TEXAS COLLEGE OF OSTEOPATHIC MEDICINE
Office of Rural Medical Education

Our Mission

Create solutions for a healthier community by preparing tomorrow's patient-centered physicians and scientists and advancing the continuum of medical knowledge, discovery, and osteopathic medicine to provide comprehensive health care.

Core Rural Family Medicine Clerkship Syllabus
MEDE 8834
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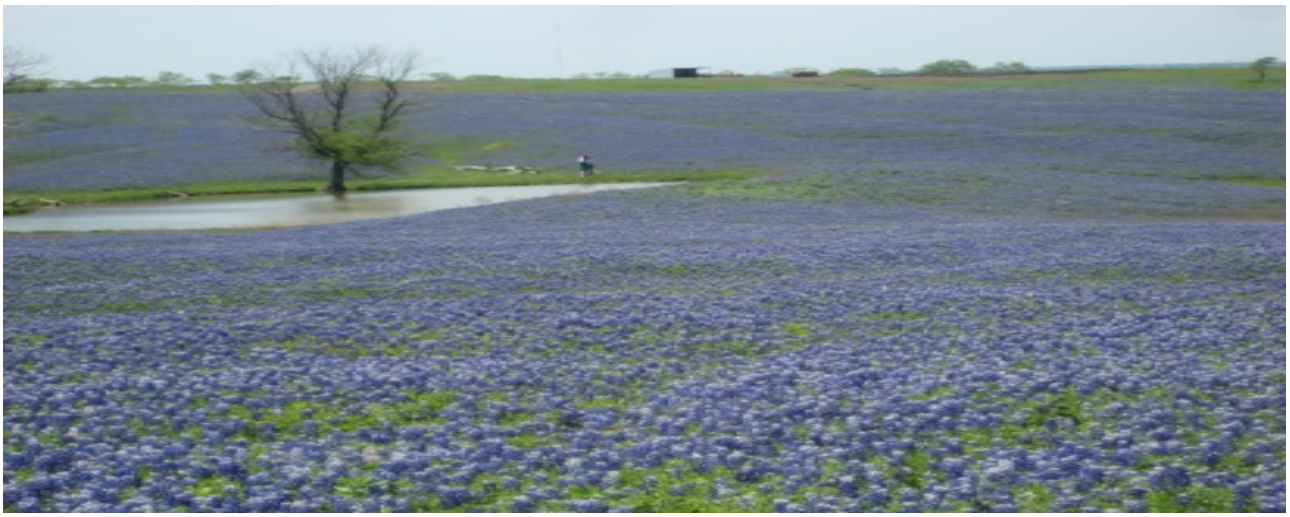
Rural Scholars Program – Office of Rural Medical Education
Creating Solutions for Healthier Rural Communities



Clerkship Director: John O. Gibson, MD
John.Gibson@unthsc.edu

Associate Director: A. Clifton Cage, DO
A.Cage@unthsc.edu

Clerkship Coordinator: Sarah Taylor
Sarah.Taylor@unthsc.edu

Office of Rural Osteopathic Medical Education
located at the corner of West 7th Street and Clifford Avenue
3501 West 7th / 800 Clifford Street
www.unthsc.edu/ruralmed

FACULTY AND SUPPORT STAFF	PHONE	E-MAIL
John Gibson, MD Course Director	817-735-2360	John.Gibson@unthsc.edu
Clifton Cage, DO Associate Director	817-735-2275	A.Cage@unthsc.edu
Lakiesha Crawford, MD Assistant Professor	817-735-2427	Lakiesha.Crawford@unthsc.edu
Lesca Hadley, MD Associate Profesor	817-320-0995	Lesca.Hadley@unthsc.edu
Ann Smith, MDiv, MEd Research Assistant Director	817-735-2354	Annette.Smith@unthsc.edu
Kaily Stone, BS Executive Assistant	817-735-2275	Kaily.Stone@unthsc.edu
Sarah Taylor, BA Academic Program Coordinator	817-735-2442	Sarah.Taylor@unthsc.edu

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Purpose of the Clinical Clerkship

The clinical clerkships affiliated with the Texas College of Osteopathic Medicine serve to provide supervised, high quality opportunities for third- and fourth-year medical students to apply and transform the declarative medical knowledge and basic clinical skills that they have acquired into procedural clinical competence, while also functioning as learning members of health care teams. The clinical clerkships promote and support TCOM students in developing clinical competence with emphasis on the core competencies beyond medical knowledge alone. Clerkships are encouraged to seek opportunities for students to provide Health and Wellness Counseling, develop improved interpersonal and communication skills, professionalism, as well as practice-based learning and improvement.

Clerkship Description

You are about to begin a twelve-week experience in Rural Family Medicine during which time you will come to appreciate concepts of prevention and health maintenance within a context of continuity. Your learning experiences will take place primarily in an ambulatory setting but will also include experiences within an inpatient setting where available. Health promotion-disease prevention has long been a part of the osteopathic philosophy and our educational emphasis on prevention is well established. Health Care Reform is now focusing on this to control costs. A major part of prevention lies in 890cancer prevention and detection. Cancer is most effectively controlled through long-term patient physician partnerships in prevention, early detection, and screening. Through your twelve-week experience of this clerkship, it is anticipated you will gain full appreciation of these concepts. To

facilitate the understanding of a long-term partnership with your patients, you have been assigned to a rural community for pre-doctoral training. During the next twelve weeks, you will be expected to coordinate all care necessary for those patients assigned to you. This experience will be invaluable in shaping a lifelong attitude of patient care.

ROME students complete their required CORE rotation in OMM as an integrated experience during the 12-week Family Medicine Clerkship. This means that OMM experiences are required to be done and documented weekly for the entire 12-week rotation. All components of the OMM rotation will therefore be satisfied during your ROME FM clerkship. Your family medicine preceptor(s) will serve as your faculty for the OMM clerkship as well. In addition, Drs. Cage and Hadley will serve as consultants and monitors of your OMM activities during your 12-week clerkship. Also, when possible, at each of the teleconferences, Dr. Hensel or her designate will be available to review and consult with you on experiences you had with OMT during the prior week. Note that you will take the OMM COMAT exam after week 8 of your FM clerkship, but OMM activities will be required for all 12-weeks of your rotation. Logging of all procedures, including OMM procedures, is required for the entire 12-week rotation. Please note that there is a separate syllabus for the OMM Core rotation, and this will be provided and explained by the OMM faculty separately.

During your 12-week Family Medicine rotation at a rural primary care site, you will also receive quality improvement training and will complete a geriatrics-focused improvement project. At project completion, you will have gained knowledge/skills in conducting continuous quality improvement, best practices in the care of geriatrics patients, and administrative leadership in a primary care setting. Additionally, you will have completed a project abstract which must be submitted to UNTHSC Research Appreciation Day (RAD) or other professional conferences. Please note that there is a separate syllabus for the OMM Core rotation, and this will be provided and explained by the ROME and Center for Geriatrics Faculty separately.

For physicians of the 21st century, “The Medical Home “has become a focal concept of any medical practice. You will be introduced to the practical implementation of a “Rural Medical Home” and how this concept applies to “Systems Based Practice.”

The well-trained family physician can provide health care for between 80 and 90 percent of the problems encountered. You will participate in this comprehensive health care in the areas of prevention, diagnosis, therapeutics, and rehabilitation. You will experience core cases in both acute and chronic diseases. Depending on the population characteristics of your preceptor’s practice, you will experience continuity of care from the small infant to the senior citizen as the scope of the family practitioner.

This rotation offers an opportunity to practice and improve your clinical skills, including diagnostic reasoning, and physical exam techniques. It gives you a chance to see patients and to follow them and test your clinical judgment and treatment. You will get feedback from your supervising physician and from your patients. Some of this may be positive and some may be negative, but all of it will benefit you in your development as a physician. It is important to follow-up on “interesting patients” by reviewing appropriate references. If you spend as little as one hour per day reading at home about topics discussed in the clinic or a patient you attended, you will visualize that topic better and enrich your clinical database for the remainder of your professional career. Medicine is a “lifelong learning opportunity.”

ROME faculty feels certain that you will find this clerkship rewarding, and it will provide valuable experiences and insight into the rewards and challenges associated with Rural Medicine and Rural Communities

Clerkship Competencies

The objectives of the Clinical Clerkships are to enable TCOM students to achieve competence as graduate osteopathic medical students. As such, the objectives of the clerkship curriculum are represented by the AACOM Osteopathic Core Competencies for Medical Students.

For the purposes of the TCOM Clinical Clerkship Competencies, the AACOM 14 Competencies have been condensed into the following 8:

1. Osteopathic Principles and Practices
2. Medical Knowledge
3. Patient Care
4. Interpersonal and Communication Skills
5. Professionalism
6. Practice-Based Learning and Improvement
7. Systems-Based Practice
8. Health Promotion/Disease Prevention

General Competencies

The core clinical clerkship in family medicine provides students with the opportunity for advancement of the following competencies:

- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families.
- Gather essential and accurate patient information.
- Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develop and carry out patient management plans.
- Counsel and educate patients and their families.
- Use information technology to support patient care decisions and patient education.
- Utilization and practice of Telehealth/Telemedicine methodology.
- Perform competently all medical and invasive procedures considered essential for practice.
- Provide health care services aimed at preventing health problems or maintaining health.
- Work with health care professionals from all disciplines to provide patient- focused care.
- Know and apply the appropriate basic and clinically supportive sciences.
- Use information technology to manage information, access on-line medical information, and support their own education.
- Create and sustain a therapeutic and ethically sound relationship with patients.
- Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development.
- Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.
- Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources.
- Practice cost-effective health care and resource allocation that does not compromise quality of care.
- Advocate for quality patient care and assist patients in dealing with system complexities.
- The body is a unit: the person is a unit of body, mind, and spirit.

- The body is capable of self-regulation, self-healing, and health maintenance.
- Structure and function are reciprocally related.
- Rational treatment is based upon an understanding of the basic principles of body unity, self-regulation and the interrelationship of structure and function

Interprofessional Education Competencies

- Competency Domain 1: Values/Ethics for Interprofessional Service
- Competency Domain 2: Roles/Responsibilities
- Competency Domain 3: Interprofessional Communication
- Competency Domain 4: Teams and Teamwork

Core Entrustable Professional Activities (EPAs) For Entering Residency

These are the skills and behaviors expected of first year residents on day one of their residencies, as described by the ACGME residency directors and described in detail in the AAMC document of the above name. It is hoped that clinical clerkship directors and facilitators will make as much effort as possible to ensure that TCOM students have opportunities to practice these skills and behaviors on all clinical rotations.

1. Gather a history and perform a physical examination.
2. Prioritize a differential diagnosis following a clinical encounter.
3. Recommend and interpret common diagnostic and screening tests.
4. Enter and discuss orders and prescriptions.
5. Document a clinical encounter in the patient record.
6. Provide an oral presentation of a clinical encounter.
7. Form clinical questions and retrieve evidence to advance patient care.
8. Give or receive a patient handover to transition care responsibility.
9. Collaborate as a member of an Interprofessional team.
10. Recognize a patient requiring urgent or emergent care and initiate evaluation and management.
11. Obtain informed consent for tests and/or procedures.
12. Perform general procedures of a physician.
13. Identify system failures and contribute to a culture of safety and improvement.

CLERKSHIP GOALS AND LEARNING OBJECTIVES

Goal 1: To help the student obtain a level of competence in osteopathic family medicine to qualify him/her for acceptance into a post-graduate GME program.

Learning Objectives Upon completion of this clinical experience, the student will be able to:
Record patient histories with emphasis on the patient's total background, including medical, social, cultural, family, nutritional, environmental, and psychological considerations.
Complete a thorough, accurate, and efficient physical and structural examination.
Record an accurate database, make assessments, and appropriate plans, including the tentative or working diagnosis, as well as identifying differential diagnostic considerations.
Select and utilize appropriate laboratory tests, radiological procedures, and consulting services to aid in reaching diagnostic conclusions.
Perform diagnostic and therapeutic clinic procedures commensurate with level of training.
Assume responsibility, under appropriate supervision, for patient evaluation and follow-up of cases to assess diagnosis and therapy.
Demonstrate knowledge of drug names, indications, side effects, dosage, and drug interaction.
Demonstrate knowledge of structural findings, manipulative treatment for correction of abnormal findings, and contraindications for the application of manipulative therapy.
Properly utilize Problem-Oriented Medical Records.
Keep records in such a manner that they can be audited.
Assure quality care and cost effectiveness via the audit procedure.
Provide patient education to facilitate patients' active participation in their own health care.
Provide medical care consistent with osteopathic philosophy and practice.
Develop a working relationship with other members of the health care delivery team: other physicians, nursing personnel, social services, office personnel, and community resources.
Identify the extent to which social, cultural, economic, psychological, and environmental factors affect the health of patients and the delivery of health care.
Demonstrate a basic understanding of the techniques, skills, problems, and competencies required in the administration of health care delivery services and office management.
Refer a patient for specialty care. (This would include a completed history and physical and a copy of pertinent information for the specialist's review. Communication regarding the referral should be relayed by phone, or preferably in writing. The Ambulatory Care Clinics would also expect a written or verbal reply from the specialist consulted following the patient visit.)
Understand the basic concepts of managed care.

Goal 2: To help the student correlate osteopathic principles with patient care.

Learning Objectives Upon completion of this clinical experience, the student will be able to:
Diagnose and treat disorders of the musculoskeletal system in-patients of all ages.
Diagnose and treat acute and chronic disorders, both somatic and visceral.
Give appropriate manipulative treatment to patients being treated for systemic diseases. The student is expected to design and implement a treatment program that is appropriate and rational for the pathophysiology involved.
Use radiology in the diagnosis of postural imbalance and other disease processes.
Identify trigger areas and reflex arcs of sensory or visceral origin.

Know the indications and contraindications for each type of manipulative treatment. Be able to select a type of treatment appropriate to the patient's age, sex, and medical condition.
Diagnose and treat disorders of the musculoskeletal system in-patients of all ages.

Goal 3: To help the student develop communicative and professional skills.

Learning Objectives Upon completion of this clinical experience, the student will be able to:
Establish rapport and communicate with patients including Telehealth methodology.
Promote patient compliance with indicated medication and other therapeutic measures.
Show an interest in the community being served.
Have better self-confidence and self-awareness.
Demonstrate a sense of professionalism as reflected in such diverse characteristics as case follow-up, continuing medical education efforts, punctuality, and personal appearance.

Goal 4: To help the student understand the importance of ethics in patient care, and professional interactions.

Learning Objectives Upon completion of this clinical experience, the student will be able to:
Understand the importance of respecting the confidentiality of patient and family concerns.
Recognize the rights of the patient.
Be attentive to common courtesies with fellow professionals, especially in handling referrals.
Be able to recognize their feelings and seek functional ways of improving their comfort and skills in dealing with "problem patients," such as those who may be considered socially unacceptable, difficult to deal with, having AIDS, or are dying.

COMMON CLINICAL ENTITIES

The following clinical presentations/ entities adapted from the assigned *Case Files Family Medicine 4th edition* text, should ideally be seen by the student during this clerkship. Knowledge of these clinical presentations/entities is essential to being prepared for the Family Medicine COMAT exam.

