



TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER™
at El Paso

Surgery ICU

Course Number: 8002

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Table of Contents

| Item | Page |
|---|-------|
| 1. Cover: | 1 |
| 2. Table of contents | 2 |
| 3. Introduction | 3 |
| 4. Locations | 4 |
| 5. Sample Schedule | 4-6 |
| 6. Learning Objectives, Evaluations | 7-12 |
| 7. Procedures | 13 |
| 8. Evaluations Overview (Grading) | 14-15 |
| 9. Mid-clerkship Feedback | 15 |
| 10. Pictures of Evaluation Cards | 16 |
| 11. SICU daily schedule notes and didactics | 17 |
| 12. Reading Assignments | 19 |
| 13. Additional Information, absence policy | 20-23 |
| 14. Appendix: Summary table | 24-28 |

SICU Critical Care

Introduction: Welcome to the SICU selective. This will be a month of growth and hopefully excitement. You will certainly see conditions you did not encounter last year as an MSIII. The main goal of this rotation is to prepare you for internship. We want you to be ready to be on call in an ICU on day one. Even if you are not entering a surgical field, this rotation will be helpful. We have had many students and interns who are not planning on a surgical career sign up for a month in the SICU. We want you to be active and involved in patient care. Some objectives follow, but you will find that reading about your patients will help you understand their course and the interventions in the SICU. Have a great rotation!

Margo Carlin, M.D., SICU Director

Academic Success and Accessibility:

TTUHSC El Paso is committed to providing equal access to learning opportunities to students with documented disabilities. To ensure access to this course, and your program, please contact the Academic Success and Accessibility Office (ASAO), to engage in a confidential conversation about the process for requesting accommodations in the classroom and clinical setting. Accommodations are not provided retroactively, so students are encouraged to register with the ASAO as soon as possible. Please note: faculty are not allowed to provide classroom accommodations to a student until appropriate verification from ASOA has been provided to the school and disseminated to the appropriate faculty member(s). For additional information, please visit the ASAO website: <https://el Paso.ttuhs c.edu/student services/office-of-academic-and-disability-support-services/default.aspx>.

Locations for rotation:

1. ICU: This is on the second floor of the North Tower of University Medical Center. You can access the ICU by going to the second floor on the North Tower Elevators. (These are near the North Tower entrance) The ICU conference room is used for morning report (Not required to attend only residents do). (ICU-CONF)
2. PICU: Some patients may be on the Pediatric ICU, on the 10th floor of the El Paso Children’s Hospital. This is accessed by the staff elevators located in the main lobby.
3. Operating Room: This is located on the first floor of the North Tower area of University Medical Center of El Paso.
4. Emergency Department: This is located on the First floor of the Thomason Tower of University Medical Center, adjacent to OR.
5. AEC: Administration Building for Texas Tech: This is located on 4800 Alberta Avenue, directly behind the University Medical Center. You should attend Trauma morbidity and mortality conference, trauma grand rounds, TECCS talks (Texas Education in Critical Care Series) usually in Auditorium A or B. Mid-clerkship evaluations occur here also.
6. El Paso Children’s Hospital.

SAMPLE SCHEDULE:

Week One (1):

| <u>Monday</u> | <u>Tuesday</u> | <u>Wednesday</u> | <u>Thursday</u> | <u>Friday</u> | <u>Saturday</u> | <u>Sunday</u> |
|--|---------------------------------------|---------------------------------------|---|---------------------------------------|--|---------------|
| 0600: student Round on patient-ICU | 0600: student Round on patient | 0600: student Round on patient | 0600: student Round on patient | 0600: student Round on patient | 0600: student Round on patient Students must round one weekend day on two weekends. | |
| 0630: Morning report(Residents only) ICU-CONF | 0630: Morning report (Residents only) | 0630: Morning report (Residents only) | 0700: Grand Rounds or Other lecture, AEC Auditorium B | 0630: Morning report (Residents only) | 0630: Morning report (Residents only) | |
| 0800: SICU rounds-ICU | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | |
| 4 PM: sign out rounds-ICU | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | |

Week Two (2):

| <u>Monday</u> | <u>Tuesday</u> | <u>Wednesday</u> | <u>Thursday</u> | <u>Friday</u> | <u>Saturday</u> | <u>Sunday</u> |
|--|--|--|---|---|--|---------------|
| <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> <u>Students must round one weekend day on two weekends.</u> | |
| 0630: Morning report(Residents only) ICU-CONF | 0630: Morning report (Residents only) | 0630: Morning report (Residents only) | 0700: Grand Rounds or Other lecture, AEC Auditorium B | 0630: Morning report (Residents only) | 0630: Morning report (Residents only) | |
| 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | |
| 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | |
| | | | | <u>Mid-clerkship evaluation. AEC, surgery department. This could also be Thursday.</u> | | |

