



**TTUHSC EL PASO**

Texas Tech University Health Sciences Center El Paso

**DEPARTMENT OF SURGERY**

FOSTER SCHOOL OF MEDICINE

# **Surgical Critical Care Fellowship**

## **Handbook**

**2023-2024**



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I. INTRODUCTION – MISSION STATEMENT

The program's mission statement is to educate Surgical Intensivists trained in the Surgical Critical Care Fellowship at Texas Tech University Health Sciences Center at El Paso, after the fellowship, the fellow will be able to provide excellent and timely surgical critical care, to resuscitate and provide excellent trauma critical care, to review data and disseminate research findings, to teach residents and students, and to be able to lead a critical care unit.

II. PROGRAM PHILOSOPHY/AIMS AND GOALS AND OBJECTIVES

Philosophy/Aims

The program philosophy/aims is to within one year of program matriculation, the surgical critical care fellow will gain substantive knowledge in surgical critical care so that the fellow will pass the surgical critical care certifying exam, the fellow will gain knowledge for practice in order to practice in a surgical intensive care unit and to practice care of trauma patients, will learn research skills, how to formulate a research question, how to gather and analyze data and how to write and submit a clinical scientific abstract to a meeting and will learn how to prepare and disseminate a one hour continuing medical education type talk. After one year of participating in the surgical critical care fellowship, the fellow will graduate and be hired as a surgical critical care attending and will be prepared to publish a scientific manuscript in a medical or surgical journal.

The primary site will have at least eight months of surgical critical care as required by the ACGME and four months of elective rotations-Cardiac ICU, Neuro ICU, Trauma or PICU. There will be a simulation activity regarding end of life care in an unconscious individual on a ventilator. The fellow will take part in Trauma morbidity and mortality conference which is held monthly. During this conference every presentation is discussed as to root causes as well as classification with the Clavien-Dindo classification of adverse events. There is also didactic material regarding near misses.

Goals and Objectives

<b>Learning Objective Category</b>	<b>Learning Objective</b>	<b>Competency</b>	<b>Evaluation Method</b>
<b>Circulatory</b>	1. The fellow will identify shock, list the 4 main categories of shock with sub-categories.	MK	Direct observation Meeting Case conferences LEAF
	2. The fellow will learn the indications for invasive hemodynamic monitoring	MK, PCPS	Direct observation Case conferences Rounds
	3. The fellow will perform insertion of arterial lines, central lines, and pulmonary	MK, PCPS	Direct observation

	artery catheters as per current guidelines		
	4. The fellow will list the important aspects of surviving sepsis guidelines and sepsis bundles	MK, PCPS, SBP	Direct observation LEAF
	5. The fellow will list steps and perform calibration and troubleshooting of monitoring systems	MK, PCPS	Direct observation
	6. The fellow will perform resuscitation of shock patients	MK, PCPS	Direct observation
	7. The fellow will list and describe usage and use vasoactive agents to manage hypotension and shock.	MK, PCPS	Direct Observation LEAF
<b>Endocrine</b>	1. The fellow will list common endocrine emergencies in SICU	MK	Direct observation LEAF
	2. The fellow will list steps in diagnosing adrenal insufficiency in SICU patient	MK	Direct observation LEAF
	3. The fellow will perform appropriate tests for endocrine abnormalities in SICU and interpret those tests	MK, PCPS	Direct observation
	4. The fellow will manage diabetic patients in ICU, including the newly diagnosed diabetic	MK, PCPS, SBP	Direct observation
<b>Gastrointestinal And Nutrition</b>	1. The fellow will manage stomas, GI fistulas and gastrointestinal drains	MK, PCPS, SBP	Direct observation
	2. The fellow will know how to and insert a variety of enteral feeding tubes including PEG and surgically placed tubes	MK, PCPS	Direct observation LEAF
	3. the fellow will estimate nutritional needs and prescribe supplementation in concert with the registered dietician	MK, PCPS, SBP, ICS	Direct observation
<b>Renal</b>	1. The fellow will list the steps in workup of oliguria	MK, PCPS,	Direct observation LEAF
	2. The fellow will list steps in evaluation of renal function	MK, PCPS	Direct observation LEAF
	3. The fellow will manage common and uncommon fluid and electrolyte abnormalities such as hyper or hypokalemia, hypo or hypernatremia, mixed electrolyte abnormalities,	MK, PCPS, SBP,	Direct observation LEAF

	metabolic acidosis and alkalosis.		
	4. The patient will identify patients in need of renal replacement therapies including dialysis	MK, PCPS, SBP	Direct observation
<b>Respiratory/ Ventilator Management</b>	1. The fellow will list criteria and recognize acute respiratory failure	MK, PCPS	Direct observation LEAF
	2. The fellow will discriminate between hypercarbic and hypoxemic respiratory failure	MK	Direct observation LEAF
	3. The fellow will order initial and subsequent ventilator settings based on type of respiratory failure, clinical indicators and arterial blood gas results	MK, PCPS	Direct observation
	4. The fellow will list steps in airway management and perform airway management including tracheostomy	MK, PCPS	Direct observation LEAF, SIMPL
	5. Ventilator management: the fellow will perform ventilator management	MK, PCPS	Direct observation on rounds
<b>Neurological Critical Care</b>	1. The resident will list steps in assessment of altered mental status due to trauma and also acquired states such as ICU delirium, agitation, encephalopathy	MK, PCPS	Direct observation LEAF
	2. The resident will identify neurological trauma on imaging	MK, PCPS	Direct observation LEAF
	3. The resident will list steps in assessment of neurosurgical patients and neurotrauma patients	MK, PCPS	Direct observation LEAF
	4. The resident will provide daily care of neurological critical care patients, including assessment of intracranial pressure, treatment of intracranial hypertension	MK, PCPS	Direct Observation
<b>Neurological Critical Care and Ethical and End-of-Life Issues</b>	5. The resident will attend family conferences with respect to end-of-life issues, especially patients declared brain dead.	MK, PCPS	Direct observation