Abdominal Pain and Vomiting in a Child
Acute Causes of Wheezing and Stridor in Children
Acute Diarrhea
Acute Low Back Pain
Adolescent Health Maintenance/Pre-participation Sports Exams
Adult Male Health Maintenance

Adverse Drug Reactions and Interactions
Allergic Reactions
Breast Diseases
Cerebrovascular Accident/Transient Ischemic Attack
Chest Pain
Chronic Kidney Disease
Chronic Pain Management/Opioid Management Pathways
Congestive Heart Failure
Dementia
Developmental Disorders
Diabetes Mellitus
Dyspepsia and Peptic Ulcer Disease
Dyspnea (Chronic Obstructive Pulmonary Disease)
Electrolyte Disorders
Family Planning – Contraceptives
Family Violence
Fever and Rash
Geriatric Anemia
Geriatric Health Maintenance
Health Maintenance in Adult Female
Hematuria
HIV, AIDS, and Other Sexually Transmitted Infections
Hyperlipidemia
Hypertension
Irritable Bowel Syndrome
Jaundice
Joint Pain
Lower Extremity Edema
Lower Gastrointestinal Bleeding
Major Depression
Medical Ethics
Menstrual Cycle Irregularity
Migraine Headache
Movement Disorders
Musculoskeletal Injuries
Obesity
Obstructive Sleep Apnea
Osteoporosis
Palpitations
Pneumonia
Prenatal Care
Skin Lesions
Substance Abuse
Thyroid Disorders
Tobacco Use
Upper Respiratory Infections
Vaginitis
We-Child Care
Wheezing and Asthma

Addendum: Do not forget that the Family Medicine COMAT exam also includes pediatrics and obstetrics questions.

EVIDENCE BASED SEMINARS

Weekly tele-health conferences in the form of team-based learning are held for all students at their rural FM location while on their 12-week clerkship. These are required activities and are monitored for participation and contribution to the activity. The list below describes the weekly topics and reading assignments that are required weekly. Please note the scheduled online quizzes which are a component of your clerkship grade.

I. TOPICS AND READING ASSIGNMENTS

All Case Reading Assignments listed are from the required text: Case Files, Family Medicine, Third Edition; Toy, Briscoe, and Britton. [**Additional** Reading Assignments are listed accordingly under learning objectives for weekly topics.]

Week 1: There will be no teleconference this week in order for you to become oriented to your rural practice setting. However, you are to complete the Principles of Prescribing Videos and Quiz which are available on Canvas. A DEI module that addresses the unique realities of rural communities is under development and will be inserted during the rotation if and when it becomes available.
Lastly, it should be noted that Telehealth methods will be coordinated according to each preceptor's clinical setting; but in preparation for understanding this methodology, you will review the Telehealth Module listed in the appendix. Ongoing Telehealth experiences will evolve from what you have learned already in your Cornerstone Clinic encounters and reviewed with you at the weekly Teleconferences.
There will be a brief session to ensure all students can be connected to Canvas from their respective site.

Week 2: Principles of Evidence Based Medicine—See Syllabus for reading assignments.

Week 3: Preventive Medicine, Health Screening, Immunizations, and Rural Environmental Safety— [Case 1, p. 16; Case 7, p. 74; Case 11, p. 52; Case 11, p. 106; Case 18, p. 170; Case 29, p. 278; Also see syllabus for reading assignments.]

Week 4: Treatment of Acute and Chronic Pain including Opioid Management and Addressing the Opioid Crisis— [See Syllabus and Canvas for video and reading assignments].

Week 5: Asthma, COPD, Allergies, Acute respiratory infections in Adults and Children, Tuberculosis. [Case 2, p.24; Case 6, p. 64; Case 19, p. 180; Case 24, p. 224; Case 30, p. 288; Case 39, p. 374; Case 45, p. 440; Case 56, p. 544.

Week 6: Common Cardiac Conditions-Chest Pain, CHF, A Fib, Cardiac Risk Factors, DVT, and HTN. [Case 20, p. 188; Case 27, p. 252; Case 35, p. 332; Case 42, p. 410; Case 60, p. 580.

Week 7: Improving Patient Care with Interdisciplinary Healthcare Relationships—interacting with a Pharm D. -- [Case 52, p. 512. Also see Syllabus for reading assignments.]

Week 8: Endocrine Problems Part **1** – Diabetes, Metabolic Syndrome and, Obesity. [Case 33, p. 314; Case 51, p. 500. Endocrine Problems Part **2**--Thyroid Disorders, Parathyroid Disease, Adrenal Disorders and, Calcium Disorders. [Case 15, p.142; Case 17, p. 162.

Week 9: GI Disorders- Abdominal pain, diarrhea, vomiting, GI bleeding, Jaundice, dyspepsia, peptic ulcer disease. [Case 10, p. 98; Case 23, p. 216; Case 31, p. 296; Case 40, p. 386; Case 46, p. 450; Case 47, p. 462.]

Week 10: Women's Health Problems -Breast, Menstrual Disorders, Menopause, Osteoporosis. [Case 22, p. 208; Case 28, p. 264; Case 49, p. 482; Case 50, p. 492; Case 58, p. 564. Men's Health Problems - BPH and LUTS, Low testosterone, ED. [Case 14, p. 133.]

Week 11: Neurologic Disorders—HA, Dizziness, Dementia, Chronic Non-Malignant Pain, Sleep disorders. [Case 32, p. 304; Case 34, p. 324; Case 44, p. 428; Case 55, p. 536; Case 57, p. 556, Case 59, p. 572.]

Week 12: Psychosocial Problems – Addiction, Anxiety, Depression, Family Violence. [Case 25, p. 232; Case 36, p. 342; Case 41, p. 394.]

Ongoing: Quality Improvement Project- Please see separate addendum to syllabus for description of project, objectives, and assignments

FORMAT OF WEEKLY SESSIONS BEGINNING WITH WEEK 2:

a. ***An online quiz will be given covering the prior week's teleconference discussion and topic assignment. It will be available from Tuesday 5:00 pm – Sunday 11:59 pm***
b. Quality Improvement Project Update.
c. Discuss interesting case[s] seen at your site during her prior week including OMM cases for Dr. Hensel/Lee.
d. Presentation of each student's assigned Evidence Based Topic as described under learning objectives.
e. Assign topic for following week

EVIDENCE BASED SEMINAR ASSIGNMENTS – DETAILED

WEEK 1: **No Teleconference as stated above i**n order for you to become oriented to your rural practice setting. However, you are to complete the Principles of Prescribing Videos and Quiz which are available on Canvas. A DEI module that addresses the unique realities of rural communities is under development and will be inserted during the rotation if and when it becomes available.
Lastly, it should be noted that Telehealth methods will be coordinated according to each preceptor's clinical setting; but in preparation for understanding this methodology, you will review the Telehealth Module listed in the appendix. Ongoing Telehealth experiences will evolve from what you have learned already in your Cornerstone Clinic encounters and reviewed with you at the weekly Teleconferences.
There will be a brief session to ensure all students can be connected to Canvas from their respective site.

WEEK 2: Principles of Evidence Based Medicine

Learning Objectives By the end of this session the student should be able to:
1. Discuss the importance and methods of Evidence Based Medicine as applied to evaluating and treating patients in a Rural Family Practice setting. 2. Discuss the elements of Evidence Based Practice presented in the "Introduction to Evidence Based Practice" developed by Duke University and the Univ. of North Carolina found at http://guides.mclibrary.duke.edu/ebmtutorial. 3. Describe how to answer your clinical question by searching for the right evidence using the "6S hierarchy" explained by Donna Windish. 4. Discuss the concept and meaning of POEMS [patient oriented evidence that matters" as defined in the Journal of Family Practice as a more simplified or "user friendly" approach to understanding and applying Evidence Based Medicine to your future practice. 5. Discuss the Strength of Recommendation Taxonomy [SORT] developed by the editors of U.S. family medicine and primary care journals which simplifies the language of Evidence Based Medicine. 6. Discuss the knowledge translation system called PURLS [Priority Updates from the Research Literature Surveillance system] developed by the Family Physicians Inquiries Network [FPIN] and the Journal of Family Practice and describe how to use the system to improve patient care.

Introductory Comments:

Understanding Evidence Based Medicine [EBM] is important for you to find the right answers for your patient's problems as you proceed through your medical career. A diagrammatic definition from UpToDate is as follows:

Evidence-based medicine is the care of patients using the best available research evidence to guide clinical decision making. The focus is upon applying the results of research involving patients and important clinical outcomes (e.g., death, symptoms). Evidence-based medicine is meant to complement, not replace, clinical judgment tailored to individual patients. Similarly, evidence-based medicine and the delivery of culturally, socially, and individually sensitive and effective care are complementary, not contradictory.

The numerous articles listed below for your review all have a purpose. The first 2 though dating back to 1994 will reassure you that you are not alone in "not knowing everything" and help you develop a guidebook to work thru the best available literature. Articles 3, 4, 5, and 6 introduce you to the *Journal of Family Practice* and show you how to use this journal as a very practical resource during your Family Practice Rotation.
The Duke University website provides an introduction into EBM and shows you how to use "PICO" to develop your clinical question. It also explains the 6S hierarchy in locating the best resources for you answers. The 6S hierarchy is important to understand and is further explained in articles 7 and 8. These last 2 articles also introduce you to the Evidence Based Medicine journal.
Lastly, *UpToDate* has a good reference on EBM and another on Overview of Clinical Guidelines.
To access the articles easily use the library as follows:
1. For finding the Journal of Family Practice, click on Journals and E journals, the type in Journal of Family Practice, and then hit "Go.' You will note several listings come up. The one you want is "Health Reference Center Academic.' When you click on this it may say it will not connect if so, just go back to the list and click it again and it will come up. Note on the left is a date list you can scroll thru to find the date of your article or at the top you can type in the title of the article. I found going to the year and finding the month is a little easier.
2. For finding the Journal of Evidence Based Medicine, use the same library journal/E journal resource and when you hit "Go" look for Evidence**-based medicine (English ed.)** (1356-5524) from 1995 to 2017 BMJ Journals and click on that and use the search tag to find the articles.

Reading Assignment:

1. Slawson DC, Shaughnessy AF, Bennett JH. Becoming a medical information master: feeling good about not knowing everything. J Fam Pract 1994; 38:505-13.
2. Bennet JH, Shaughnessy AF, Slawson DC. Becoming an information master: a guidebook to the medical information jungle. J Fam Pract 1994; 39.5 [Nov 1994]: 489-
3. Slawson DC. Becoming an information master: using "medical poetry" to remove the inequities in health care delivery. J of Fam Pract 2001: January; 50[01]51-56.
4. Ebell MH, Siwek J, et. al. Strength of Recommendation Taxonomy [SORT]: a patient-centered approach to grading evidence in the medical literature. J Fam Pract 2004: February; 53[02] 111-120.
5. Sussman J. Diving for PURLS: introducing priority updates from the research literature. J of Fam Pract 2007: November; 56[11] 878-879.
6. Ewingman B, Susman J., PURLS-translating research into reality. J Fam Pract 2007 December; 56(12):981-983.
7. Windish, D., Searching for the right evidence: how to answer your clinical questions using the 6S hierarchy. Evid Based Med 2013; 18:93-97.
8. Windish, D., EBM apps that help you search for answers to your clinical questions. Evid Based Med 2014; 19:85-87.

Designated Student Assignments:
Completed assignments must be submitted through Canvas by midnight Monday before the scheduled teleconference.

1. Define the following terms and concepts of EBM: sensitivity, specificity, positive predictive value, negative predictive value, likelihood ratio + and likelihood ratio -, pre-test probability, post-test probability, number needed to treat, the difference between systematic review and systematic surveillance.
2. Explain the difference between a POEM and DOE and be able to discuss the concept of "usefulness of medical literature" using the formula that applies relevance, validity, and work.
3. Discuss your projected personal approach to the "medical information jungle" based on the article above by Bennet, Shaughnessy and Slawson.
4. Discuss and explain the importance of the Strength of Recommendation Taxonomy [SORT] as described in the article above by Ebell, Swek, et. al.
5. Discuss and explain the importance of Priority Updates from the Research Literature [PURLs] as described above by Ewingman and Sussman,
6. Pick one problem from patients you have seen at your rural family medicine practice site and formulate an appropriate question based on the presenting problem needing to be solved. Then look for the answer from the PURLS or POEM sections of the Journal of Family Medicine. You may use another source to answer your question if you cannot find the answer in the Journal of Family Practice. Along with submitting your question and findings in writing, be prepared to discuss your findings at the teleconference.

WEEK 3: Preventive Medicine, Health Screening, Immunizations, and Rural Environmental Safety

Health promotion-disease prevention has long been a part of the osteopathic philosophy and our educational emphasis on prevention is well established. Health Care Reform is now focusing on this to control costs. There have been multiple instruments developed to assist physicians incorporate this process into their practice. It is important also to stress the need of incorporating these principles into medical student's lives.

Your assigned text has the following cases for you to review—Case 1, p. 16; Case 7, p. 74; Case 5, p. 52; Case 11, p. 106; Case 18, p. 170; Case 29, p. 278. Each of these cases involves important areas of Health Prevention for an individual age and or gender. You will not that these areas include Cancer prevention and immunization. Another important aspect of prevention in Rural communities is Rural Environment Safety.

Modern day medicine continues to evolve in its approach and implementation of Health promotion and disease prevention using improved patient monitoring and delivery systems along with community resources.

Reading Assignment:

1. AHRQ-ePSS [http://epss.ahrq.gov]CDC Adult Immunization Scheduler [https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html]
2. CDC/ACIP Recommendations [https://www.cdc.gov/vaccines/hcp/acip-recs/index.html]
3. IAC Summary of Adult Immunization Rec's [https://www.immunize.org/va/va53_summary-recs-adults.pdf]
4. IDSA Vaccination Rec's for immune compromise [CID 2014:58[1 February] http://www.uphs.upenn.edu/bugdrug/antibiotic_manual/idsa-vaccinesimmunosupp2013.pdf
5. Liu, G. et. al., Improving our approach to preventive care; J of Fam Practice, Vol 64, no 6, June 2015. https://www.mdedge.com/familymedicine/article/99908/practice-management/improving-our-approach-preventive-care
6. Access Medicine/Understanding Value Based Healthcare/Chapter 14/ Defining an effective screening tool.

Designated Student Assignments

Completed assignments must be submitted through Canvas by midnight Monday before the scheduled teleconference.