Week Three (3):

| <u>Monday</u> | <u>Tuesday</u> | <u>Wednesday</u> | <u>Thursday</u> | <u>Friday</u> | <u>Saturday</u> | <u>Sunday</u> |
|---|--|--|---|--|--|---------------|
| <u>0600: student Round on patient--ICU</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> <u>Students must round one weekend day on two weekends.</u> | |
| 0630: Morning report(Residents only) ICU-CONF | 0630: Morning report (Residents only) | 0630: Morning report (Residents only) | 0700: Grand Rounds or Other lecture, AEC Auditorium B | 0630: Morning report (Residents only) | 0630: Morning report (Residents only) | |
| 0800: SICU rounds--ICU | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | |
| 4 PM: sign out rounds--ICU | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | |

[Week Four \(4\):](#)

| Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|--|--|--|---|---|--|------------------------|
| <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> | <u>0600: student Round on patient</u> <u>Students must round one weekend day on two weekends.</u> | |
| 0630: Morning report(Residents only) ICU-CONF | 0630: Morning report (Residents only) | 0630: Morning report (Residents only) | 0700: Grand Rounds or Other lecture, AEC Auditorium B | 0630: Morning report (Residents only) | 0630: Morning report (Residents only) | |
| 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | 0800: SICU rounds | |
| 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | 4 PM: sign out rounds | |
| | | | | <u>Student Powerpoint presentation. This could also be Thursday. This is usually in ICU-CONF</u> | | |

The following are learning goals and objectives for the SICU rotation. Included are what the goals are, the specific objectives to meet those goals, and how you will be evaluated on meeting those goals. After this, some suggested resources are listed. You are free to use other resources which you may like.

Abbreviations: Medical Education Program Goals and Objectives: MEPGOs (the full set of MEPGOs is available on the PLFSOM website)

Entrustable Professional Activities: EPAs.

Entrustable Professional Activities or EPAs are those activities you are expected to be able to do upon graduation. PLFSOM has selected 3 for subinternships and SICU rotations:

- o EPA 4 – enter and discuss orders and prescriptions
- o EPA 8 – give or receive a patient handover to transition care responsibility
- o EPA 10 – recognize a patient requiring urgent or emergent care and initiate evaluation and management

For a quick reference on learning objectives, requirements and evaluations, and links to institutional learning objectives, see Summary Table in Appendix 1.

GOALS AND OBJECTIVES

MEDICAL KNOWLEDGE

GOALS:

Each medical student will be instructed by Critical Care Faculty on relevant patient care issues requiring medical knowledge and on the application of basic science information to issues frequently encountered in critically ill patients. These include:

- Airway anatomy and its impact on airway management of critically ill patients including mask ventilation, intubation, and surgical airway management.
- Subsets of shock including cardiogenic, hypovolemic and septic
- Blood gas interpretation
- Identification and management of respiratory compromise/failure
- Ventilator management
- Fluid and electrolyte management of ICU patients.
- Student must have knowledge of how to diagnose acute myocardial ischemia syndromes and must list patient's cardiac medications on note.
- Trauma: student must understand basic ICU trauma care
- Neurologic Dysfunction and Neurologic support
- Life Threatening Infections/Sepsis
- Special populations: pregnant ICU patients
- Venous thromboembolism
- In addition, students will complete four online voice-over powerpoint modules during the rotation.
- Students will view the online video lectures in four modules on CANVAS on the SICU course.
- Students will complete Self-assessment knowledge checks each week.
- Students will complete a mid-clerkship open book quiz prior to 8 Am on Monday of the third week.
- Students will complete a final open book exam prior to Friday at 5 pm following the last day of the rotation.

OBJECTIVES:

Upon completion of the Critical Care rotation, each medical student will demonstrate to a Critical Care faculty member or designated individual that the student understands and is proficient in the goals by:

- The student will assist with surgical airway management at least once. The student will list pre-op qualifications for tracheostomy. (2.1, 1.8)
- Providing a written list of a minimum of 3 criteria that identify each of the subsets of shock (cardiogenic, hypovolemic, obstructive, and distributive or septic shock.) (2.2, 2.3)
- Interpreting and discussing a minimum of 10 blood gas test results of a patient while on rounds with the ICU team (2.1, 2.2, 2.3)
- providing a plan of fluid and electrolyte management for a minimum of 5 patients to be shared with the ICU team while on rounds (2.1, 2.2, 2.3, 1.3, 1.2)
- Listing the criteria for the definition of Sepsis and Septic Shock as defined in February 2016 Sepsis 3 Definition by the Society of Critical Care Medicine. See SCCM.org for full article. (2.3, 2.6)
- Student must write a note for ICU rounds on at least one trauma patient. (4.4)

- Student must examine at least one patient with neurologic dysfunction and calculate a Glasgow coma scale correctly at least once. (2.2, 2.3, 1.1, 1.3)
- Student must record culture results on patients with cultures pending. (2.2, 2.3)
- Student may round on one pregnant ICU patient: this is not required but recommended. (1.3)
- Student must list on their note stress ulcer prophylaxis and also Venous Thromboembolism prophylaxis. (2.2, 2.3, 2.6)
- Student must be able to list workup of suspected Deep Venous Thrombosis or Pulmonary Embolus in an ICU patient. (2.3, 1.2)

EVALUATION:

