiology of the common causes of knee pain
ii. Identify red flag symptoms that may lead to infectious etiology of knee pain
iii. Discuss the osteopathic approach to the evaluation of knee pain including: Anatomical causes, balance, tracking, and gait abnormalities
iv. Describe a thorough osteopathic knee exam including fibular head derangement and patellar tracking
v. Demonstrate range of motion testing of the knee
vi. Utilize special testing to identify meniscal or tendon etiology
vii. Combine a knee exam and imaging to aid in diagnosis for acute and chronic knee pain
viii. Discuss the role of laboratory studies in diagnosis of acute and chronic knee pain
ix. Formulate an osteopathic treatment plan for knee pain combining office and ‘at home’ therapies
x. Consider muscle energy to the fibular head to help improve dysfunctions associated with knee pain
xi. Consider counterstrain and other indirect procedures to improve hamstring or calf muscle dysfunction associated with knee pain
xii. Discuss diagnosis and management of patellofemoral syndrome as well as the use of indirect myofascial release of the patella in the acute setting
xiii. Educate the patient on strengthening and flexibility exercises to perform at home to assist recovery from knee pain

11. Occupational Musculoskeletal Disorders

Reading Assignment:
- Rakel Textbook of Family Medicine, Chapter 30, pages 659-661
- Foundations of Osteopathic Medicine (3rd ed.)
  - Chapter 42, pages 618-620
  - Chapter 43, pages 656-658

Online Case: FM II Case 11 – Occupational Disorder

Learning Objectives:
i. Discuss the osteopathic evaluation of an occupational disorder
ii. Discuss the importance of obtaining a thorough work and environmental exposure history in the evaluation of occupational disorders
iii. Understand the differential diagnosis for carpal tunnel syndrome
iv. Incorporate osteopathic considerations with the physical exam necessary to differentiate common causes of hand numbness
v. Discuss the osteopathic management and treatment of carpal tunnel syndrome and deQuervain’s tenosynovitis
vi. Consider myofascial release to the carpal tunnel and muscle energy to the wrist to aid in the management of carpal tunnel syndrome and deQuervain’s tenosynovitis
vii. Discuss osteopathic approach to a patient with foot pain
viii. Recognize plantar fasciitis based on the common presenting history
ix. Educate patients on the home management and tools for prevention of plantar fasciitis
x. Consider myofascial release and counterstrain in the treatment of plantar fasciitis

Reading Assignment:
- Rakel Textbook of Family Medicine, Chapter 30 pages 650-664
- Somatic Dysfunction in Osteopathic Family Medicine (2nd ed.), Chapter 15, pages 139-157

Online Case: FM II Case 12 – Managing Simple Fractures
Learning Objectives:
i. Discuss the osteopathic evaluation and work up for an upper extremity sports injury
ii. Demonstrate the physical exam necessary to differentiate common causes of shoulder pain as well as differential diagnosis for shoulder pain
iii. Recognize exam finding that correlate with shoulder dislocation
iv. Differentiate rotator cuff tendonitis, impingement syndrome, and bursitis based on history and exam findings
v. Consider the Spencer technique in treatment of shoulder pain
vi. Discuss history and osteopathic exam findings that correlate with lateral and medial epicondylitis including radial head derangements
vii. Consider muscle energy to the lateral and medial epicondyles to assist in healing lateral and medial epicondylitis
viii. Identify risk factors for fracture of the upper extremity
ix. Educate the patient on the role of RICE therapy to decrease inflammation and promote healing
x. Discuss medication options for the treatment of acute pain in an upper extremity injury

Reading Assignment:
- Rakel Textbook of Family Medicine
  - Chapter 29, pages 641-645
  - Chapter 30, pages 648-650, 662-666, 669-683
- Somatic Dysfunction in Osteopathic Family Medicine (2nd ed.), Chapter 15, pages 139-157

Online Case: FM II Case 13 – Sports Injury
Learning Objectives:
i. Discuss the osteopathic evaluation and work up for a lower extremity sports injury
ii. Identify the risk factors for stress fractures
iii. Demonstrate the physical exam necessary to differentiate causes for acute hip, knee, leg, ankle, and foot pain including differential diagnoses
iv. Discuss the role of gait assessment along with functional, standing structural, seated, supine and prone examinations in the patient with lower extremity pain
v. Incorporate osteopathic physical exam for a suspected fracture with imaging to help diagnose suspected fractures
vi. Distinguish the different stress fractures related to the foot anatomy
vii. Consider indirect myofascial release to the knee, and hamstring to assist in the healing of lower extremity pain
viii. Consider muscle energy to the anterior lateral malleolus for the most common ankle sprain
ix. Understand the importance of a thorough fracture history
x. List the 5 “P’s” of compartment syndrome
xi. When fracture exists, educate the patient on proper post-fracture care, including casting
14. Inflammatory Bowel Diseases, Irritable Bowel Syndrome, Diverticular Disease, Hepatic/Biliary Disease and Celiac Disease