1. Review and briefly summarize the article on Improving the approach to preventive care by Liu, Perkins, and Duffy.
2. Define the function of USPSTF and its members.
3. Define primary, secondary, and tertiary prevention.
4. What is the current thinking with regards to the "Annual Physical Exam"?
5. Are there harms of screening and over-testing patients?
6. Is there a gap between National immunization goals and current immunization rates?
7. Who should get the annual Influenza Vaccine?
8. Who should get the Tdap vaccine?
9. Which adults require Pneumococcal Vaccine and what are the differences and between PCV 13 and PPSV23 requirements? Does the Pneumococcal Vaccine prevent pneumonia or pneumococcal invasive disease?
10. Who should receive the Meningococcal Vaccine?
11. What are the recommendations for Hep A and Hep B immunization in the U.S. for adults and children?
12. What are the 3 types of HPV vaccine and what are the recommendations for their administration?
13. Who should get MMR and Varicella vaccine and are there contraindications?
14. Who should get Zoster vaccine what are the contraindications?
15. How do you distinguish between immunodeficiency, high level immunocompromised and low-level immunocompromised patients when considering vaccine administration?
16. Are there special immunization rules for HIV, Hemoglobinopathy, Asplenia, CSF Leaks, and Cochlear Implant patients?
17. Are there special rules for household contacts and caregivers of patients who have had stem-cell implants?
18. Why is it important for healthcare workers to be immunized?

Each student will review and be familiar with the following cases:

a. Case 1, page 22
b. Case 5, page 62
c. Case 7, page 86
d. Case 11, page 120
e. Case 18, page 194
f. Case 29, page 316.

Students are identified by a number designated by email and each will be prepared to discuss their assigned cases and important aspects of the case in about a 15-minute time allotment. Though no one is assigned case # 7, Tobacco Use, it is important that you all can answer questions on how to help patients quit using tobacco products, and hopefully you will be able to assist at least one patient quit during your rotation.

Note: For each case, you should use the AHRQ- ePSS search for recommendation tool website for comparing what is recommended in the text to updated recommendations.

Assignments are as follows:

Student 1 –Case 1; Student 2—Case 5; Student 3—Case 11; Student 4—Case 18; Student 5—Case 29.

WEEK 4: Treatment of acute and chronic pain including opioid management and addressing the opioid crisis in Rural America

Learning Objectives By the end of the session the student will be able to:
1. Discuss the pathophysiologic mechanisms of acute and chronic pain. 2. Discuss the treatment of acute and chronic pain. 3. Discuss the proper use of opioids in the treatment of acute and chronic pain. 4. Discuss the opioid crisis in urban and rural America. 5. Discuss alternatives to preventing opioid abuse and as well as the treatment for opioid dependency.

Reading and Video Assignment:

1. See Canvas Video assignment "Addressing the Opioid Crisis" and complete the modules and quiz.
2. End the Epidemic sponsored by the AMA -- https://www.end-opioid-epidemic.org/education/
3. Assessing Complimentary Pain Management Options for Chronic Pain Management, *Osteopathic Family Physician*: https://imis.acofp.org/ACOFPIMIS/Acofporg/PDFs/OFP/Interactive/MayJune_2018.pdf

Assignment:

Written answers to the following questions must be submitted through Canvas by midnight Monday before the scheduled teleconference.

1. Define and explain pain and its classification along with the differences between acute and chronic pain. How common is chronic pain? Is chronic pain over-assessed or under assessed by physicians? What should the treatment of chronic pain include?
2. What are the Texas Medical Board requirements for the treatment of chronic pain? Does your preceptor utilize a patient opioid use contract and do urine drug screens?
3. With regards to opioid use, define physiological dependence and tolerance, pseudo-addiction, and the mild, moderate, and severe substance abuse disorders.
4. Describe the symptoms of opioid withdrawal.
5. Describe the current opioid crisis in the U.S. and the projected reasons for its occurrence. Is the crisis worse in Urban or Rural populations? Review the USDA website "Opioid Misuse in Rural America" and look at the YouTube video. [https://www.usda.gov/topics/opioids]
6. Describe the most recent legislative efforts to deal with the crisis.
7. Using the www.end-opioid-epidemic .org web site, look at the Texas treatment locator to find out the closet physician[s] or clinics treating opioid abuse near your rural site.
8. Describe SAMSHA and after looking at their website locate and facility near your preceptor's location and see if you preceptor is aware of it.
9. How does buprenorphine work, who can use it, and does your preceptor have any interest in using it?
10. What do the TMA and Texas Medical Board recommend about using Naloxone?
11. Look at the Texas Prescription Monitoring Program YouTube video [https://www.youtube.com/watch?v=1YtwtZG0sNc] and ask your preceptor when he or she uses it.
12. What are the current rules for prescribing hydrocodone?
13. Review the article Assessing Complimentary Pain Management Options for Chronic Pain Management, Osteopathic *Family Physician,* and comment on which if any of these options make sense to you. Also ask your preceptor if he or she has tried any.

WEEK 5: Asthma, COPD, Allergies, Acute respiratory infections in Adults and Children, Tuberculosis

Learning Objectives By the end of this session, the student should be able to:
1. Describe the definition of asthma and the essentials for diagnosis. 2. Discuss the demographics and etiology of asthma. 3. Describe the risk factors for asthma. 4. Describe the key elements in the history and physical exam to establish a diagnosis of asthma 5. Discuss the differential diagnosis of Asthma and the indications for provocative testing. 6. Discuss pulmonary function testing used in the diagnosis of asthma 7. Describe the National Lung and Blood Institute Expert Panel Report on the four components of Asthma Management. 8. Describe the Classification of Management Severity and the associated treatment for each degree of severity. 9. Describe the use of a peak flow meter and the correct method of using a steroid or beta 2 agonist metered dose inhaler. 10. Discuss the etiology, frequency, and methods of diagnosing Exercised Induced Asthma. 11. Describe the use of long-acting beta agonists and the updated use of these agents only in combination with an inhaled steroid. 12. Discuss the management of the acute exacerbations of Asthma and the "Red Flags for Increased Risk of Death from Asthma." 13. Discuss when an asthma patient should be referred to a pulmonologist. 14. Differentiate the common cold from acute rhinosinusitis, acute bronchitis, bronchiolitis, influenza, and community acquired pneumonia. 15. Describe the treatment for the above listed acute respiratory illnesses. 16. Discuss the diagnosis of Acute Viral URI in Children and how to differentiate it from more serious respiratory illnesses. 17. Discuss the differential diagnosis and treatment for pharyngitis. 18. Discuss the management and treatment for Acute Otitis Media in children. 19. Discuss the Gold Criteria for Classifying COPD and the management of the disease based on the degree of severity. 20. Discuss the management of acute exacerbations of COPD and the red flags indicating the need for hospitalization. 21. Discuss the criteria for using Oxygen therapy in COPD. 22. Discuss Allergic rhinitis and the concepts of Atopy. 23. Discuss the updated criteria for diagnosis and treatment of TB.

Student Assignments:

There are 7 Cases assigned for review in your ***Case File*** text.

Case 2- Dyspnea [COPD]
Case 6- Allergic Disorders [Allergic Rhinitis]
Case 19- Acute Bronchitis
Case 24- Pneumonia
Case 39- Acute Cases of Wheezing other than Asthma in Children
Case 45- HIV and Aids
Case 56- Wheezing and Asthma

Each student is to review all the cases and submit in writing at least 5 important points from each case that was particularly meaningful to you. Also, if during your rotation to date you and your preceptor have had a case of each of these present in your assigned clinic, please describe your experience with regards to diagnosis, treatment, and outcome. Be ready to discuss your assignment during the teleconference. Lastly, please access

on the UNTHSC website Safer Care of Texas and review the Asthma 411 project. Specifically look at the video "Asthma 411 Reduces Absences". Then under Education, look at the links "How to use a LifeAir Spacer", "Using a Metered Dose Inhaler in the Mouth", and "Using a Metered Dose Inhaler with a Spacer". Report if you have had the opportunity to educate any patients or parents of asthmatic patients in these techniques and keep these references available for future patient education during and after the rotation.

WEEK 6: Common Cardiac Conditions [Chest Pain, CHF, A Fib, Cardiac Risk Factors, DVT], and HTN

Learning Objectives By the end of this session, the student should be able to:
1. Describe the 2018 ACC/AHA guidelines for Cardiac Risk Assessment and treatment as compared to the 11/12/13 and prior guidelines. 2. Discuss the AHA/ACC Secondary Prevention Guideline. 3. Describe the AHA/ACC Guidelines on the Management of Overweight and Obesity in Adults. 4. Discuss the summary and recommendations of the UPTODATE authors on Cardiovascular disease risk assessment for primary prevention in adults: Our approach and the Management of elevated LDL-C primary prevention of CV disease. 5. Describe the summary and recommendations of the UPTODATE authors on the measurement of blood lipids and lipoproteins. 6. Discuss Cardiac Risk equivalents and the recommendations for management. 7. Discuss the Emerging Risk Factors and Risk Markers in CV Disease which are important. 8. Discuss the Metabolic Syndrome and current recommendations as to its importance in patient management. 9. Describe the current medications available to control lipids and their costs. 10. Discuss the causes of secondary dyslipidemia. 11. Describe the importance of managing elevated Triglycerides and current recommendations on treating elevated Triglycerides according to UPTODATE and the ACC/AHA. 12. Discuss HDL Cholesterol and its importance as a risk factor in the prevention of CAD. 13. Describe the differential diagnosis of Chest Pain and how you would evaluate it using the recommendations in your text. 14. Discuss Acute Coronary Syndromes and management. 15. Describe the clinical presentation and management of Panic Disorder. 16. Discuss methods of diagnosis and management of DVT and Pulmonary Embolism. 17. Discuss the importance of classifying Heart Failure according to stages and the New York Heart Association Functional Classes as described in your Text. 18. Discuss the difference in systolic from diastolic CHF. 19. Discuss the pathology, diagnosis, and treatment of Atrial Fibrillation. 20. Define hypertension, its classification according to the latest recommendations in JNC 8 and discuss the initial approach to evaluating a newly diagnosed patient with this problem. 21. Describe the causes of and Identify physical findings that suggest secondary HTN along with the evaluation of a patient whom you suspect may have secondary HTN. 22. Describe important Lifestyle modifications and the drug classes for treatment of HTN including the compelling indications for selecting appropriate classes of medications.

References: The New 2018 Cholesterol Guidelines. Filling Gaps and Expanding Opportunities

Amit Khera-- The New 2018 Cholesterol Guidelines | Circulation (ahajournals.org)

Use of Risk Assessment Tools to Guide Decision-Making in the Primary Prevention of Atherosclerotic Cardiovascular Disease: A Special Report from the American Heart Association and American College of Cardiology

Donald M. Lloyd-Jones **Lynne T. Braun**, **Chiadi E. Ndumele**, **Sidney C. Smith Jr**, **Laurence S. Sperling**, **Salim S. Virani**, **Roger S. Blumenthal**-- Use of Risk Assessment Tools to Guide Decision-Making in the Primary Prevention of Atherosclerotic Cardiovascular Disease: A Special Report From the American Heart Association and American College of Cardiology | Circulation (ahajournals.org)
UPTODATE [access through Lewis Library]

Student Assignments:
There are 6 cases assigned for review in your ***Case File*** text.

Case 20, p. 188- Chest Pain
Case 27, p. 252- Dyspnea
Case 30, p. 288- Htn and Obesity
Case 35, p. 332- Htn and Elevated Cholesterol
Case 42, p. 410- Cardiac Dysrhythmia
Case 60, p. 580- Lower Extremity Edema

Each student is to review all the cases and submit in writing at least 5 important points for each case that was particularly meaningful. Also, if so, far in your rotation, you and your preceptor have had a similar case present in your clinic, please describe your experience relative to diagnosis, treatment, and outcome. Lastly, calculate your Cardiovascular risk factors if you are aware of your lipid profile [since this is a personal health record, you do not have to submit it in writing but acknowledge if you are aware of it or not.]

Please Note: The guidelines for the evaluation, definition, and treatment of CV risk factors, hyperlipidemia, and hypertension continue to evolve. It is the recommendation of faculty that an effective way to stay current is to use UPTODATE as a resource.

WEEK 7: Improving Patient Care with Interdisciplinary Healthcare Relationships – Interacting with a Pharm D

Learning Objectives By the end of this session the student should be able to:
1. Describe the qualifications and role of a Pharm D in assisting a physician in patient care with an emphasis in Rural Practice settings. 2. Discuss methods of establishing effective relationships with a Pharm D in your community to assist in improved patient care. 3. Describe how a Pharm D can be a helpful resource in conducting a comprehensive medication review to understand and or eliminate possible drug interactions including the identification of harmful herbal products or OTC products. 4. Describe how a Physician/Pharm D relationship can be useful in identifying and preventing patient drug seeking behavior. 5. 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 potential problems associated with each. 6. 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. 7. 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.

Reading Assignment:

1. Access Medicine/Understanding Teamwork in Healthcare/
   Chapter 3: Roles, Education and Values of Health Care Professionals
   Chapter 19: The Future of Teamwork in Health Care.
2. Case Files Text – Chapter 52, Page 512

Team Based Assignments:

1. Each student will introduce themselves to one or more local pharmacists in their rural community and interview them to see what their ideas are on the importance of establishing patient/pharmacist relationships.
   a. Report on specific ideas and or experiences the pharmacist or Pharm D has on improving such a relationship. Review what tools the Pharmacist uses to conduct a comprehensive medication review for patients.
   b. What is the total # of prescriptions that are filled per day and month?
   c. Are there any services the pharmacist provides that are unique to that pharmacy?
   d. What are some of the problems a pharmacist identifies on physician prescriptions and when identified how does the pharmacist deal with it? And what has been physician response to these problems?
   e. If the pharmacist identifies a potential problem with a newly prescribed medication based on the patient's medication profile, how would he or she interact with the physician?
   f. How does a pharmacist identify a patient is drug seeking and in turn how does he deal with such a patient?

2. Review the "Prescription Access in Texas" program provided by the DPS to identify patients' a physician or pharmacist suspects may be drug seeking opioids or other controlled substances. See if your preceptor uses the program and report any experiences they have had with it. Also, with the help of your preceptor, identify one patient in the practice on a controlled substance and utilize this internet program to look for possible drug misuse or overuse.

3. Case study: TCOM ROME Family Medicine Program
   Improving Patient Care with Interdisciplinary Healthcare Relationships

   RB is a 48-year-old female who presents to your office for an initial visit. She states that she does not feel comfortable with taking prescription medications and would prefer to try "natural" approaches first. Her brother and father both died from heart attacks and her mother is living with a history of diabetes and depression. She takes the following over the counter products for the corresponding conditions:

   St. John's Wort – "Mood"
   Valerian – "Mood and to help me sleep"
   Magnesium – "Sugar"
   Garlic – "To keep my heart healthy"
   Ginger – "To settle my stomach"
   Black Cohosh – "Menopause"
   B Complex – "Energy"
   Vitamin C – "To prevent colds"

   Upon exam, you find her blood pressure to be elevated at 168/102mmHg and a point of care blood glucose fingerstick reveals a random glucose level of 385mg/dL. The patient states she gets a burning in her chest at night and has difficulty concentrating, sleeping, and remembering to eat. All other findings upon exam were negative.

   You want to start prescription medications to improve care in this patient but are hesitant given her strong affinity for herbal supplements and vitamins.

   Given the information at your disposal and that which you find in the literature, design an optimal regimen for this patient consisting of prescriptions, herbal supplements/vitamins, or both to address her current medical issues.