- Evaluation will be on rounds. The student will hand out evaluation cards with a goal of daily Clinical Evaluation Card (CEC), with a minimum of 4 cards by mid-clerkship turned in to the clerkship coordinator and 8 cards by the end of the month, at least 4 of the cards must be filled out by an attending.
- The student will record assisting at one tracheostomy on his/her OPLOG during the rotation.
- Mask ventilation will be assessed at the end of the ventilation demonstration.
- ABG interpretation will occur during rounds; these should be recorded on OPLOG as “respiratory failure” or “mechanical ventilation” patients. **This is one of the EPA’s (10) which need to be completed (Identification of critically ill patient).**
- Criteria for shock will be identified at the end of the shock lecture. **This is one of the EPA’s (10) which must be completed.**
- Sepsis criteria knowledge will be assessed by a quiz following the sepsis lecture.
- The mid-clerkship quiz is a formative quiz. The score will form part of the knowledge part of the grade.
- The final exam will form part of the knowledge part of the grade.
- The student must pass the final exam with 75% correct to pass the rotation. Students will have an opportunity to remediate if they do not obtain 75%
- The exams will not determine the final grade but be taken into account. If the student has scored exceptionally well on all other aspects of the rotation but does not score highly on the exam, he/she could still obtain honors on the course based on clinical work, rounds, and the PowerPoint presentation.
- There will be weekly discussion times for the modules represented in the SICU online material.

PATIENT CARE

GOALS:

Medical students will be introduced to complex medical patients with critical illnesses requiring extensive monitoring and dynamic management. The goal is for each student to:

- Be responsible for understanding his or her patients' medical conditions throughout the student's rotation
- Be responsible for daily notes on his/her patients
- Provide appropriate treatment and examination studies of his or her patients in conjunction with the ICU team
- Have exposure to invasive monitoring techniques including central venous access and arterial lines and participate in these procedures.
- Student must understand cardiac defibrillation, pericardiocentesis.

- Develop an appreciation for the intensive, around-the-clock patient care needs
- Experience and participate in end-of-life ethical issues, including the potential for organ procurement
- Identifying sepsis or septic shock when present in a patient, or in a patient simulation.
- The student will understand specialized wound care in the surgical patient (also a systems' based practice objective.)

OBJECTIVES:

To achieve the goals, each student will:

- Be responsible for a minimum of 3 patients throughout their rotation; prepare daily ICU notes and present during daily rounds. (1.1, 1.3, 1.2, 4.4, 4.2)
- Be responsible for providing a minimum of 1 extensive treatment plan for a newly admitted ICU patient, including examination studies. (1.3, 1.2)
- Be expected to follow up on all ordered laboratory values and examination studies as they pertain to the student's patients. (1.3, 1.4, 5.7)
- Have an opportunity to observe the insertion of at least 1 CVP and 1 A-line in a patient. (1.8)
- Insert 1 CVP and 1 A-line in a mannequin or patient. (1.8)
- Read and be able to list steps and anatomical landmarks for pericardiocentesis. (1.8, 2.1, 2.2)
- List steps in cardiac defibrillation. (1.2, 1.5, 2.3)
- Student must observe or perform wound care with wound care team on at least 2 occasions. (1.8, 7.3)
- Participate in lecture-format didactic sessions addressing end of life issues, including organ procurement (presented by Southwest Organ Transplant) OR round on and write notes on at least 1 patient being considered for organ donation. (1.6, 5.4)

EVALUATION:

Patient notes will be examined daily by the ICU attending.

- Follow-up will be assessed during sign out rounds.
- The student will give evening sign out "Hand off" procedure during his/her rotation. **This is one of the EPA's (8) which need to be completed (handoff of critically ill patient).**
- The student will write the ICU transfer summary on at least 5 patients during the rotation. This is also a handoff procedure. **This is one of the EPA's (8) which need to be completed.**
- Participation in CVP and art line will be assessed by examining the OPLOG and also the CEC's, which should be handed to the participants after the student participates during a procedure.
- The student will write at least one set of ICU admission orders. **This is one of the EPA's (4) which need to be completed.**
- Student must read assigned readings in Marino on cardiac resuscitation.
- Document wound care on OPLOG and/or using CEC's

INTERPERSONAL AND COMMUNICATIONS SKILLS

GOALS:

Management of critically ill patients requires a team approach involving multiple levels of communication. Medical students will:

- Learn the appropriate format for presenting patient information on rounds.

- practice communicating treatment plans with critical care patients
- initiate communication with family members of patients regarding treatment plans and outcomes
- Learn to verbally transfer care daily.