Reading Assignment:
- Somatic Dysfunction in Osteopathic Family Medicine (2nd ed.), Chapter 28, pages 308-316
- The Rakel Textbook of Family Medicine, Chapter 38, pages 914, 933-946

Online Case: Aquifer fmCASES 15

Learning Objectives:
1. Demonstrate the osteopathic evaluation and work up of suspected colon disorders
2. State the areas of the GI tract most prone to the development of ulcerative colitis (UC) and Crohn's; define what is meant by a skip lesion
3. Incorporate osteopathic exam findings along with history to recall the intestinal and extra-intestinal symptoms of Crohn’s and ulcerative colitis
4. Identify Chapman's points associated with lower gastrointestinal disorder
5. List 3 symptoms that characterize IBS
6. Incorporate osteopathic physical exam findings with the ROME III criteria to diagnose IBS
7. Consider sacral rock to help with IBS symptoms
8. Incorporate exam findings with the common signs and symptoms of diverticulitis and know the diagnostic tests in initial evaluation
9. State conservative management of uncomplicated diverticulitis and who may be treated as an outpatient
10. Incorporate osteopathic exam findings with history and serologic tests in the presentation of celiac disease
11. Educate the patient on dietary considerations in Celiac disease
12. Consider osteopathic treatment techniques directed at improving sympathetic tone to the bowels including hypertonic paravertebral musculature
13. Educate the patient on the use of diagnostic screening tests (recommendations) for the colon
14. Create a differential diagnosis for a patient presenting with right upper quadrant pain

15. Pneumonia

Reading Assignment:
- Rakel Textbook of Family Medicine
  - Chapter 15, pages 203-208
  - Chapter 16, pages 252-255
- Somatic Dysfunction in Osteopathic Family Medicine (2nd ed.), Chapter 25, pages 274-286

Online Case: FM II Case 15 – Pneumonia

Learning Objectives:
1. Demonstrate the osteopathic evaluation and work up for a patient with suspected pneumonia
2. Describe the common pathogens causing community acquired pneumonia
3. Discuss the varied presentations including laboratory findings of the elderly with pneumonia
4. Understand the need to hospitalize patients based on CURB-65 criteria
5. Know the CDC guidelines for vaccinations to prevent pneumonia and influenza
6. Discuss the approach to antibiotic treatment of pneumonia
7. List a differential diagnosis for the patient presenting with suspected pneumonia
8. Incorporate osteopathic evaluation to assess for rib dysfunctions in the treatment of pneumonia
9. Consider soft tissue and myofascial release of thoracic inlet to help ease fascial tensions and promote lymphatic movement
10. Consider rib raising into the treatment of patients with pneumonia in the outpatient and inpatient setting
11. Educate patients on risk factor reduction for pneumonia
16. Sinusitis

Reading Assignment:
- Rakel Textbook of Family Medicine, Chapter 18, pages 329-336
- Somatic Dysfunction in Osteopathic Family Medicine (2nd ed.)
  - Chapter 21, pages 226-232
  - Chapter 24, pages 258-273

Online Case: FM II Case 16 – Sinusitis

Learning Objectives:
i. Demonstrate the osteopathic evaluation and work up for a patient with suspected sinusitis or otitis media
ii. Discuss the etiology of sinus infections and otitis media
iii. Recognize the main risk factors for the development of sinusitis or otitis media
iv. Identify improper use of nasal decongestant sprays leading to rhinitis medicamentosa
v. Determine when antibiotics may be appropriate for acute bacterial sinusitis and otitis media
vi. Recognize the different treatment options for otitis media based on exam findings and age
vii. Understand the interactions of common decongestants with patients with hypertension or coronary artery disease
viii. Discuss the complications of sinus infections and indications for referral
ix. Describe the pharmacologic treatment of sinusitis
x. Consider facial effleurage, mandibular drainage, suboccipital release and trigeminal nerve stimulation to improve symptoms of sinusitis
xi. Consider Galbreath procedure to improve symptoms of otitis media
xii. Educate the patient on the complications with overuse of antibiotics in non-bacterial sinusitis and treatment options at home for prevention of sinusitis

17. Obstructive Lung Disease

Reading Assignment:
- Rakel Textbook of Family Medicine, Chapter 16, pages 243-251
- Somatic Dysfunction in Osteopathic Family Medicine (2nd ed.), Chapter 25, pages 274-286