   Points to consider:

   1. How do you approach the subject of initiating prescription medications in this patient? Why is taking the right approach on this subject important?
   2. Which herbal supplements that she is currently taking have proven efficacy in the literature? Would you want to continue these in this patient? Why or why not?
   3. Which herbal supplements should be discontinued and why? Which herbal supplements should be replaced by a prescription medication and why?
   4. What resources could you use to find accurate, relevant information? What health care professionals could help you with your decisions?

<u>WEEK 8A:</u> Endocrine Problems: Part 1 – Diabetes types 1 and 2, Nutritional Disorders [Obesity and Other Serious Nutritional Problems]

Learning Objectives By the end of this session, the student should be able to:
1. Describe and contrast the pathophysiology of Type I [DM-1] and Type II [DM-2] diabetes mellitus. 2. Discuss the Diagnostic Criteria and Categories of Increased Risk for DM-2. 3. Discuss the Micro and Macro Vascular complications of DM-1 and DM-2. 4. Discuss the similarities and differences of DKA and Hyperosmolar Hyperglycemic States in Adults. 5. Discuss methods of self – management and monitoring of Diabetes. 6. Describe the Oral Agents for Treating DM-2 and their mechanism of action including the newer agents Sitagliptin and injectable Exenatide and SGLT-2 inhibitors. 7. Describe how you would recognize and treat hypoglycemia. 8. Discuss the various types of insulin available and review their onset and duration of action. 9. Describe the stepwise approach to treatment of DM-2. 10. Describe the classification of overweight and obesity in adults based on BMI. 11. Discuss the importance of doing a nutritional assessment in adults and children and identify patients who are at risk for poor nutrition. 12. Outline the appropriate assessment and treatment of overweight, underweight, and obese patients. 13. Discuss the surgical indications for obesity, the types of procedures and the necessary follow up post-surgery. 14. Discuss management of overweight and obesity in children.

<u>Student Assignments:</u>
Each student is to review Case 33, p 314, and Case 51, p-500 in the *Case File* text and submit in writing at least 5 important points that were meaningful.
Also, each student is to submit in writing answers to the following questions:

1. A 50 y/o male patient who is diabetic and has a history of Coronary Artery disease and is stable following a CABG procedure presents for a routine 3 month visit to your office. Lab work shows his A1C is 7.9%. His last eye exam was 2 mos. prior to the visit, and he did not have significant diabetic retinopathy. In the past he has only had one hypoglycemic event
   Questions: Based on ADA guidelines what would his A1C goal be?
   If the patient above was on Metformin maximum dosage, what would you do next to have him attain his A1C goal?
   Based on ADA guidelines, describe what else you would do for this patient to manage his diabetes properly?

2. A 25 y/o Female presents for her well woman exam. Your history reveals she is G-1 P-1 and during her pregnancy she had gestational diabetes. Physical exam shows she has acanthosis nigricans and her BMI is 30.
   Questions: Is this patient at risk for DM-2?
   How would you manage this patient if her fasting sugar was 118 mg/dL based on ADA guidelines?

3. To learn how to use a glucometer, each student is to perform on themselves a fasting sugar and approximate 2-hour post prandial sugar and record and report the results. If your preceptor has an A1C monitor in their office, ask if he or she will allow you to test yourself and report the findings.

4. Explain the difference and similarities between a DPP-4 inhibitors and GLP-1 agonist. Give a list of the current ones available on the market.

5. The best management for certain diabetic patients usually involves more time than can be provided by a PCP. Therefore, it is important for a physician to be aware of Diabetic Educators in their area. Please refer to the ADA/Diabetes Pro and American Diabetes Care and Education Specialists [ADCES] websites to identify where these educators are located nearest to your rural site.

6. The SGLT-2 inhibitors came to market in the past year [Dapagliflozin and Canaglifozin], review the article in J. of FP, Jan 14, Vol 63, Issue 1, p1-9:*SGLT-2 Inhibitors in the Kidney: Changing Paradigms in the Treatment of Type 2 Diabetes* and state whether you think they should be used. Also review UPTODATE on the SGLT-2 inhibitors and state why they do not recommend them.

7. The medications available for treating Obesity include Orlistat, Phentermine HCL/Topirmate, and Lorcaserin. Based on the current recommendations for their use according to UPTODATE, would you prescribe them to your patients?

8. Familiarize yourself with the CDC's National Diabetes Education Website and National Diabetes Prevention Program. Specifically look at the CDC/AMA Prevent **Diabetes STAT** initiative which began 3/15/15. See if your preceptor is aware of this program and the multiple tools available that can be printed off to use in the office to identify and help the 86 million people it the U.S. who are pre-diabetic.

WEEK 8B: Endocrine Problems: Part 2-Thyroid disorders, Parathyroid Disorders/Calcium Disorders

Learning Objectives By the end of this session, the student should be able to:
1. Describe the common causes, methods of diagnosis, signs and symptoms, treatment, and long-term monitoring of Hypothyroidism. 2. Describe the common causes, most efficient work up and treatment options of Hyperthyroidism. 3. Describe the causes of thyroid enlargement, diagnostic testing for evaluation and the long-term management and treatment. 4. Discuss common types of thyroid nodules, the diagnostic evaluation, their malignant potential, and the management based on Cytology. 5. Describe Subclinical Thyroid Dysfunction and the treatment and or long-term management of these problems. 6. Describe the classification of overweight and obesity in adults based on BMI. 7. Discuss the importance of doing a nutritional assessment and identify patients who are at risk for poor nutrition including "Red Flags Suggesting High Risk of Serious Nutritional Problems" described in Table 15.4 in your Text. 8. Outline the appropriate assessment and treatment of overweight, underweight, and obese patients. 9. Discuss the surgical indications for obesity, the types of procedures and the necessary follow up post-surgery. 10. Discuss management of overweight and obesity in children.

Student Assignments:

Each student is to review Case 15, p-142, and Case 17, p-162 in the Case Files text and submit in writing at least 5 points that were meaningful.

Also, each student is to submit in writing the answers to the following questions:

1. A 65 y/o female presents to the clinic feeling tired and fatigued all the time. She has also noticed increasing problem with constipation despite fiber intake. She is frequently cold when others are hot and has noticed swelling sensation in her neck area. On examination she is afebrile with a pulse of 60/minute. She appears in

good health. She has an enlarged non-tender thyroid gland. Her reflexes are diminished, and her skin is dry to the touch.

Questions:

a. What is her most likely diagnosis?
b. What laboratory test would you do to confirm the diagnosis?
c. What is the treatment of choice?

2. A 25-year-old female sought treatment for her constant fatigue, lethargy, and depression. She was small in stature and had previously been diagnosed with attention-deficit disorder. On physical examination she was found to have an enlarged thyroid gland (goiter). Blood tests revealed elevated levels of T3, T4, and TSH, yet she did not exhibit typical symptoms of hyperthyroidism.

   Question: Which one of the following possibilities offers the most likely explanation of her symptoms?

   A.) Thyroid hormone overproduction because of a thyroid gland tumor
   B.) Hyper secretion of TSH because of a pituitary tumor
   C.) Genetic alteration in the thyroid receptor reducing its ability to bind thyroid hormone
   D.) Mutation in the TSH receptor in the thyroid gland reducing its ability to bind TSH

3. In women taking thyroid hormone replacement pills, the dosage must be adjusted if they start taking birth control pills.

   Question: Which one of the following best explains this situation?

   A.) Thyroid hormones block the action of estrogens, so the estrogen dose must be increased.
   B.) Estrogens block the action of thyroid hormones, so the dose of thyroid hormone must be increased.
   C.) Progestins block the action of thyroid hormone, so the dose of thyroid hormone must be increased.
   D.) Estrogens stimulate the action of thyroid hormone, so the dose of thyroid hormone must be decreased.
   E.) Thyroid hormones stimulate the action of estrogens, so the estrogen dose must be decreased

4. A 25-year-old woman presents with a complaint of rapid weight loss despite a voracious appetite. Physical examination reveals tachycardia (pulse rate 110 beats/min at rest), fine moist skin, symmetrically enlarged thyroid, mild bilateral quadriceps muscle weakness, and fine tremor. These findings strongly suggest hyperthyroidism.

   Questions:

   a. What other features of the history should be elicited?
   b. What other physical findings should be sought?
   c. Serum TSH and free thyroxin level are ordered. What results should be anticipated?
   d. What are the possible causes of this patient's condition?
   e. What is the most common cause of this patient's condition, and what is the pathogenesis of this disorder?
   f. What is the pathogenesis of this patient's tachycardia, weight loss, skin changes, goiter, and muscle weakness?

5. A 30 y/o female presents for her well woman exam and you note on palpation of her thyroid gland a nodule or irregularity on the right side.

   Questions:

   a. What would be your approach to the management of this problem?
   b. What would be your differential?
   c. What tests would you order?

6. A 50 y/o female presents to your office for HTN follow up. Her BP is well controlled. She reports some recent fatigue but otherwise feels well. Because of her age and medications, she is on [ACE and diuretic] you order a

CBC, CMP, and Thyroid function studies. The report shows all lab normal except that her TSH is mildly elevated but free T4 is in the normal range.

Questions:

a. What does she have and what would your approach to this patient be?
b. Suppose the report showed a low TSH and normal free T4, what would she have and how would you approach this patient?

7. A 40 y/o female presents to your office for routine evaluation of her HTN and Lipids. You order a CMP and note she has an elevated serum Ca++ level.

Questions:

a. How would you approach this patient?
b. What would be your differential diagnosis?
c. Would you order an ionized calcium level?

8. You have been treating a 28 y/o morbidly obese diabetic [BMI = 40] and he has been unable to lose weight with lifestyle modifications. His A1C is 8.9 and he is on metformin and basal/bolus insulin therapy.

Questions:

a. How would you approach further treatment of this patient?
b. Based on the Summary and Recommendations in UPTODATE *regarding Bariatric Operations for Management of Obesity: Indications and Preoperative Preparation*, would you consider referral for bariatric surgery?
c. How would you advise this patient based on your review of the STAMPEDE [Surgical Therapy and Medications Potentially Eradicate Diabetes Efficiently] study recently published in the New England Journal? [N. Engl. J. Med. 2014:370:2002-13]
d. If you elected to refer him for Bariatric Surgery, how would you follow up and monitor him when he is discharged back to your care?

9. A 28 y/o male patient of yours develops RLQ abdominal pain and you think he has a possible appendicitis. You send him to the ER and the work-up is negative for appendicitis, but he has mesenteric adenitis seen on CT scan. You treat him accordingly and he improves. On recheck evaluation, in the office a week later, you review his CT scan with him and note he has a mass described on his right Adrenal Gland.

Questions:

a. How would you approach this patient now?
b. What tests would you order?
c. How would you determine if he had an incidentaloma or Adrenal Tumor?

WEEK 9: GI Disorders-- Abdominal pain, diarrhea, vomiting, GI bleeding, Jaundice, dyspepsia, peptic ulcer disease.

Learning Objectives By the end of this session the student should be able to:
1. Discuss the important history and physical clues to understand a presumptive diagnosis for the causes of Abdominal Pain. 2. Describe the Diagnostic Testing required to diagnose the causes of abdominal pain. 3. Discuss the differential diagnosis of abdominal pain and causes based on location and quality of the pain. 4. Describe and recognize the differences in the differential diagnosis of abdominal pain in children. 5. Describe the differential diagnosis and approach to the evaluation of acute and chronic liver disease. 6. Discuss the treatment of Alcoholic and Viral Hepatitis. 7. Describe the Model of End Stage Liver Disease [MELD]score to determine the severity of liver injury. 8. Describe the diagnostic criteria for non-alcoholic fatty liver disease. 9. Discuss the various complications of cirrhosis. 10. Describe the common causes of dyspepsia and pathophysiology of each. 11. Discuss the key diagnostic features and evidence-based approach to management of a patient with dyspepsia. 12. Describe the common causes of lower intestinal bleeding in adults along with the diagnostic evaluation. 13. Describe the clinical evaluation and treatment of acute and chronic diarrhea. 14. Describe the common causes and differential diagnosis of chronic constipation in adults.

Student Assignments:

Each student will review the following cases in *Case File* text:

Case 10, p. 98
Case 23, p. 216
Case 31, p. 296
Case 40, p. 386
Case 46, p. 450
Case 47, p. 462.

After reviewing the cases, write at least 5 points that were important and meaningful for each case discussion.

Also submit written answers to the following questions:

1. A 42-year-old male with known hepatitis C who is also a heavy drinker presents to your office because of increasing confusion. He has not noticed much of anything (hey, most of his life has been like this …), but his family states that he is somewhat confused and on occasion difficult to wake up. He has a known history of end-stage liver disease. He is supposed to be on a low-protein diet but decided that it was time to start the Atkin low-carbohydrate diet to "lose that gut" (he even found himself a "low carb" beer). So, he has increased his intake of protein.

   Questions:

   Which of the following is NOT a common cause of hepatic encephalopathy?

   A) GI bleeding
   B) Constipation
   C) High-carbohydrate diet
   D) Up-regulation of GABA receptors.

Which of the following IS NOT part of the treatment of hepatic encephalopathy secondary to alcohol use?

A) Lactulose
B) Polyethylene glycol (e.g., GoLytely and Mira-Lax)
C) Oral antibiotics
D) Fluid and electrolyte management

What other problems do you need to worry about in this patient?

A) Elevated bleeding time
B) Elevated PT/INR
C) Thrombocytopenia
D) A and B
E**)** All of the above

Which of the options is indicated for this patient at the time of discharge, assuming he is hemodynamically stable?

A) Nadolol
B) Isosorbide dinitrate
C) Pentoxifylline
D) Vitamin K.
E**)** All of the above

Which of the following statements best reflects the current thinking on large-volume paracentesis?

A) A patient who has over 4 L of fluid removed should receive IV albumin
B) There is no consistent data about the use of albumin in large-volume paracentesis
C) Under no circumstance should more than 5 L of ascites be removed at one time
D) Given this patient's dyspnea, large-volume paracentesis is contraindicated
E) If more than 10 L of ascites fluid is removed, and equal volume of normal saline should be replaced intravenously

Which of the following statements best reflects the status of TIPS?

A) TIPS is ineffective in controlling acute variceal bleeding.
B) TIPS unequivocally improves survival from end-stage liver disease.
C) TIPS is associated with an increased risk of hepatic encephalopathy.
D) Once placed, TIPS remains effective for at least 3 years.
E) TIPS is only indicated for waiters, bar tenders, and cab drivers.

2. What is a MELD score and what is it used for? Suppose a patient had a MELD score if 7 and another had a score of 26, what would this mean?

WEEK 10: Women's Health Problems [Breast, Menstrual Disorders, Menopause, Osteoporosis]
Men's Health Problems [BPH and LUTS, Low Testosterone, ED]

Learning Objectives By the end of this session, the student should be able to:
1. Describe the evaluation and treatment of breast pain. 2. Describe the evaluation, pathophysiology, and treatment of nipple discharge. 3. Discuss the evaluation and management of the palpable breast mass. 4. Discuss the pathophysiology and treatment of mastitis. 5. Describe the differential diagnosis and evaluation and treatment of dysmenorrhea. 6. Discuss the differential diagnosis, evaluation, and treatment of premenstrual syndrome. 7. Discuss the definition, pathophysiology, evaluation, and management of abnormal menstrual bleeding. 8. Discuss the definitions of perimenopause and menopause including symptoms and treatment. 9. Discuss prevention and treatment of Osteoporosis. 10. Discuss the symptoms, methods of evaluation and treatment for Benign Prostatic Hyperplasia [BPH] along with associated lower urinary tract symptoms [LUTS], including indications for urologic referral. 11. Describe the pathophysiology, symptoms, and treatment of acute and chronic prostatitis. 12. Discuss screening for prostate cancer and the controversy over using PSA testing. 13. Discuss methods of diagnosing, staging, and treating prostate Cancer. 14. Describe causes, evaluation, and treatment for Erectile Dysfunction [ED]. 15. Discuss the prevalence, evaluation, symptoms, and treatment of hypogonadism.