OBJECTIVES:

- During daily rounds, medical students will present their patients in the expected and accepted format. This will be assessed by the rounding Critical Care faculty. (4.2)
- Students will be expected to communicate treatment plans with a minimum of 3 patients in the ICU while under direct observation of the ICU faculty member. (4.1, 4.2, 4.3)
- Critical Care faculty will evaluate and provide feedback for at least 1 verbal or written transfer of care by a medical student to the on call team. (4.2)
- Each medical student will participate in a meeting with family members as an observer. (4.1, 4.3)

EVALUATIONS:

- Student will PARTICIPATE IN DAILY ROUNDS ON A MINIMUM OF 3 PATIENTS AND A MAXIMUM OF 3 PATIENTS.
- Student will be observed to communicate treatment plans to team daily. Assessment will be by observation and by CEC's
- Student will be observed communicating to a patient or family the day's treatment plan at least twice. This evaluation will be recorded on CEC. An example would be: Suppose the treatment plan includes placing a chest tube. The student would communicate to his/her patient this plan and reasons for the tube. The student would not be expected to communicate a long complicated plan. Or the student could communicate to a family for example, that a family member on a ventilator will undergo a spontaneous breathing trial and if he/she passes, would then be extubated and liberated from mechanical ventilation. The student would be expected to know what is passing for an SBT.
- Patient handoffs are an EPA: see above. This communication skill will be assessed.

PROFESSIONALISM

GOALS:

- Medical students will be expected to arrive on time for all weekday rounding activities in the ICU.
- Adequate preparation of patient information prior to rounds.
- ICU rounds are often long and extensive, appropriate behavior and attentiveness is expected throughout the experience on a daily basis.

OBJECTIVES:

- Medical students will be present and prepared a minimum of 10 minutes prior to rounds on each day. (5.3, 5.7)
- All relevant laboratory data, X-ray, CT and MRI results must be presented by the student to the ICU team for patients being followed. (5.2, 5.3, 5.7)

EVALUATION:

- Evaluation will be by direct observation and recorded on a CEC.

PRACTICE BASED LEARNING AND IMPROVEMENT

GOALS:

- While on their Critical Care rotation, each medical student will be instructed as to the use of the relevant ICU checklist while on service.
- The student will understand Joint Commission “Core Measures” and their applicability to ICU patients.

OBJECTIVES:

- Students will be expected to apply the ICU checklist to their patients while on service. (3.4, 3.5)
- Students will fill out the core measures section of the SICU note daily, including exceptions to the application of core measures. (3.2, 3.5)
- Students will be expected to be able to order appropriate Deep Venous Thrombosis Prophylaxis and to note when this must be omitted. (3.2, 3.5)

EVALUATIONS:

- The student note will be assessed for adherence to filling out the core measures section.
- In the event that the hospital switches to computer only notes and the student cannot access notes, the student will fill out a shadow note.
- The student PowerPoint presentation will be assessed as an example of the student’s ability to research a topic, which is essential to Practice-Based Learning and Improvement. The PowerPoint will also be assessed for use of resources.

SYSTEMS-BASED PRACTICE

GOALS:

Medical students will learn:

- Importance of discharge planning for ICU patients and local resources available
- Criteria requiring ICU admission
- Challenges of discharge planning for the medically underserved patient.

OBJECTIVES:

- Each student will be expected to provide a written transfer summary for at least one patient. (6.4)
- Students will be given sample cases of patients who might need ICU admission. Students would be expected to incorporate admission to ICU as part of plan. (1.5, 6.3, 1.2)
- Students will attend at least 2 SICU discharge planning meetings with a social worker. An alternative would be to discuss discharge planning of their patients on at least 3 patients during rounds. An example of discharge planning would be if physical therapy has determined that the patient should have inpatient rehabilitation, then the student would bring that up during the daily presentation. (6.4, 6.1, 6.2)
- Student must also interact with wound care team as in Patient Care above. (6.4)
- Student must observe 1 speech path evaluation. (6.4, 7.1)

EVALUATIONS:

- The student will be observed for meeting the learning objectives and recorded on the CEC. Either the faculty or the ICU social worker or Case Manager or both may comment on the CEC regarding Systems-Based Practice.

INTERPROFESSIONAL COLLABORATION

GOALS:

MEDICAL STUDENTS WILL LEARN: COLLABORATION WITH MULTIPLE OTHER DISCIPLINES IN MEDICINE AND ALSO OTHER DISCIPLINES SUCH AS NURSING, SOCIAL WORK, PHYSICAL THERAPY, SPEECH AND LANGUAGE PATHOLOGY.

OBJECTIVES:

- STUDENTS WILL CALL AT LEAST TWO CONSULTS AND FILL OUT CONSULT REQUEST DURING THE MONTH FOR OTHER MEDICAL DISCIPLINES. (4.2, 7.2)
- STUDENTS WILL INTERACT WITH NURSING, SOCIAL WORK AND PHYSICAL THERAPY DURING THE COURSE OF THE DAY. (7.1, 7.2)

EVALUATIONS:

- THE STUDENT WILL BE OBSERVED FOR MEETING THE LEARNING OBJECTIVES AND RECORDED ON THE CEC. THE FACULTY OR RESIDENTS WILL COMMENT ON THE CEC REGARDING INTERPROFESSIONAL COLLABORATION.

PERSONAL AND PROFESSIONAL DEVELOPMENT

GOALS:

MEDICAL STUDENTS WILL LEARN HOW TO DEVELOP THEMSELVES FURTHER IN THE MEDICAL PROFESSION. THIS INCLUDES SELF-MOTIVATED LEARNING AND LEARNING THE PROFESSIONAL SKILLS OF RESEARCHING AND CREATING A PRESENTATION.