Online Case: Aquifer fmCASES 28

Learning Objectives:
i. Demonstrate the osteopathic evaluation and work up for a patient with chronic obstructive pulmonary disease (COPD) complaints
ii. Incorporate osteopathic physical exam findings along with spirometry to help diagnose the three most common obstructive lung diseases
iii. Educate the patient on the risks of smoking and environmental pollutants in COPD along with preventive measures
iv. Know the stages in the stepwise approach to classification and treatment of COPD and when to test for alpha-one antitrypsin deficiency
v. List the indications for antibiotic treatment in the exacerbation of COPD
vi. Recognize how to interpret pulmonary function test (PFT) results
vii. Develop a treatment plan for COPD and incorporate an osteopathic approach towards treatment for COPD
viii. Consider rib raising to improve lung function in patients with COPD
ix. Recognize the use of OMM in COPD patients has been shown to improve pCO₂, O₂ saturation, residual lung volume and total lung capacity
x. Consider osteopathic principles and treatment to aid in chest cage movement, including somatic dysfunction, thoracic drainage and rib movement
xi. Educate the patient on home techniques to improve COPD symptoms including lung exercises and osteopathic treatment
xii. Know the community based resources that do (or do not exist) for the patient in preventing exacerbations and providing health maintenance in the patient with COPD.
18. Abnormal Vaginal Bleeding
Reading Assignment:
- Rakel Textbook of Family Medicine, Chapter 25, pages 479-481
- Somatic Dysfunction in Osteopathic Family Medicine (2nd ed.), Chapter 13, pages 127-142

Online Case: FM II Case 18 – Abnormal Vaginal Bleeding

Learning Objectives:
i. Demonstrate the osteopathic evaluation and work up for a patient with abnormal vaginal bleeding
ii. Incorporate an osteopathic physical exam with history to develop a differential diagnosis for abnormal vaginal bleeding (review the online case to assist with obtaining GYN history)
iii. Differentiate hormonal vs. structural causes of abnormal uterine bleeding
iv. Describe the signs, symptoms and risk factors for pregnancy with threatened spontaneous abortion and for ectopic pregnancy
v. Discuss the risk factors for cervical cancer and screening guidelines
vi. Know key points in the work-up of postmenopausal women with vaginal bleeding
vii. Understand the role of the sacrum with pelvic somatic dysfunctions
viii. Consider soft tissue techniques to the lumbar paravertebrals to assist in treatment with abnormal vaginal bleeding
ix. Incorporate knowledge of pubic symphysis, iliopsoas mechanics and lumbosacral mechanics when diagnosing and treating a patient with abnormal vaginal bleeding
x. Consider techniques to treat innominate dysfunctions found in patients with abnormal vaginal bleeding
xi. Educate the patient on treatment options for abnormal vaginal bleeding according to the evaluation and diagnosis

19. Congestive Heart Failure (CHF)
Reading Assignment:
- Rakel Textbook of Family Medicine, Chapter 27, pages 549-553
- Somatic Dysfunction in Osteopathic Family Medicine (2nd ed.), Chapter 27, pages 300-307

Online Case: Aquifer fmCASES 31

Learning Objectives:
i. Demonstrate the osteopathic evaluation and work-up for a patient with congestive heart failure symptoms
ii. Interpret an echocardiogram to determine systolic versus diastolic congestive heart failure
iii. State the pathophysiologic mechanisms involved in CHF
iv. State the classes of pharmacologic therapy in CHF and their mechanism of action and mortality outcomes
v. Differentiate systolic versus diastolic CHF based on pathophysiology
vi. Incorporate an osteopathic physical exam and history to investigate precipitating factors of CHF and develop a differential diagnosis
vii. Consider lymphatic techniques in the treatment of a patient with lower extremity edema in CHF
viii. Consider rib raising and techniques focused at T1-T6 to help sympathetic tone in a patient with CHF
ix. Understand staging of CHF based on patient symptoms
x. Educate the patient on methods of risk factor reduction for CHF and for those with CHF in reducing exacerbations
20. Addressing Crisis, Trauma and Disasters in the Family Medicine Setting

Reading Assignment: Rakel Textbook of Family Medicine, Chapter 44, pages 1062-1073

Learning Objectives:

i. Understand the various presentations of crisis in the primary care setting
ii. Understand the prevalence and approach to trauma related to family dysfunction, the interventions, and treatment
iii. Recall the increasing prevalence of post-traumatic stress disorders and likelihood of a traumatic event or disaster
iv. Determine the usual duration of the acute crisis and adaptation to the crisis
v. Relate previous psychiatric illness to the challenges of coping of a current crisis
vi. Utilize an intervention approach to the treatment of a crisis in the office setting
vii. Understand the importance of a timeline and ecological map (or wheel and spoke model) to determining the causes of the crisis
viii. Consider the differences between problem-focused and symptom-oriented treatment
ix. Recall the various treatment mechanisms for trauma or crisis intervention
xi. Educate the patient on coping and adaptive problem solving skills

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.