Student Assignments: Each student is to read and review the following cases from the text *Case Files:*

Case 22, p- 208- Vaginal Infections
Case 28, p- 264- Family Planning
Case 49, p- 482- Breast Diseases
Case 50, p- 492- Menstrual Cycle Irregularity
Case 58, p-536- Osteoporosis
Case 14, p-133- Hematuria

After reviewing the cases, write at least 5 points that were important and meaningful for each case discussion.

Also, each student is to submit in writing the answers to the following questions:

1. A 50 y/o male patient of yours presents to your office stating he has been feeling tired and his wife thinks he has a low libido. He has been listening to TV and Radio commercials regarding Testosterone clinics and is requesting that you prescribe it for him.
   Questions:
   a. How would you counsel this patient, and would you prescribe it for him?
   b. What are the indications and contraindications to prescribing it?
   c. If you decided to prescribe it, what medication would you choose?
2. A 55 y/o male presents to your office with nocturia x 3 and some hesitancy of his urine stream. He shows some enlargement of his prostate on DRE but no irregularities.
   Questions:
   a. Based on recommendations and the review in UPTODATE, how would you manage this patient?
   b. Would you perform a PSA on him?
   c. Supposed you performed a PSA, and it was 4ng/ml, what would you do next?
   d. Review the Prostate Cancer Prevention Trial Risk Calculator at the University of Texas Health Science Center website to help you counsel this patient.

WEEK 11: Neurologic Disorders: Headaches, Dizziness, Chronic Nonmalignant Pain, Sleep disorders

Learning Objectives By the end of this session, the student should be able to:
1. Discuss the Differential diagnosis of dizziness to include the subtypes. 2. Describe the systematic approach to diagnosis in primary care outlined in Access Medicine/The Patient Story –Chapter 6 as well as in Access Medicine/Symptom to Diagnosis –Chapter 14 to differentiate Vertigo, Disequilibrium, and Pre-Syncope. 3. Discuss the life-threatening causes of dizziness based on alarm symptoms that must be ruled out. 4. Describe the clinical exams for Screening Disequilibrium, Vertigo, and Stroke versus acute vestibular neuronitis as outlined in your text. 5. Discuss the available additional diagnostic testing available to evaluate dizziness. 6. Describe the management for the various causes of dizziness. 7. Discuss the diagnostic office testing for dementia and the subsequent evaluation if it is identified. 8. Describe the difference between a TIA, Transient Symptoms with Infarction, and Ischemic stroke the methods of evaluation of each. 9. Describe the differential diagnosis of tremor and associated causes along with management strategies. 10. Describe the common causes of sleep disorders and the common presenting complaints associated with each disorder. 11. Discuss the clinical evaluation of sleep disorders including diagnostic testing. 12. Describe the management of the various sleep disorders including sleep hygiene recommendations for patients with Insomnia. 13. Describe the common types of primary headache and secondary headache and review the differential diagnosis to understand when there may be a serious underlying cause. 14. Discuss the types of migraine headache and appropriate management. 15. Discuss Chronic Daily Headache and methods of managing it. 16. Discuss the "red flags" for identifying the more severe forms of headache. 17. Describe the treatment of cluster and tension type headache.

Student Assignments:

Each Student will review the following cases in the Case Files text and submit in writing at least 5 important points from each case:

Case 32, p-304- Dementia
Case 34, p- 324- Migraine Headache
Case 44, p- 428- CVA and TIA
Case 55, p-536- Movement Disorders
Case 57, p-556-Obstructive Sleep Apnea

Also, each student will submit written answers to the following questions:

1. A 61-year-old woman comes to your office for intermittent dizziness for the past 2 weeks. At times, she misses work due to the dizziness. When she awakens in the morning, she states, "The entire room spins." Nausea accompanies the dizziness. The episodes last less than a minute. The patient has had 2 previous similar episodes of dizziness over the past year that resolved spontaneously. She is otherwise healthy and has no chronic medical conditions. She reports no associated headaches, hearing loss, or focal neurologic symptoms. The episodes are most severe when she rolls over in bed or gets out of bed.

   Questions: What is the most likely diagnosis? How would you treat this patient?

   A.) Postural hypotension
   B.) Benign paroxysmal positional vertigo

C.) Posterior circulation ischemic infarct
D.) Disequilibrium

2. How would the presence of Nystagmus help in understanding the cause of Vertigo?

3. Go to Access Medicine/Multimedia/View by System/Neurological and look at the Dix-Hallpike Maneuver and the Epley Maneuver and try to practice each on at least one individual before the teleconference and report your findings.

4. Perform a Mini-mental Status exam on at least one individual during the week and report your findings.

5. A 45-year-old man comes to your office for evaluation of tremor. He started to notice the tremor recently, when he began building model airplanes with his son and had difficulty doing the fine motor tasks required for this hobby. His son has been making jokes about the shaking to his mother, who was concerned about this new tremor and scheduled an appointment for her husband to see you.
   Additional History:
   This tremor is just in his hands and is present in both hands equally. It never occurs when his hands are resting in his lap or when lying in bed before he goes to sleep. He occasionally notices a tremor when doing other things, such as pouring from a full gallon of milk. He had a slight tremor several years ago when building models for the first time, but it was not bothersome to him then. He has one cup of coffee daily, but this has not changed over the last 20 years. He drinks alcohol occasionally but has not noticed an ameliorating effect on his tremor. He has not had any stiffness, slowness, or changes in his gait. He does not have any psychiatric history and denies any problems with his mood now. He is otherwise healthy and does not take any medications. He remembers that his mother had a tremor when she was in her seventies.
   Questions: What Is the Most Likely Diagnosis? How would you treat this patient?
   A.) Parkinson's disease
   B.) Enhanced physiologic tremor
   C.) Essential tremor
   D.) Task-specific tremor

6. During an office visit, a 66-year-old man tells you that 1 week ago he experienced weakness in his right hand at work that resulted in a temporary inability to write or hold a pen. These symptoms persisted for approximately 45 minutes and resolved without further recurrence. The patient's history is significant for hypertension and coronary artery disease with stable angina. He has a history of 45-pack-year smoking. His medications include aspirin, nitrates, and a β-blocker. On examination, bruits can be heard over both carotid arteries. The results from the cardiopulmonary examination and the remainder of the physical examination are unremarkable. You obtain a duplex ultrasonogram of the carotid arteries that reveals an 80% narrowing of the left carotid artery and a 95% narrowing of the right carotid artery.
   Questions: What is the most likely diagnosis?
   What is the best therapy?
   What is the optimal timing for treatment?

7. What is the Mallampti Score and why is it important? Print off a copy of the Epworth Sleepiness Scale and score on yourself.

WEEK 12: Psychosocial Problems: Addiction, Anxiety, Depression, Family Violence

Learning Objectives By the end of this session, the student should be able to:
1. Describe the definition of addiction and methods of screening and diagnosis in a primary care setting. 2. Discuss the DSM-IV criteria for Substance Abuse and Substance Dependence. 3. Discuss the adverse effects of common recreational drugs. 4. Describe the management of Tobacco addiction and dependence. 5. Become familiar with the NIDA website as a reference tool to understand drug use and addiction. 6. Describe the management methods of alcohol and other drug addictions. 7. Describe the common anxiety disorders seen in primary care. 8. Discuss the methods of recognition, diagnosis, and management of anxiety disorders in the primary care setting. 9. Describe medications available for treating anxiety disorders including potential side effects. 10. Discuss PTSD as described in the PTSD website www.ptsd.va.gov giving an overview, the assessment, types of trauma causing it and treatment available and look for the treatment resources available in your rural community clerkship site. 11. Discuss the prevalence of depression and diagnostic criteria for major depressive disorder differentiating it from dysthymic disorder. 12. Describe the screening tools available for diagnosis of depression including PHQ-2 and PHQ-9. 13. Describe the diagnostic criteria for Bipolar I and II disorders and the differentiation from hypomanic episode. 14. Describe how you would screen for suicide risk and manage those you identify at risk. 15. Discuss the antidepressants, the indications for their use and potential side effects. 16. Discuss the indications for and the role of psychotherapy in the management of depression and when you would refer to a psychiatrist or psychologist.

Student Assignments:

Read and review the following chapters in the *Case File* text and submit in writing at least 5 important points from each.

Case 25, p-232- Major Depression
Case 36, p-342- Family Violence
Case 41, p-394- Substance Abuse

Narcotic Prescriptions-Past, Present and Future: Online Module in Canvas

Also, written answers to the following questions:

1. You are a physician in a Rural Community and have a patient who recently was elected to the Texas Legislature. Prior to leaving for his first legislative session in Austin, he stops by your office and asks for your advice regarding the legalization of Marijuana both for medical reasons and recreational use since he knows this will be presented for vote while he is there. How would you advise him on these decisions based on the recent literature? [Use the NIDA website "Marijuana Drug Facts" or other resources to support your recommendation.]

2. Do you think alcoholism and other forms of substance abuse are genetic diseases? Cite some articles from the literature to defend your position.

3. Do you think patients who have substance abuse are self-treating an underlying psychiatric disorder such as anxiety or depression? What does the literature say about this?

4. Download the PHQ-2 and PHQ-9 screening tools and see if you can use them on at least one patient before our teleconference and report your findings. Before doing so ask for permission from your preceptor.

Applied Evidence

Patient abusing alcohol or drugs? Help starts with a single question

Although binge drinking and drug use are rarely discussed during office visits, they are common, costly, and potentially fatal. Help patients stop with these easy-to-use screening tools and effective intervention strategies. *J Fam Pract.* 2013 February;62(2):63-69. **Daniel C. Vinson, MD, MSPH**

Questions:

1. Review the above article and be aware of screening tools for patients to identify drug use and be able to discuss the some of the clues to identify the associated health issues that occur with substance use or abuse. During your Family Practice rotation, can you think of some patients where the tools discussed in this article would have been helpful?

2. In your rural practice you have a new patient presenting for a "Check-up.' In taking his or her history you ask if they served in the military and they report that they have. What would be the questions you would ask to identify if they had PTSD? Using the ptsd.va.gov web site, see if you can identify a resource in your current rural community that could assist you in helping such a patient.

3. Using the NIDA website as a reference:
   a. How many babies are currently suffering from opiate withdrawal in the U.S.?
   b. Does NIH and NIDA think Substance Abuse is a Brain Disease?
   c. What does NIDA have to say about e-cigarettes?

4 During your Family Practice rotation have you
   a. Been able to help a patient quit smoking?
   b. Identified anyone using, abusing, or misusing recreational or prescribed drugs?
   c. Identified a patient with depression or an anxiety disorder not previously diagnosed?

5. Does your preceptor think Amphetamine use is a significant problem in his or her rural community?

6. Ask your preceptor if he or she has identified any or many cases of Family Violence including Child Abuse in their practice and if so, how did they manage it?

Note: This is the last opportunity to submit your Ethics Assignment (Appendix B)

Evaluation, Grading, and Attendance

Evaluation is an important part of any educational experience. The most important part of the evaluation process is the feedback the student receives during the learning process. The final grade you will receive will be based on your performance in four basic areas:

- Clinical performance as evaluated by the rural preceptor faculty
- Family Medicine COMAT exam
- Weekly assignments and evidence-based seminar participation
- Weekly quizzes

A **mid-rotation feedback** interview will be conducted by your rural faculty. This is a formative evaluation and is for the purpose of giving you a "progress report" or clinical preceptor feedback of your clinical performance up to that time. Any deficiencies will be pointed out to you at that time. Any number grade given at this time will not be averaged with your final evaluation. Please review it. Your active participation in your assigned seminar group and other didactic sessions is required. This will be considered in determining your final grade.

It is important to establish a strong student / faculty relationship with your rural preceptor. In the Appendix there is a form that outlines both student and faculty expectations for the FM clerkship. The form is in the Appendix to this document. You will print out and discuss with your rural preceptor. Both of you will sign the form and bring to your exit interview as well.

At the end of the rotation, supervising faculty will assess each student and complete the clinical clerkship evaluation form via eMedley. The faculty assessment portion of the final pass/fail grade will be based on these clinical clerkship evaluations. It is our goal that all students and faculty-on-service meet to provide mutual feedback and to fully discuss the assessment

It is a direct conflict-of-interest for an evaluator to provide medical care to a student for whom they are responsible for evaluating. The same person should not be privileged to both academic and medical information about a student. No preceptor should fill out an evaluation form for a student that they provide medical care. It is best practice for medical students to seek their care from physicians not related to their medical education. Clerkship directors and preceptors should refer students to their own PCP or the student health care clinic for care.

Students may be eligible for “Honors”, designated by the Clerkship Director, if they meet all expected requirements to pass the clerkship and:

- Score 91 or above on the COMAT exam for that clerkship. The score will be set and approved on an annual basis by the clerkship director, the assistant dean for clinical education, and the senior associate dean for academic affairs.
- Achieve an “Exceeds Expectation” on at least one of their clinical evaluation competency areas.
- Do not have a “Below Expectation” on any clinical evaluation competency area.
- Do not violate any Clinical Education policy or procedure while on the rotation, e.g., attendance policy.
- The final designation for Honors is at the discretion of the Clerkship Director for Core clerkships and does not apply to elective rotations.

A comprehensive subject (shelf) exam will be given on the final day of the rotation. This will be administered by the Department of Testing and Evaluation. Per TCOM policy, this is a required component of each core clerkship and a scaled score of 70 or greater will be required to pass the clerkship course.

Students must achieve the minimum required score in each component area to pass the course. The final grade of Honors/Pass/Fail for the core rotation is derived from successful completion of the following components:

Component	Evaluation Tool	Minimum Score Required
Student Clinical Performance	Clinical Clerkship Evaluation	Upon completion of this clerkship, students should perform the behaviors outlined within the "expected" level of each competency rated on the Clinical Clerkship Evaluation and the AACOM Osteopathic Core Competencies for Medical Students. Student evaluations with ratings of below expected for any competency may result in failure.
Standardized Assessment	Family Medicine COMAT Exam	Scaled Score of 70
Weekly Seminars	Active Participation, Completion of Weekly Assignments	Attendance Each Week Submission of Weekly Assignments Prior to the Week's Seminar
Internal Quizzes	Weekly Quizzes	Average Score of 70
Quality Improvement Project	Written assignments	Submission of completed assignments by posted date
Institute for Healthcare Improvement (IHI)	QI 102: How to Improve with the Model for Improvement QI 105: Leading Quality Improvement PFC 101: Introduction to Patient-Centered Care PDSA Part 1 video PDSA Part 2 video	Complete by posted date and submit certificates of completion as required
Prescription Writing Exercise	Watch Posted Video Complete 20-point quiz	Complete by posted date

Attendance Policy

The Office of Rural Medical Education expects 100% attendance at all required clinics, rounds, meetings and assigned functions. Students are required to strictly adhere to the attendance policies described in *"Uniform Policies and Procedures for Clinical Clerkships."* Failure to do so may result in disciplinary action.