OBJECTIVES:

- STUDENTS WILL SELECT A TOPIC AND RESEARCH, CREATE AND PRESENT A POWERPOINT PRESENTATION ON A SHORT TOPIC OF THEIR CHOICE. (3.1, 3.4)

EVALUATION:

- STUDENT POWERPOINTS WILL BE EVALUATED BY THE COURSE DIRECTOR FOR COMPLETENESS, CORRECTNESS AND NEATNESS OF PRESENTATION.

PATIENT CONDITIONS – REQUIRED OP LOG ENTRIES

| <u>CONDITION</u> | <u>EXPECTED ROLE</u> | <u>QUANTITY</u> | <u>COMMENTS</u> |
|-----------------------------------|--------------------------------|------------------------|--|
| <u>RESPIRATORY FAILURE</u> | <u>ASSIST OR MANAGE</u> | <u>10</u> | <u>PATIENTS WILL BE ON A VENTILATOR</u> |
| <u>SHOCK</u> | <u>ASSIST OR MANAGE</u> | <u>1</u> | <u>ANY SHOCK</u> |

| | | | |
|--|--------------------------------|-----------------|--|
| <u>TRAUMA, MULTISYSTEM</u> | <u>ASSIST OR MANAGE</u> | <u>5</u> | |
| <u>TRAUMA, TRAUMATIC BRAIN INJURY</u> | <u>ASSIST OR MANGE</u> | <u>2</u> | <u>ANY TRAUMATIC BRAIN INJURY</u> |
| <u>PNEUMONIA</u> | <u>ASSIST OR MANGE</u> | <u>1</u> | <u>MUST BE DIAGNOSED WITH CULTURES OR CXR</u> |
| <u>INFECTION</u> | <u>ASSIST OR MANAGE</u> | <u>3</u> | <u>ANY INFECTION OTHER THAN PNEUMONIA</u> |
| <u>ALTERED MENTAL STATUS</u> | <u>ASSIST OR MANGE</u> | <u>4</u> | <u>ANY ALTERED MENTAL STATUS: COULD BE WITHDRAWAL, DEMENTIA, ICU DELIRIUM, INTOXICATION</u> |

PROCEDURES THE MSIV WILL BE EXPECTED TO EITHER OBSERVE, ASSIST, OR PERFORM:

| Procedure | Expected role | Quantity | Initials |
|---|---------------|----------|----------|
| ABG interpretation | P | 5 | |
| Ventilator management, change settings in response to ABG | P | 5 | |
| Arterial blood gas | 3O, 1P | 3O, 1P | |
| Central line insertion | O | 3 | |
| Arterial line insertion | O | 3 | |
| Chest PT | O | 1 | |
| Endotracheal suctioning | O | 2 | |
| Extubation | O | 1 | |
| Tube thoracostomy | 3O | 3 | |
| Wound care | O,P | 2 | |
| Speech Pathology Evaluation | O | 1 | |

Note: for central line insertion: if a student observes 5 and has performed well in other aspects of the course, the student may perform a central line insertion under supervision. The same is true for arterial line insertion and tube thoracostomy.

ASSESSMENT OVERVIEW

You may wonder how you will be assessed during the rotation. We want you to be successful in meeting all learning objectives. You will be assessed as follows:

1. Participation in rounds: the student will be expected to be up to date on patients. Knowledge may also be assessed during rounds, and also systems-based practice, as ICU patients have multiple issues along the continuum of care.
2. Participation in procedures: Students are not expected to perform the procedures, but will be expected to know about the procedure, the indications and the pertinent anatomy. If a student shows that he/she is prepared, he/she may be allowed to perform a procedure. Procedures include bedside as well as Operating Room procedures. Knowledge about anatomy, indications, and complications may be assessed. Professionalism and teamwork are often assessed during procedures.
3. Participation in history and physical exams: this is less frequent in ICU, as most patients already have the history and physical performed, but a student may be asked to perform or assist with history and physical exams.
4. Participation in clinic: This is also less frequent. A student may be asked to see a post-ICU patient in clinic.
5. PowerPoint Presentation. The student will prepare a short (20 slides or less) PowerPoint presentation on a topic of his/her choice related to ICU. The student will give this presentation during the last week of ICU.

Students are assessed by Faculty, residents and nurse practitioners. In order to capture evaluations during the multiple activities which occur during the ICU rotation, Clinical Evaluation Cards are used. These are 8 cards which you will receive and print prior to the start of the rotation. You must receive 2 evaluations per week, one from an attending and another from fellow/senior resident specifically for rounds. This would have a total of 8 evaluations completed at the end of the rotation, 4 from attending's and 4 from fellow/senior resident. On the front is an area for your name and date. The activity and setting are options to circle at the top. The main competencies (e.g., knowledge, verbal presentation, written presentation...) are listed on the left hand side and the evaluation is listed to the right. You may receive "below MS-IV", "Average MS-IV" or "Above MS-IV", numerically graded 1-3. At the bottom of the list is a professionalism grade. An evaluation may circle "NA". On the back of the card is room for comments, these are mandatory. Faculty and residents are familiar with the CEC's; these have been used since October 2014 on this rotation. Your mid-clerkship evaluation and end of rotation evaluation which use the information on these cards will be online, the same as your other MS-IV rotations.