All students must be on-campus the last day of the rotation to complete post clerkship evaluations. The student may leave his/her rural site after 5:00 p.m. on Wednesday of the last week of the rotation. Additional travel time may be allowed for those students traveling from a distant site. All activities and evaluations that must be completed at the site must be done prior to leaving.

Weekly schedules are to include on average:

- 3 ½ days in rural faculty's clinic practice.
- ½ day in small group evidence-based seminar.
- ½ day in independent study.
- ½ day in community service activity.

*If you are ill, or otherwise cannot be in the clinic, you must notify your clinic at the earliest possible time. Absence forms are required for each absence***.**

CLERKSHIP RESOURCES

REQUIRED

Case Files –Family Medicine 5th Edition: Toy, Briscoe, Britton; McGraw Hill- Lange.
The 5 Minute OMM Consult: Channell, Mason.

RECOMMENDED UNTHSC LIBRARY AND OTHER ONLINE RESOURCES

- Library Databases
  - UPTODATE
  - Lewis Library Resources:
    - Access Medicine
    - Clinical Key
    - VisualDX
  - JAMA and Archives
  - Stat-Ref
  - **Journal of Family Practice**
  - ACP Journal Club
  - ACP PIER
  - National Guideline Clearing House
  - **Under Library initial page, on the far-left listing, see Research Guides/ Rural Health/ Statistics by Geographical Region– look for your County and see if there are any pertinent characteristics.**

Apps that may be helpful:

- 12 Apps That Could Help Your Practice, Paul Cerrato, MA
  - https://www.medscape.com/viewarticle/883539_1
- CDC Healthcare Apps: Health Care Provider/Clinician Apps
  - CDC DentalCheck
  - U.S. Medical Eligibility Criteria for Contraceptive Use
  - Laboratory Response Network Rule-Out and Refer app
  - MMWR Express
  - Prevent Group B Strep (GBS)
  - PTT Advisor Support
  - STD Treatment (Tx) Guide
  - Vaccine Schedules
  - The Yellow Book
- American College of Physicians releases ACP Clinical Guidelines app
  - https://www.acponline.org/acp-newsroom/american-college-of-physicians-releases-acp-clinical-guidelines-app
- The Top 9 Medical Apps for Doctors
  - Published February 8th, 2018 by Cathy Reisenwitz in EMR
  - https://blog.capterra.com/top-7-medical-apps-for-doctors/
- TOP Medical Apps by What the Bleep
  - https://www.whatthebleep.co.uk/top-medical-apps

Additional Resources are Available on Canvas

Rural Faculty

James Qualls, DO – Athens, TX

David Hill, DO – Cuero, TX

Alyssa Molina, MD – Eagle Lake, TX

Ramon Cantu, DO – Eagle Lake, TX

David Randell, DO – Abilene, TX

John Sissney, DO – Sherman, TX

Jennifer McGaughy, DO – Perryton, TX

Trevor Huber, DO –Little Elm, TX

Blair Thwaites, MD – Prosper, TX

Clayton Roberts, DO – Stephenville, TX

Rebecca Daley, DO – Fredericksburg, TX

Jeremy Johnson, DO – Olney, TX

Richard David, MD – Tyler, TX

Robert DeLuca – Eastland, TX

David Meredith, DO – Gonzales, TX

Zachary Castle, DO – Midland, TX

Taylor McCain, - Clifton, TX

Clerkship General Responsibilities

Specific orientation for clinic procedures will be given at your individual clinics. Please refer to your schedules for specific details.

1. Clinic Hours

   Patient care hours and schedules **vary from clinic to clinic**. You are expected to arrive at your assigned clinic no later than one-half hour before the first scheduled patient. This will allow you to tend to any charting, messages, lab results, or other duties and be ready to see your first patient on time.

2. Patient Visits

   During the patient visit, the student is responsible for:

   - Obtaining an appropriate history and physical. This may be v e r y comprehensive, or problem focused, depending on the situation.
   - Evaluation of pertinent diagnostic tests.
   - Presenting every patient to the faculty supervisor prior to finalizing management plans.
   - After appropriate consultation with the faculty supervisor, initiate all necessary treatment and management.

3. Medical Record

   The medical record is a vital part of maintaining a continuity relationship with the patient and being able to provide a preventative approach to the health care of your patients. Updating the medical record each visit is expected of all students. This will include:

   - Chronic and acute problem lists
   - Medication lists
   - Immunization status
   - Health maintenance charts

   All records should be completed the day of the visit and no medical record shall be removed from the clinic.

4. Diagnostic Tests

   Laboratory, x-ray, and other diagnostic tests should be viewed to confirm or rule out pathological conditions suspected based on your clinical evaluation. Learning cost-effective health care is an essential part of your medical education. You should be able to justify each test you order. If you cannot give sound reasoning as to why the test should be done, perhaps it is an unnecessary test.
   All tests should be approved by the faculty supervisor prior to ordering or doing them.

   Specific orientation on how to order lab and x-rays will be given at the clinic site. You must be specific and follow protocol. There are several managed health care plans that have specific rules**.** These must be followed. Ask the nursing staff at your clinic if you are unsure of what to do.

5. Lab Procedures performed on at your clinic site will vary according to qualifications and intentions of your preceptor.

   What lab procedures are done at the clinic is dependent on whether CLIA approval has been obtained. At the end of the rotation the student should be proficient in performing the following tests:

   - Urinalysis.
   - Wet mount.
   - KOH prep.

- Urine pregnancy test.
- Finger stick glucose, PT/INR, HgbA1c.
- Obtaining specimens for various cultures.

6. Writing Prescriptions
   All prescriptions must be signed by a supervising licensed physician and preceptors will supervise and determine if prescriptions can be placed in the EMR.

7. Referrals
   If you feel that your patient would benefit from a referral to another specialist, you must have pre-approval by the supervising physician. He/she will review with you whether there is sufficient data on the patient's problem and see if you have done a sufficient work-up before sending the patient to a consultant. Your preceptor will instruct you on how consultations are arranged in their clinic and if you can assist in the process. There may be instances where your preceptor will allow the student to accompany the patient to the referred specialist. If so, this can be a valuable learning experience.

Patient Care Supervision

Cross Listed as TCOM Procedure 5.4 Patient Care Supervision
TCOM students and residents engaged in patient care at UNTHSC operated facilities or as participants in UNTHSC affiliated training programs shall do so under the supervision of a licensed health care provider who has been credentialed to provide that scope of care. Visiting students and residents working in UNTHSC facilities or with UNTHSC employed faculty shall be similarly supervised.

1. TCOM students and residents engaged in patient care activities shall always be supervised by a duly licensed member of the clinical faculty who retains privileges for the scope of care being provided. Faculty or a similarly credentialed designee (resident or fellow with approved privileges) must be immediately available in the facility where the activity is taking place. Students who have demonstrated competence to the faculty may perform patient histories and physical examinations without immediate supervision if directed to do so by faculty.
2. TCOM students and residents may form such additional tasks as may be directed by supervising faculty upon demonstrating competence to perform those tasks. In most instances, the provision of patient care shall require the immediate presence of a duly credentialed supervising provider who has ascertained the trainees' level of proficiency.
3. TCOM shall assure distribution of this procedure to students, residents, and faculty as part of the orientation plan for clinical training.
4. Students or residents who fail to follow procedures for clinical supervision may be removed from patient care activities at the discretion of the dean or her/his designee pending a disciplinary review.
5. Faculty who fail to observe supervision procedures may be removed from participation in TCOM training programs and may be further subject to disciplinary action.

Medical Student Use of Chaperones

While on rotations, it is important for you to make your position clear to patients by introducing yourself as a "medical student". All students should review with their preceptor and site all chaperone policies to ensure they are in compliance on this rotation. Without question, any portion of an exam that involves breast, pelvic or rectal exams, and even during certain portions of an interview that can involve sexual history, should not be done alone with the patient.

Professionalism and Ethics

We expect you to give the appearance and behavior of an advanced medical student about to become a physician. You should remember that medical ethics of confidentiality should be adhered to. Appropriate identification identifying you as student physicians should be always worn when seeing patients. The student physician should appear well groomed, neatly dressed, and give a good professional image. Dress requirements include a cleaned and pressed clinic jacket. We reserve the right to suggest that dress may not be suitable, or we may suggest appropriate attire. Your response will be judged as part of your self-management. We expect you to always maintain the highest standard of professionalism and ethical behavior. This includes your relationship with the clinic staff, and your fellow students.

Problem Patients

If you are having trouble with a patient, please notify your supervising physician.
He/she will advise you or get further consultation on how to handle the situation.

Availability

You must be always readily available during clinic hours. If for any reason you must leave the clinic, you must notify both the supervising faculty and the head nurse. Your home phone number must be listed with your assigned clinic office.

Equipment

Carry your stethoscope with you during clinic hours.

Courtesy Visits

Under no circumstances are you to see a patient unless they have signed in with the receptionist of your clinic. Do not see your classmates or fellow students informally. They must register with the front desk. Under no circumstances are you to discount any charges without the approval of the supervising faculty.

Health & Safety General Guidelines

Student Healthcare

Students may access physical health services at the sites listed below. All students are responsible for carrying health insurance and should check with their insurance company before accessing services.

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Students in the **DFW & Weatherford area** may access health services at the UNTHSC Student Health Clinic.

UNTHSC Student Health Clinic
855 Montgomery St
3rd Floor North
Fort Worth, TX 76107
817-735-5051
studenthealth@unthsc.edu

Students in the **Conroe area** may access health services at Lone Star Family Health Center's Spring Location.

Lone Star Family Health Center- Spring
440 Rayford Rd.
Spring, TX 77386
936-539-4004

Students in the **Longview area** may access health services at CHRISTUS Trinity Clinical Internal Medicine.

CHRISTUS Trinity Clinical Internal Medicine
703 E. Marshall Ave
Suite 1001
Medical Plaza II
Longview, TX 75601
903-753-7291

Students in the **Corpus Christi area** may access health services at Promptu Immediate Care.

Promptu Immediate Care
5638 Saratoga Blvd
Corpus Christi, TX 78414
361-444-5280

Promptu Immediate Care
4938 S Staples
Ste E-8
Corpus Christi, TX 78411
361-452-9620

Exposure to Bloodborne Pathogens

Universal Precautions: The term "universal precautions" refers to infection control which presumes that every direct contact with body fluids is potentially infectious. The Occupational Safety and Health Administration (OSHA) regulations for health care professionals who are considered to be at risk of occupational exposure to bloodborne diseases can be found at https://www.osha.gov/SLTC/bloodbornepathogens/index.html

Bloodborne pathogens refer to pathogenic microorganisms that are present in human blood and can cause disease in humans (e.g. HBV, HIV, etc.). Exposure Incident means "a specific eye, mouth, other

mucous membranes, non-intact skin, or parenteral contact with blood or potentially infectious materials." Contact can occur via a splash, needle stick, puncture/cut wound from sharp instrument, or human bite. Other potentially infectious body fluids other than blood include semen; vaginal secretions; pleural, pericardial, synovial, peritoneal, cerebral spinal, amniotic fluid; saliva during dental procedures; and any other body fluid visibly contaminated with blood.

Policy/Procedure: If a TCOM medical student is exposed to bloodborne pathogens either by direct contact with blood or other body fluids via the eyes, mucous membranes, human bite, or sharps (e.g., needle stick, lancet stick, scalpel cut, etc.) while on rotation, it is to be handled as an EMERGENCY SITUATION.

Post Exposure Protocol

- Immediately wash exposed areas with soap and water.
- If splashed in eyes or mouth, flush with large amounts of water.
- Treatment is critical within first 2 hours.
- Notify supervisor and follow rotation site exposure protocols (see below for addresses).
- If facility is not equipped to handle exposure, contact HSC Health Student Health Clinic or appropriate remote site location listed below.
- If SHC or remote site listed is not available, or you are not in the DFW area, go to the nearest ER and use your student health insurance.
- You must notify Student Health and the Osteopathic Clinical Education Office of any care received at another facility.

Dallas Fort Worth & Weatherford Area students with exposures to bloodborne pathogens which occur M-F, 8-5 should report to:

HSC Health Student Health
855 Montgomery St., 3rd Floor
Fort Worth, TX 76107
T: 817-735-2273 F: 817-735-0651

For exposures occurring afterhours, students should report to the nearest emergency room and use your student health insurance.

Conroe remote site students with exposures to bloodborne pathogens which occur M-F, 8-5, should report to the Nurse Manager at :
Lone Star Family Health Center
605 S. Conroe Medical Dr.
Conroe, TX 77304
936-539-4004

For exposures occurring afterhours, students should report to :

Emergency Department
Conroe Regional Medical Center
504 Medical Center Dr.

Conroe, TX 77304
936-539-1111

Longview remote site students with exposures to bloodborne pathogens which occur M-F, 8-5, should report to:

CHRISTUS Good Shepherd Medical Center Employee Health
1621 N 4th St, Suite 1
Longview, TX 75601
903-315-5154

For exposures occurring afterhours, students should report to:

Emergency Department
CHRISTUS Good Shepherd Medical Center
700 E Marshall Ave.
Longview, TX 75601
903-315-2000

Corpus remote site students with exposures to bloodborne pathogens should report to:
Christus Spohn
OCC Health Nurse at Christus Spohn
also immediately report to your attending and Dr Hinojosa
Bay Area
report to charge nurse and medical education office
proceed directly to emergency room for treatment

DISCLAIMER

The clinical clerkship is operated in accordance with the policies and procedures of the academic programs of the Texas College of Osteopathic Medicine as presented in your class' Clerkship Manual, Student Handbook and College Catalog.

Academic Integrity/Honor Code
Enrollment is considered implicit acceptance of the rules, regulations, and guidelines governing student behavior at UNT Health Science Center. It the responsibility of the student to be familiar with all policies governing academic conduct which can be found in the UNTHSC Student Catalog, Student Policy Handbook and the Student Code of Conduct and Discipline which are located on the UNTHSC Internet at http://www.hsc.unt.edu/Sites/DivisionofStudentAffairs/

Academic Assistance
Students may schedule one-on-one academic assistance with faculty through in-person appointments, telephone calls or e-mail communication. Academic assistance is also available through the UNTHSC Center for Academic Performance (CAP). http://www.hsc.unt.edu/CAP

Attendance and Drop Procedure
Course instructors and the School's administration expect students to attend class. It is the responsibility of the student to consult with the instructor *prior* to an absence, if possible. Withdrawal from a course is a formal procedure that must be initiated by the student. Students who stop attending class and do not withdraw will receive a failing grade. Students should consult with the instructors prior to withdrawing. In some cases, a perceived problem may be resolved, allowing the student to continue in the course. It is the student's responsibility to be familiar with the policies and procedures as stated in the Student Handbook and the UNTHSC Catalog located on the UNTHSC Internet at http://www.hsc.unt.edu/departments/studentaffairs/.