Grading Criteria:

A. Honors Grade:

1. To receive "Honors" you must have at least 4 CEC's turned in which show greater than 3 "Above MS-IV" in the list of evaluations.
2. To receive "Honors" you must have your OPLOG updated at Mid-clerkship and by Wednesday of the last week of the rotation

3. You must meet all objectives.
4. You must receive Honors or “Above MS-IV” on the PowerPoint presentation on at least one CEC.
5. An Honors student will be up to date on patients, likely round on 3 patients when patients are available, be up to date on culture results, diagnostic imaging results, or other tests. The Honors student will be able to answer basic questions about his/her patients disease because the student will read about his/her patients after rounds or during evenings.

B. Passing Grade:

1. You must have at least 5 cards which have a predominance of “Average MS-IV” on 4 of the list of evaluations.
2. You must have your OPLOG updated by Wednesday of the last week of the rotation.
3. You must meet all objectives.
4. You must receive Pass on the PowerPoint presentation on at least one CEC.
5. The MS-IV who passes this rotation should be able to meet all the objectives. He/she may need help with understanding the diseases and may not answer all questions correctly but should show evidence of having looked up the patient diseases during his/her study time.

F. Failing Grade:

1. Receiving “Below MS-IV” on 6 CEC’s on 4 of the list of evaluations.
2. Failing to meet objectives. For example: not having completed notes by rounds. Not coming to rounds. Not participating even as helper or observer on procedures on your patients.
3. Excessive absences. Please see absence policy on the TTUHSC Common Clerkship Requirements.

Mid Clerkship Feedback:

You will have a mid-clerkship evaluation in order to assist you with progress in Surgery ICU; requirements, expectations, and possible methods of remediation will be discussed at that time. This will take place after at least two weeks in the surgical ICU. The exact date will be given to you by the Clerkship Coordinator. You must have at least 7 Clinical Evaluation Cards filled out prior to this meeting.

The formative feedback is based on:

- ❖ Clinical evaluation Cards and Professionalism evaluations -forms filled out by attending and residents.
- ❖ Review of Op-log encounter entries to date
- ❖ Review of Procedure log

Grading:

Honors/Pass/Fail and follow the PLF SOM grading system. Both ICU attending’s and residents will participate in grading. Please also see Evaluations Overview.

Remediation:

The clerkship director will meet with students needing remediation and discuss a remediation strategy specific for objectives which are deficient. For example, if the notes are incomplete, the clerkship director can meet with the student about the note.

Pictures of Evaluation Cards:

Front:

Clinical Encounter Document Student: _____
 Date: _____
 Location: ICU Ward OR ED Clinic Other

Observed: Procedure H/P Daily Rounds Consult Clinic Visit Other

Evaluation Scale Rating: 1 – Below M4 2 – Average M4 3 – Above M4

| | | | | |
|---------------------------|--|---|-----------------|--------------------------------|
| 1. Knowledge: | | 1 | 2 | 3 |
| 2. Technical Skills: | | 1 | 2 | 3 |
| 3. Written communication: | | 1 | 2 | 3 |
| 4. Verbal Communication: | | 1 | 2 | 3 |
| 5. Team Work: | | 1 | 2 | 3 |
| 6. Other: _____ | | 1 | 2 | 3 |
| 7. Professionalism: | | | Serious Concern | Slight Concern No Concern |

Back:

Comments (Mandatory):

Was verbal feedback given to student? Yes No

Evaluator Name

Print: _____ Sign: _____

SICU Daily schedule and expectations:

The SICU daily schedule starts with the student rounding on his/her assigned patients. Student will be assigned up to 3 patients, the student must work with the senior resident/fellow for patient selection and must choose at least 1 ventilated patient. The student must arrive early enough to round on his/her patient and fill out the daily note. This note is on a template arranged by system. The student is no longer required to attend morning report in the ICU conference room at 6:30 a.m., only residents attend. The student will round with the team following morning report. Once team rounds end, the student will either attend a didactic session or help with completing work. This work may also complete the student's goals and objectives. For example, the student may write a transfer summary as part of the daily work.

The student will report to the SICU senior resident during the day. The student will be assigned as if an intern, that is one day per week will be completely off. The student will work no more than 12 hours per day. During the day, the student will be expected to follow up on test results, either x-rays, laboratory tests or other, including consults. Since the student may not give orders, if there is a need for his/her patient, the student will report to the senior resident, or on days the resident is off, the designated resident.

Didactics schedule:

Didactics will need to be completed online. There are 4 Voice-Over PowerPoint presentations to review during the rotation.

Society for Critical Care Medicine Modules

Students will be given access to SCCM adult learning modules. Modules must be completed as assigned.

Reading Assignments:

The recommended textbook is “The ICU Book” by Paul Marino. This book is available online at Amazon.com. IN addition, the student should read the following “Guidelines” on <http://sccm.org>:

<http://www.sccm.org/Research/Guidelines/Pages/Guidelines.aspx>. This page has all the guidelines.