Americans with Disabilities Act
The University of North Texas Health Science Center does not discriminate based on an individual's disability and complies with Section 504 and Public Law 101-336 (American with Disabilities Act) in its admissions, accessibility, treatment, and employment of individuals in its programs and activities. UNTHSC provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law, who are otherwise qualified to meet the institution's academic and employment requirements. For assistance contact the Assistant Director, Disability Accommodations within the Center for Academic Performance at the Health Science Center.
Reference Policy 7.105 Americans with Disabilities Act Protocol in the Student Policies.

Course and Instructor Evaluation
It is a requirement of all students that they are responsible for evaluating each of their courses and instructors as defined in UNTHSC Policy 7.120 Student Evaluation of Courses and Instruction. Please adhere to all guidelines established in the policy.

Course Assessment In some instances, courses will have a course assessment that will provide immediate feedback to the course director regarding progress of the course identifying potential problems and determining if student learning objectives are being achieved. (Provide all pertinent information regarding the specifics of the groups in the syllabus as defined in UNTHSC Policy 7.120 Student Evaluation of Courses and Instruction.)

Syllabus Revision
The syllabus is a guide for this class but is subject to change. Students will be informed of any change content or exam/assignment dates.

Turnitin and the Family Education Rights and Privacy Act (FERPA) – If applicable

NOTE: UNTHSC has contracted with Turnitin.com for plagiarism detection services. Use of Turnitin.com is entirely in the discretion of the instructor but use of such a service requires that you provide notice (via syllabus) to your students that you are using such services. In addition, instructors who use Turnitin should be sure to remove student identifiable information from the work before sending to Turnitin or receive written permission from the student. There are two methods for using Turnitin for written assignments. Please refer to the wording guidelines and consent form located on the Faculty Affairs website at http://www.hsc.unt. edu/Sites/OfficeofFacultyAffairs/index.cfm?pageName=Turnitin

Zero Tolerance for Sexual Violence and Harassment

All students should be able to study in an atmosphere free of harassment, sexual violence, and gender discrimination. Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources on the UNT Health Science Center's website: *http://web.unthsc.edu/info/200304/student_affairs/355/title_ix_reporting (Links to an external site.)*

COMAT Exam

A passing score of at least 70 (scaled) on the Family Medicine COMAT exam is a required component of this course. Testing and Evaluation Services will notify students of exam date, location, and start time. Students must be seated in their designated seats prior to the published exam time. Any student arriving late to the COMAT exam will receive no additional time to take the exam. They will be required to stop taking the examination at the published stop time. A student will lose 10points on the exam for late arrival. If the 10-point reduction results in a score below 70, the student will not be required to remediate the exam. However, the score will be recorded as is. See also section 4.2.1 of Clinical Education Policy and Procedure Manual for COMAT exam and remediation procedures.

ATTACHMENTS

Attachments are also posted to Canvas

A. Faculty/Student Contract Sample – complete in eMedley
B. IHI Assignment
C. Ethics Assignment
D. Prescription Writing Assignment
E. Telehealth Module (used at Cornerstone)
F. Quality Improvement Project Guidelines

ATTACHMENT A

University of North Texas Health Science Center
Texas College of Osteopathic Medicine
Clinical Clerkship Evaluation

Student Name | Period/Dates | Site

Preceptor | Rotation | Core ❒ Elective ❒

PLEASE EVALUATE THE STUDENT ON EACH OF THE SEVEN COMPETENCIES AS THEY PERTAIN TO YOUR PRACTICE
Comments required for **below expected** or **beyond expected**.

1- Osteopathic *Principles* -			
❒ Below expected The student does not regularly consider OPP/OMM in patient care.	❒ Expected The student considers OPP/OMT in the evaluation and treatment of the patient. They can develop osteopathic differential diagnoses when appropriate	❒ Beyond expected The student applies holistic care, performs osteopathic structural and sympathetic reflex examinations and employs manipulative treatment as necessary	❒ Not Observed
Comments:			
2- *Medical Knowledge* -			
❒ Below expected The student has a deficient knowledge base for their level of training. They are unable to apply clinical skills to patient care. They struggle to develop appropriate differential diagnoses.	❒ Expected The student *demonstrates* an adequate knowledge base for specialty and level of training. They are able to *apply* their knowledge clinically and *perform* skills appropriate for their level. They can *identify* differential diagnoses and *use* investigative thinking in clinical situations.	❒ Beyond expected The student demonstrates a superior fund of knowledge for their level of training. They regularly perform skills most others do not at this level. Their differential diagnoses are beyond what would be normally expected at this level.	❒ Not Observed
Comments:			
3- *Patient Care* -			
❒ Below expected The student struggles with time management when interacting with patients. Their history and physical skills are not developed. They cannot reliably formulate differential diagnoses, treatment plans. There is no attempt to address wellness and prevention.	❒ Expected The student is reliably timely and evaluates patients appropriately with history and physical exam. They can develop thoughtful treatment and management plans. They are aware of the importance of wellness and prevention but may not incorporate it into patient interactions regularly.	❒ Beyond expected The student always *evaluates* assigned patients in a timely fashion, *performs* an appropriate history and physical exam, can *prepare and carry out* treatment and management plans. They can *provide* wellness counseling to patients and can *promote* disease prevention.	❒ Not Observed
Comments:			
4- *Professionalism* -			
❒ Below expected The student has demonstrated unprofessional behavior with little insight or remorse. They do not apply cultural awareness. Their actions are concerning for their future dependability	❒ Expected The student *applies* ethical standards to patient care, *demonstrates* respect for cultural diversity. They *demonstrate* concern for others and *exhibit* dependable, self-directed action.	❒ Beyond expected The student advocates for quality care. They are highly self-directed and dependable. prevention.	❒ Not Observed
Comments:			

5 - *Interpersonal and Communication Skills* -			
❒ Below expected The student has difficulty communicating effectively with patients and others. They do not, or are unable to document appropriately in the medical record.	❒ Expected The student can *communicate* effectively with the patient and their family, other members of the healthcare team, and can *document* appropriately in the medical record	❒ Beyond expected The student is an excellent communicator with patients and others. They document completely in the medical record, beyond what would be expected at their level of training. They employ empathic care for patients and others.	❒ Not Observed
Comments:			

6- *Practice-Based Learning and Improvement* -			
❒ Below expected The student does not try to employ evidence based medicine. They do not receive or give feedback in an appropriate manner.	❒ Expected The student can discuss current evidence but may not regularly apply it. They are developing their skills when it comes to giving and receiving feedback.	❒ Beyond expected The student regularly *applies* current evidence to patient management. The student *solicits* and *provides* feedback as appropriate.	❒ Not Observed
Comments:			

7- *Systems Based Practice* -			
❒ Below expected There is no consideration of safe, cost-effective care. They struggle to work with others effectively for the benefit of patients.	❒ Expected The student *demonstrates* a basic level of cost-effective patient care. They are aware of and can *promote* community resources and can *participate* in a team environment.	❒ Beyond expected The student demonstrates an advanced level of safe, cost-effective care. They can assume multiple roles within the healthcare team as needed. They seek out community resources in order to benefit patients.	❒ Not Observed
Comments:			

Number of Days Absent: _____

General Comments:

_____

_____

_____

_____

_____

_____ _____ _____ _____

Preceptor Date Student Date

_____ _____

Clerkship Director Associate Dean

You may return this evaluation form via the following: UNTHSC/TCOM

Mail:
Office of Clinical Education
3500 Camp Bowie Blvd.
Fort Worth, TX 76107

Fax:
Office of Clinical Education
817-735-2456

Email:
clinicaleducation@unthsc.edu

ATTACHMENT B

IHI Course Instructions

The Institute for Healthcare Improvement offers online courses through "Open School" that teach practical skills to improve quality and safety in health care. During your clinical rotations, you will be required to complete IHI modules applicable to the clerkship. You are not required to repeat modules if already completed. Simply submit your certificate of completion to the appropriate course assignment.

For MEDE 8834, you are required to complete the following modules

Open School Online Courses:

- QI 102: How to Improve with the Model for Improvement (90 minutes)
- QI 105 Leading Quality Improvement
- PFC 101: Introduction to Patient-Centered Care

Whiteboards:

- PDSA Cycles Part 1: PDSA in Everyday Life (5 minutes)
- PDSA Cycles Part 2 (4 minutes)

IHI PROCESS

STEP 1: Start by registering to access the Institute for Healthcare Improvement (IHI) Open School's online courses
Create a profile on www.IHI.org (top right corner of webpage).

STEP 2: Information needed:
Organization = UNTHSC
Address = your preferred address
Information = Student > School > Other Learner > Full-time > Grad year

STEP 3: Access OPEN SCHOOL link > Online Courses > Take Courses

STEP 4: Upon completion of the courses, a certificate can be generated. Please upload that certificate in Canvas assignments As always, keep a copy of the certificate for your records
remember you do not need to re-take a course, simply upload your certificate

ATTACHMENT C

ETHICS ASSIGNMENT

Ethical Issues in Clinical Practice

The ethical issues of clinical practice are often ignored during training. To help fill this void, students will discuss ethical issues as they relate to a clinical situation, and therefore be better prepared to deal with these issues upon the completion of training.

Objectives:

Upon completion of this clerkship the student should be able to:

1. Appreciate the ethical issues relating to a clinical situation.
2. Understand the role multicultural populations play in ethical dilemmas.
3. Make clinical decisions within the context of culturally sensitive ethical constructs.
4. Understand the role and function of hospital ethics committees.

During this Family Medicine Clerkship, you will have the opportunity to encounter and experience ethics in the clinical setting. We believe you will expand your knowledge and engage your heart and head as you participate in "real life"! In the FM Orientation, you will be provided with an overview of the ethics module and your assigned tasks.

ETHICS ASSIGNMENT: Written assignment in Canvas

Resources

American Osteopathic Association Code of Ethics
https://osteopathic.org/about/leadership/aoa-governance-documents/code-of-ethics/

Ethics and Multiculturalism in the Patient Physician Encounter
Virtual Mentor. 2007;9(8):523-526. doi: 10.1001/virtualmentor.2007.9.8.fred1-0708.
https://journalofethics.ama-assn.org/article/ethics-and-multiculturalism-patient-physician-encounter/2007-08

Code of Medical Ethics: Inter-professional relationships
https://journalofethics.ama-assn.org/article/ethics-and-multiculturalism-patient-physician-encounter/2007-08
These Opinions are offered as ethics guidance for physicians and are not intended to establish standards of clinical practice or rules of law.

ATTACHMENT D Prescription Writing Assignment

Prescription Writing Instructions

1. Access Prescription Writing module in Canvas
2. Complete the following by posted date.
    a. Principles of Prescribing – Pre-Survey
    b. Prescription Writing Exercise Video
    c. Principles of Prescribing – Post-Survey

ATTACHMENT E Telehealth Module

Telehealth Module Instructions

View the video found in the following link:
https://www.youtube.com/watch?v=Ni4YDD-a-Gc

ATTACHMENT F – QIP Guidelines

ROME Family Medicine Geriatrics-Focused Quality Improvement Project

UNTHSC Department of Internal Medicine and Geriatrics
Lesca Hadley, MD, MBA, FAAFP, AGSF
Associate Professor, Department of Internal Medicine & Geriatrics
Lesca.Hadley@unthsc.edu
Please text 817-320-0995 for immediate assistance

UNTHSC Office of Rural Osteopathic Medical Education
Ann Smith, MDiv, MEd

Research Assistant Director, Department of Clinical Education
Annette.smith@unthsc.edu
817.735.2354

Rural Osteopathic Medical Education (ROME) Geriatrics Project

An integral part of medicine is the continual assessment and improvement of healthcare – the prevention, diagnosis, treatment, recovery, and outcomes. As rural physicians, this link is even more critical due to the compounding issues of supply and demand. Nearly 20% of the rural population in Texas is aged 65+, meaning that about 1 in 5 of the patients you encounter.[1] Because of this harsh reality, one of the components of this clerkship is the completion of a geriatrics-focused improvement project. In collaboration with your preceptor and under the direction of Dr Hadley, your project can potentially bring awareness of a need, improve the quality of life, enhance healthcare access, or any of a plethora of benefits to your patients.
At project completion, you will have gained knowledge/skills in conducting continuous quality improvement, best practices in the care of geriatrics patients, and administrative leadership in a primary care setting. Additionally, you will have completed a project abstract which must be submitted to UNTHSC Research Appreciation Day (RAD) or other professional conferences.

Objectives

- Identify best practices to address the health needs and concerns of older adults and their caregivers, such as Alzheimer's Disease, chronic disease management, fall prevention, and medications.
- Integrate value-based care and community services into a quality improvement (QI) strategy.
- Evaluate the project for patient access, quality, and cost measures.
- Create a project abstract to present findings at UNTHSC Research Appreciation Day and/or a professional conference.

Requirements

- Completion of an IHI online courses and submission of completion certificate(s)
- Selection of a project outcome in conjunction with your site preceptor
- Development of enhancement activities to answer the question
- Implementation of the plan for data collection at your site
- Six (6) bi-weekly meetings with Dr. Lesca Hadley
- Submission of written assignments:
  - *Introduction/Purpose/References*
  - *Methods/References*
  - *Results/ Conclusions*
  - *Data table*
  - *Abstract (draft)*
  - *Abstract (final)*
- **Optional:** The project abstract can easily be converted to a poster presentation for presentation at UNTHSC Research Appreciation Day (RAD) or several other regional, national, or international conferences. Poster requirements are linked at the end of this document for your convenience.

[1] https://texasalmanac.com/topics/population/texas-population-still-growing

Guidelines:

- All Quality Improvement Project (QIP) materials and resources are available in the QIP tab in the Canvas environment for MEDE 8834.
- All QIP assignments will be submitted through Canvas.
- Use AMA format for written documents
- Bi-weekly video conferences with Dr Hadley will cover Family Medicine didactics for the week and status/challenges of the QIP

During Orientation Tasks

1. **Preparation**
    a. Familiarize yourself with the Canvas environment for this clerkship, especially the QIP tab and module for due dates and assignment guidelines
    b. Please note that you have been assigned to Group A or Group B for your weekly video conference. Please pay careful attention to the calendar dates for your group's video conferences.
2. **Assignment:** Complete the IHI online course requirements (see previous Attachment B).
3. **Review** information here about age-friendly health systems:
    a. http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/default.aspx
    b. https://www.johnahartford.org/age-friendly-health-systems-initiative
    c. Terry Fulmer's article: Good Introduction https://onlinelibrary.wiley.com/doi/full/10.1111/jgs.15076
4. **Submit** IHI certificate(s) of completion

Groups for this clerkship:

Group A	Group B
1.	**1.**
2.	**2.**
3.	**3.**
4.	**4.**
5.	**5.**

WEEK 1 TASKS:

A. **Meet** with your preceptor and discuss the QI Project outcome options. Choose one outcome from the list below that is the best "fit" for their organization.