1. Guidelines for national support:
<http://sccmmedia.sccm.org/documents/LearnICU/Guidelines/Nutrition-SCCM-ASPEN.pdf>.
2. Surviving Sepsis guidelines: <http://www.sccm.org/Documents/SSC-Guidelines.pdf>.
3. Corticosteroid use: <http://www.learnicu.org/Docs/Guidelines/CoricosteroidInsufficiencyAdult.pdf>.
4. Guidelines for insulin infusion:
http://www.learnicu.org/SiteCollectionDocuments/Glycemic_Control.pdf. (recommended but not required.)
5. Red Blood Cell transfusion: <http://www.learnicu.org/Docs/Guidelines/RedBloodCell.pdf>. (Recommended but not required.)
6. Workup of fever: <http://www.learnicu.org/Docs/Guidelines/NewFeverAdult.pdf>.
7. Critical Care Delivery: Structure and staffing in ICU:
<http://www.learnicu.org/Docs/Guidelines/DeliveryIntensiveCare.pdf>. This is a systems-based practice readin.

There is also a set of handouts on ventilator management termed “AVLS” or Advanced Ventilatory Life Support, these will be handed out.

There is a shock guidelines algorithm, this will be handed out.

[Please also see the overall evaluation section at the beginning of the syllabus.](#)

Communication:

It is important that you check your email and maintain contact with our department. **Please check your email**, and respond to communications from the Director, residents or coordinator. Email is the primary mode of communication between the clerkship unit coordinators and students. You will receive important reminders from the clerkship unit coordinator or Director. We also encourage you to email us with questions or concerns. If you encounter any problems or conflicts that interfere with learning, you can discuss them with the senior resident or attending surgeon on the service to which you are assigned, Dr. Carlin, SICU Director will also be happy to discuss problems with you. Other problems or concerns can be discussed with the Clerkship Coordinator.

ADDITIONAL INFORMATION

Absence policy:

The SICU elective will follow the PLF SOM Policy. If more than 3 days are needed off, then the student must notify the clerkship director for scheduling of remediation:

Please see the PLFSOM Common Clerkship Requirements. This rotation will adhere to the common policies. All absences must be excused by the Clerkship Director. Please notify the Clerkship Director and your team if you must be absent. For interviews occurring during the rotation, notify the Clerkship Director in advance of the expected missed dates. The Clerkship Director will assess the impact of the missed dates and assign makeup dates if necessary.

Excessive absences, tardiness or unexcused absences can have a negative impact on the student's final grade or professionalism evaluations and may necessitate remediation of the rotation. Each rotation syllabus will have the contact information for a student when they are absent.

Preparation for Teaching

Attending faculty and residents will be oriented to the experience by the SICU Clerkship Director or their designee, and provided copies of the syllabus and forms that they will use to assess student performance.

Residents will be required, as part of their training and orientation, to function as teachers. All residents are required to participate in a "Residents as Teachers" program that is administered by the Office of Graduate Medical Education. In addition, each resident will be provided copies of the Medical Student syllabus with particular emphasis on goals, objectives, and assessment methods and criteria.

Needlestick Policy

Please see the Exposure Matrix Policy posted on Canvas.

Appendix 1: Summary table of Learning objectives, requirements.

SICU MS-IV clerkship Learning objectives, evaluations, requirements

| Subject | Learning objectives(Institutional and competencies) | Evaluation | Requirement | Mechanism | Institutional learning objective |
|--|---|--|---|--|---|
| Medical Knowledge: Respiratory Failure | Includes: A. Airway Management B. Diagnosis/ Management of Acute Respiratory Failure C. Mechanical Ventilation I D. Mechanical Ventilation II | Direct observation during presentations and written notes. | Student must discuss and recommend ventilator setting changes for at least 2 arterial blood gases on 2 different patients | Rounds on patients on ventilators. Lecture on ventilators. Readings in book and ICU syllabus. Assessment on Rounds with CEC's filled out. | Knowledge 2.1-2.4 Patient care 1.1-1.8 |
| Medical Knowledge: Shock and Alteration in Vital signs | E. Basic Hemodynamic Monitoring F. Diagnosis/ Management of Shock | Direct observation during presentations and written notes | Student must Discuss types of shock and arrive at differential diagnosis for patient in shock Student must have patient vital signs and hemodynamic signs in notes and be able with assistance to make an assessment | Rounds on patients in shock Resuscitations Which may occur at times other than rounds Readings in syllabus in book Student must read the current "surviving sepsis guidelines" on SCCM website SCCM.org Evaluation form on CEC's | Knowledge 2.1-2.5 Patient care 1.2-1.8 |
| Subject | Learning objectives(Institutional and competencies) | Evaluation | Requirement | Mechanism | Institutional learning objective |
| Medical Knowledge: Cardiac Dysfunction | G. Myocardial Ischemia and Infarction | Direct observation of presentations on rounds | Student must list patient's cardiac medications and information in the CV part of note and include a plan. | Rounds, patient notes, reading in book and ICU syllabus | Knowledge 2.1-2.5 Patient care 1.2-1.8 |

| | | | | | |
|------------------------|---|---|---|--|---|
| Neurologic dysfunction | H. Neurologic support | Direct observation during presentations and written notes. | Student must examine a patient with neurologic dysfunction, and calculate a Glasgow Coma Scale score at least once. | Rounds, patient notes, reading in book and ICU syllabus | Knowledge 2.1-2.5 Patient care 1.2-1.8 |
| Trauma and Burns | I. Burn and Trauma management | Direct observation during presentations and written notes. Discussions during new trauma admissions | Student must write a note for ICU rounds on at least one trauma patient and include and assessment and plan. | Rounds on trauma patients, attendance at daytime trauma admissions, readings in syllabus and book. | Knowledge 2.1-2.5 Patient care 1.2-1.8 |
| Subject | Learning objectives(Institutional and competencies) | Evaluation | Requirement | Mechanism | Institutional learning objective |
| ICU infections | J. Life Threatening infections | Direct observation during presentations and written notes. | Student must record culture results and antibiotics in the patient note. Students must check culture results. | Rounds, discussions after rounds, patient notes review | Knowledge 2.1-2.5 Patient care 1.2-1.8 |
| Special Populations | M. Special consideration in Selected populations N. Critical care in pregnancy | Direct observation during presentations and written notes. | Student must record prophylaxis against Stress ulcer prophylaxis and thromboembolic disease in the note | Rounds, evaluation of patient notes | Knowledge 2.1-2.5 Patient care 1.2-1.8 Systems based practice |
| Fluid and electrolytes | K. Electrolyte and metabolic disturbances | Direct observation during presentations and written notes. | Student must record electrolytes and discuss ways of correction in note and on rounds at least twice. | Rounds, evaluation of patient notes. CEC's | Knowledge 2.1-2.5 Patient care 1.2-1.8 |
| Subject | Learning objectives(Institutional and competencies) | Evaluation | Requirement | Mechanism | Institutional learning objective |

| | | | | | |
|---|---|--|--|--|--|
| Patient Care: Special Skills | Special skills vascular access, defibrillation, pericardiocentesis | Direct observation and discussion | Student must observe or perform a Seldinger technique wire change. Student must observe or could perform a central line insertion. Student must observe or perform an arterial line insertion. Student must observe or perform a tube thoracostomy | Rounds, direct observation. Student recording in OPLOG. Student does not have to perform any invasive procedure, but must observe and understand the technique. Also CEC's | Knowledge 2.1- 2.5 Patient care 1.2-1.8 |
| Systems Based Practice: The patient in Society | The student must participate with the social worker assigned to his/her patient during rounds and report on Social work interventions such as rehab placement. The student must list barriers to progression along the rehabilitation spectrum. | Direct observation. | Student must interact with a Social worker at least 2 times during the rotation. | Rounds, meetings with social work. CEC's must be filled out. | Knowledge 2.1- 2.5 Patient care 1.2-1.8 Systems Based Practice 6.1-6.6 Interprofessional Collaboration 7.1-7.3 |
| Systems Based Practice and Patient Care: Adjuncts to ICU care | List which patients require specialized wound care List which patients are at risk for post-ventilator swallowing dysfunction | Direct observation | Observe or perform wound care with wound care team on at least 3 patients. Observe one speech pathology consult. | Rounds, readings in book | Knowledge 2.1- 2.5 Patient care 1.2-1.8 Systems Based Practice 6.1-6 Interprofessional Collaboration 7.1-7.3 |

| Subject | Learning objectives(Institutional and competencies) | Evaluation | Requirement | Mechanism | Institutional learning objective |
|--|--|---|---|-------------------------------------|---|
| Professionalism | See list under Learning objectives. Students must be on time and attentive on rounds. Students must work with other health care professionals in a collaborative fashion. | Direct observation | Students must attend at least 2 discharge planning meetings. Students must be on time and ready for rounds. | Clinical Evaluation Cards on rounds | Professionalism 5.1-5.7 |
| Practiced Based Learning and Improvement | Students should be aware of the TPOAT ICU checklist. Student will be able to list core measures applied to ICU patients Student must attend one Trauma Morbidity and Mortality Conference Student must make a Powerpoint presentation on a topic of their choice. | Observation of written notes and discussion | Student must fill out the portion of ICU note pertaining to core measures | Clinical Evaluation cards | Practiced Based Learning and Improvement: 3.1-3.5 Powerpoint: e. 3.6, 3.7 Knowledge for Practice 2.4, 2.7 |
| Interpersonal and communication skills | Student must be able to present patient status on rounds. Students will be able to discuss a care plan with a family or patient | Direct observation | Student must present a minimum of 3 patients on rounds. Students must be able to give at least one patient or family a care plan so that the patient or family could understand. | Clinical Evaluation cards. | Interpersonal and Communication Skills 4.1-4.5 |
| Patient Care | Please refer to list on Patient care under learning objectives. | Direct observation of behavior and notes. | Students must write notes, participate in handoffs, transfer care. | Clinical Evaluation Cards | 1.1-1.8 |