Option 1: Increase dementia caregiver education and support for any age caregivers

Option 2: Reduce risk of opioid misuse for adults ages 18 and older

Option 3: Increase use or discussion of care plans for adults ages 65 and older

Option 4: Decrease high-risk medication use for adults ages 65 and older

Option 5: Increase screening for future fall risks for adults ages 65 and older

Option 6: Increase utilization of telehealth and tele-education services

B. If your preceptor asks you to choose an outcome that is not on this list, please seek immediate approval from Dr. Lesca Hadley prior to proceeding with the project.
C. **Group A video conference with Dr Hadley**

WEEK 2 TASKS:

A. **Develop** enhancement activities for your project, using the guidelines provided here and in Canvas. Refer to Appendix A for examples.
   a. *Purpose:* Do something with patients or with the practice environment that should impact the chosen outcome
   b. *Timing:* Chose specific times to start and stop activities
   c. *Data Collection:* Develop a system to keep track of the number of both **eligible** and **actual** participants (patients, staff, providers, trainees) during your reporting period
B. Complete the written assignment: *Introduction/Purpose/References* <500 words
   ¶ 1. Describe the chosen outcome for this organization using this format:
   Will {enhancement activities} lead to {chosen patient outcome}?
   ¶ 2. Summarize the organization's history and mission statement, current programs, projects, and activities. Include population and geographic region.
   ¶ 3. Briefly describe the problem, challenge, or need that is unaddressed or unmet. Briefly include data supporting this need. Explain why this organization is positioned to address this.
   ¶ 4. Reference list required: minimum of three peer-reviewed and/or .gov references, formatted in AMA style. Formatting resource: https://owl.purdue.edu/owl/purdue_owl.html "*References are found at the end of a manuscript and are titled "Reference List," and each item should be listed in numerical order (two references should not be combined under a single reference number) as opposed to alphabetically. Additionally, each item should be single-spaced."*
C. Submit completed assignment to Canvas.
D. Group B video conference with Dr. Hadley

WEEK 3 TASKS:

A. **Conduct** a chart review for a four-week period to collect baseline data for this project.
B. **Complete** the Data Table using the **appropriate** template shown in Appendix B.
C. **Submit** completed assignment to Canvas.
D. **Group A video conference with Dr Hadley**

WEEK 4 TASKS:

A. **Complete** the written assignment: *Methods/References* <200 words
   a. ¶ 1. Summarize relevant short-term, intermediate, and long-term goals/outcomes of this project including the timeframe for each

b. ¶ 2. Define the target population: who, how many, and why selected
c. ¶ 3. Briefly describe the planned steps of data collection and the reporting of feedback from all stakeholders for the following
    i. What will be done?
    ii. Where it will be done?
    iii. How and when the enhancement activities will be performed?
    iv. Who will perform the activities?
    v. Why were these activities chosen? (include evidence of best practices)
d. ¶ 4. Reference list required: minimum of two peer-reviewed and/or .gov references, formatted in AMA style.

B. **Submit** completed assignment to Canvas.
C. Group B video conference with Dr. Hadley

WEEKS 5 – 8 TASKS:

A. **Implement** enhancement activities, adjust as needed
B. **Collect** data and complete the appropriate data table
C. Week 5 **Group A video conference with Dr. Hadley**
D. Week 6 **Group B video conference with Dr. Hadley**
E. Week 7 **Group A video conference with Dr. Hadley**
F. Week 8 **Group B video conference with Dr. Hadley**

WEEK 9 TASKS:

A. **Complete** the appropriate data table with final data
B. **Submit** completed assignments to Canvas
C. **Group A video conference with Dr. Hadley**

WEEK 10 TASKS:

A. **Complete** the written assignment: *Results/Conclusions <200 words*
    a. Describe the main findings related to your project question, including feedback
    b. Briefly describe lessons learned and next steps
B. **Submit** completed assignments to Canvas
C. **Group B video conference with Dr. Hadley**

WEEK 11 TASKS:

A. Complete the written assignment *Draft Abstract* <250 words by summarizing all previous written assignments using the following format: (See Appendix C for complete details)
    a. Purpose: Your QIP questions and 2-4 sentences that describe your QIP need or community benefit
    b. Methods: 2-4 sentences of QIP description, enhancement activities, and evaluation
    c. Results: 2-4 sentences that summarize data and supporting statistics
    d. Conclusions: 3-6 sentences summarizing findings, lessons learned, and next steps
B. Submit *Draft Abstract* to the Center for Academic Performance for evaluation
C. Submit *Draft Abstract* and CAP's suggestions to Canvas.
D. **Group A video conference with Dr. Hadley**

WEEK 12 TASKS:

A. Complete the written assignment *Final Abstract* by reviewing suggested changes, revising as required, and checking word count <250 words.
B. Submit completed *Final Abstract* to Canvas.
C. If, after final assessment by Dr Hadley, you want to submit your abstract for presentation, please refer to Appendix D for links, guidelines, and resources.

APPENDIX A EXAMPLES OF ENHANCEMENT PROJECTS FOR QIP

Considerations:

- PURPOSE: Do something with patients or with the practice environment that should impact the chosen outcome
- TIMING: Pick a specific time to start and stop activities
- DATA COLLECTION: Develop a system to keep track of the number of both ELIGIBLE and ACTUAL participants (patients, staff, providers, trainees) during the specified timeframe

Below are a few of the many examples of possible activities to Enhance Patient Practices or Patient Operations. You may PICK ONE of these for your project.

- Increase/diversify screening services. ("Use brief validated instrument to increase or diversify the screening." [Validated instruments include Opioid Risk Tool Screener, SOAPP-R, Timed Up and Go, STEADI CIC, and so on.])
- Increase/diversify education efforts and available resources. ("Provide dementia caregiver with educational handout and refer to additional resources like websites" or "Discuss advance care plan with patient and document patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan.")
- Modify scheduling/decrease wait times. ("Set up an online check in process for patients.")
- Clarify/formalize communication channels. ("Implement a time-out process before patient procedures.")
- Identify/diversify areas for provider/staff training. ("Train clinic staff about the 4 Ms.")

APPENDIX B DATA TABLE TEMPLATES

For the project option you select, use the corresponding Data Table Template. Complete the Data Table following these guidelines for each column:

1. & 2. Data collection and Timeframe: Choose a time period, prior to enhancement activities that can be used as the "usual practice" comparison group (if data is available), and then determine the period for implementation of enhancement activities. Define the time periods as month and year for which data will be/is reported.

3. Number individuals who participated: The total number of individuals who verifiably participated in the enhanced activity during the time frame.

4. Number individuals eligible to participate: The total number of individuals who were ELIGIBLE to participate in the enhanced activity during the time frame.

5. Results: Calculate the results for the timeframe, using the formula A divided by B.

6. Target: Set targets to determine whether the results from "enhancements" are better/worse/indifferent from the results for "prior to enhancement."

Option 1: Increase dementia caregiver education and support for caregivers of any age. Percentage of patients, regardless of age, with a diagnosis of dementia whose caregiver(s) were provided with education on dementia disease management and health behavior changes AND referred to additional resources for support within a 12-month period [MIPS].

1 Data Collection	2 Time Frame	3 Number of caregivers of dementia patients educated and referred during time frame	4 Number of caregivers of dementia patients eligible for education and referral during time frame	5 Results	6 Target
Prior to Enhancement	Mo _ _ Yr 20_ _ to Mo _ _ Yr 20_ _	(A) XXX	(B) XXX	A/B	Enhancement results > Prior to Enhancement results & Enhancement results >= 80% (or other realistic percentage)
Enhancement	Mo _ _ Yr 20_ _ to Mo _ _ Yr 20_ _	(C) XXX	(D) XXX	C/D	

Option 2: Decrease risk of opioid misuse for adults ages 18 and older. All patients 18 and older prescribed opiates for longer than six-week duration evaluated for risk of opioid misuse using a brief validated instrument (e.g., Opioid Risk Tool, Screener and Opioid Assessment for Patients with Pain-Revised [SOAPP-R]) or patient interview documented at least once during Opioid Therapy in the medical record [MIPS].

1 Data Collection	2 Time Frame	3 Number of adults ages __ to __ with opiate prescriptions evaluated for misuse during time frame	4 Number of adults ages __ to ___ with opiate prescriptions during time frame	5 Results	6 Target
Prior to Enhancement	Mo _ _ Yr 20_ _ to Mo _ _ Yr 20_ _	(A) XXX	(B) XXX	A/B	Enhancement results > Prior to Enhancement results & Enhancement results >= 80% (or other realistic percentage)
Enhancement	Mo _ _ Yr 20_ _ to Mo _ _ Yr 20_ _	(C) XXX	(D) XXX	C/D	

Option 3: Increase use or discussion of care plan for adults ages 65 and older. Percentage of patients aged 65 years and older who have an advance care plan or surrogate decision maker documented in the medical record or documentation in the medical record that an advance care plan was discussed but the patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan [MIPS].

1 Data Collection	2 Time Frame	3 Number of adults ages 65+ with an advance care plan or discussion during time frame	4 Number adults ages 65+ eligible for an advance care plan or discussion during time frame	5 Results	6 Target
Prior to Enhancement	Mo _ _ Yr 20_ _ to Mo _ _ Yr 20_ _	(A) XXX	(B) XXX	A/B	Enhancement results > Prior to Enhancement results & Enhancement results >= 80% (or other realistic percentage)
Enhancement	Mo _ _ Yr 20_ _ to Mo _ _ Yr 20_ _	(C) XXX	(D) XXX	C/D	

Option 4: Decrease high-risk medication use for adults ages 65 and older. Use of High-Risk Medications in the Elderly: Percentage of patients 65 years of age and older who were ordered high-risk medications. Two rates are reported: a. Percentage of patients who were ordered at least one high-risk medication, and b. Percentage of patients who were ordered at least two different high-risk medications [MIPS].

1 Data Collection	2 Time Frame	3 Number of adults ages 65+ ordered only one high-risk medication during time frame	4 Number of adults ages 65+ ordered two or more high-risk medication during time frame	5 Results	6 Target
Prior to Enhancement	Mo _ _ Yr 20_ _ to Mo _ _ Yr 20_ _	(A) XXX	(B) XXX	C vs A	Enhancement results < Prior to Enhancement results & Enhancement results reduced from prior >= 50% (or other realistic percentage)
Enhancement	Mo _ _ Yr 20_ _ to Mo _ _ Yr 20_ _	(C) XXX	(D) XXX	D vs B	

1 & 2. Data Collection and Timeframe: Choose a time period prior to enhancement activities that can be used as the "usual practice" comparison group (if data is available), and then determine the period for implementation of enhancement activities. Define the time periods as month and year for which data will be/is reported.

Option 5: Increase screening for future fall risk for adults ages 65 and older. Percentage of patients 65 years of age and older who were screened for future fall risk during the measurement period [MIPS].

1 Data Collection	2 Time Frame	3 Number of adults ages 65 and older screened for fall risk during time frame	4 Number of adults ages 65 and older eligible for fall risk screening during time frame	5 Results	6 Target
Prior to Enhancement	Prior to Enhancement	(A) XXX	(B) XXX	A/B	Enhancement results > Prior to Enhancement results & Enhancement results >= 80% (or other realistic percentage)
Enhancement	Enhancement	(C) XXX	(D) XXX	C/D	

Option 6: Increase utilization of telehealth and tele-education services. Percentage of patients 65 years of age and order who used telehealth or tele-education services during the measurement period (CMS Telehealth Measure). Example: CPT Codes 99441, 99442, 99443 collected from program records/electronic health records.

1 Data Collection	2 Time Frame	3 Number of adults ages 65 and older with evaluation or interview using telehealth/tele-education	4 Number of adults ages 65 and older eligible for evaluation or interview using telehealth/tele-education	5 Results	6 Target
Prior to Enhancement	Prior to Enhancement	(A) XXX	(B) XXX	A/B	Enhancement results > Prior to Enhancement results & Enhancement results >= 80% (or other realistic percentage)
Enhancement	Enhancement	(C) XXX	(D) XXX	C/D	

APPENDIX C FINAL ABSTRACT DETAILS

Guidelines

- Your abstract should be 250 words, maximum.
- It should be single-spaced, with one-inch margins and 12-point Times New Roman font.
- Use Headings for each section, Introduction, Methods, Results, and Conclusion.
- Skip a line between each section.
- Do not include citations/references in your abstract. (Note: If you choose to turn your abstract into a poster presentation, you will need references.)
- Additional considerations:
    - **IMPORTANCE:** Does your abstract address an important issue or a critical barrier to progress in the field of geriatrics? Does the work have broad population, public health, or educational implications? Is there a great potential benefit to geriatric patients?
    - **INOVATION:** Does the abstract challenge current paradigms by utilizing novel concepts, methodologies, or interventions? Is the finding new knowledge, or a clear advantage in existing knowledge?
    - **METHODS and APPROACH:** Are the design, methods, and analyses well-reasoned and appropriate?

Format

Purpose
Two to four sentences that describe the QI Project need or community benefit; QI project question addressed (written as a question or a statement.)

Methods
Two to four sentences that provide the QI project description, enhancement activities, and evaluation method.

Results
Two to four sentences that summarize describe the QI project results with data and supporting statistics.

Conclusions
Three to six sentences that provide a summary of findings, lessons learned, and next steps.

APPENDIX D RESOURCES FOR RAD, IRB, POSTERS, AND PRESENTATIONS (to be updated as information becomes available)

North Texas Regional Institutional Review Board https://www.unthsc.edu/north-texas-regional-irb/

IRB On-line Submission Process https://www.irbnet.org/release/index.html

CITI Training Requirements https://about.citiprogram.org/en/homepage

Note that the various "Refresher Courses" offered through CITI (Biomedical- Clinical, Social-Behavioral, Interdisciplinary, etc.) are NOT a substitute for the HUMAN SUBJECTS RESEARCH Training Course. Additionally, completion of the CITI Good Clinical Practice (GCP) Course or any other CITI course (such as Responsible Conduct of Research – RCR) is NOT a substitute for the HUMAN SUBJECTS RESEARCH Course. While completion of the GCP and RCR courses may be required by other departments or units at the UNT Health Science Center, these courses do not meet the HUMAN SUBJECTS RESEARCH Course requirement.

RAD Submission Guidance (for NEW IRB Protocols)

https://www.unthsc.edu/north-texas-regional-irb/for-rad-participants/

For studies involving chart reviews (involving more than one patient), please submit the following documents (in addition to completing the Wizard Application Form in your IRBNet submission):

- Protocol Application for Research involving Chart Reviews (Application bundles protocol synopsis with IRB application and Waivers of Informed Consent and HIPAA)
- A letter, or email of authorization to access medical charts/records for research project.
- Proof of CITI training completion for all key personnel (see below for additional information about CITI training requirements).

For secondary analysis of data already collected or analyses of existing specimen, records, charts, etc., please submit the following documents (in addition to completing the Wizard Application Form in your IRBNet submission):

- Research Involving Materials (data, records) Already Collected Protocol Synopsis
- If applicable, letter of authorization for the use of data or specimen already collected.
- If applicable, IRB approval notice of parent study.
- Proof of CITI training for all key personnel (please see below for CITI training requirements).