<b>Infectious Disease</b>	1. The fellow will identify common SICU infections including pneumonia, urinary tract infection, central line associated infection and list risk factors	MK, PCPS	Direct observation LEAF
	2. The fellow will be aware of reporting requirements for central line infections, catheter related blood-stream infections and urinary catheter associated infections	MK, PCPS, SBP, ICS	Direct observation
<b>Social and Systems based learning</b>	1. The fellow will assist the social workers and case managers in appropriate disposition of ICU patients	MK, SBP, PROF, ICS	Direct observation
	2. The fellow will list factors which impede disposition	MK, SBP,	Direct observation
	3. The fellow will list and review plans to increase surge capacity of ICU for critical and intermediate beds	MK, SBP, ICS, PCPS	Direct observation Weekly meeting
<b>Cardiac</b>	1. The fellow will identify common cardiac arrhythmias in SICU and treat	MK, SBP, PCPS	Direct observation, Learning enhancement assessment formative (LEAF) exercise
	2. The fellow will evaluate patient's cardiac status and list risk factors for noncardiac surgeries.	MK, SBP, PCPS	Direct observation Case LEAF
<b>Trauma</b>	1. The fellow will outline steps in initial resuscitation of trauma patients and perform those steps	MK, PCPS	Direct observation LEAF CASE
	2. The fellow will list causes of hypotension in an acute trauma patient and treat those causes	MK, PCPS	Direct observation LEAF Case
	3. The fellow will list and perform steps in	MK, PCPS, SBP	LEAF, Direct Observation

	resuscitation of trauma patients in shock		
	4. The fellow will list items in making diagnosis of abdominal compartment syndrome. The fellow will list indications for damage control surgery in trauma The fellow will delineate differing methods of temporary abdominal closure	MK, PCPS	LEAF
	5. The fellow will list and perform special items in spine trauma and spinal cord injury	MK, PCPS	LEAF
	6. The fellow will list special items in burn care and resuscitation of acute burn injury	MK, PCPS	LEAF, Direct Observation
	7. The fellow will list special items in supportive, ventilator and surgical care of thoracic injury	MK, PCPS	LEAF
<b>ICU Management</b>	1. The fellow will describe situations in which ICU management includes triage and discuss triage mechanisms,	MK, PCPS, SBP	LEAF
	2. The ICU fellow will list and use scoring systems for evaluation of severity of illness, preoperative risk stratification and prediction and use these systems during ICU care of preop and severely ill patients	MK, PCPS, SBP	LEAF
<b>Special Topics including Biostatistics, Ethics, and Special Populations</b>	1. The fellow will list risk factors for DVT/PE(VTE) disease, list methods to prophylaxis and treat VTE	MK, PCPS, SBP	LEAF
	2. The fellow will list major ethical principles in SICU, participate in	MK, PCPS, SBP	Direct Observation,

	at least one ethical discussion and family conference regarding level of support.		LEAF
	3. Temperature: The fellow will describe heat and cold related illness. The fellow will list methods and indications for targeted temperature management.	MK, PCPS	LEAF
	4. The fellow will describe Post-ICU Syndrome and Also methods of prevention. The fellow will discuss enhancing rehabilitation outcomes	MK, PCPS, SBP	LEAF
	5. The fellow will describe, delineate special considerations for special populations of pediatric surgical, obstetrical, oncologic, and geriatric populations	MK, PCPS	LEAF
	6. The fellow will identify, given a medical literature study, what type of study it is and what is the level of evidence. The fellow will apply levels of evidence in evaluating articles which apply to ICU problems	MK, PCPS, PBLI	LEAF

### III. CORE COMPETENCIES

Fellows are expected to demonstrate the skills, knowledge, and attitudes to meet the requirements of the following core competencies listed below. Fellows are educated on the core competencies through exposure at daily SICU rounds and weekly Grand Rounds. Fellows are also encouraged to attend core lectures presented by the TTUHSC EP Graduate Medical Education Committee to complement their daily experience.

1. Patient Care
  2. Medical Knowledge
  3. Practice-Based Learning and Improvement
  4. Interpersonal and Communication Skills
  5. Professionalism
  6. Systems-Based Practice
1. Patient Care:
    - a. Effectively lead patient care issues with clear communication to team, patients, family, and attendings
    - b. Accurately synthesize size complex clinical data and propose clear treatment plans
    - c. Actively lead team decision making

- d. Capably perform procedures suitable to trauma and surgical critical care with attending supervision
2. Medical Knowledge:
- a. Demonstrate effective decision making based on adequate knowledge
  - b. Effectively correlate basic sciences knowledge with clinical scenarios
  - c. Exhibit a desire for additional knowledge
  - d. Appropriately use learning resources
  - e. Fluent with pharmacology and physiology as it pertains to surgical critical care:
    - 1) Reads the current literature
    - 2) Demonstrates investigatory and analytical thinking approach to clinical situations
3. Practice-Based Learning & Improvement:
- a. Participate in conferences, M&M, etc.
  - b. Knowledge of evidence-based medicine applied to critical care
  - c. Adequately use scientific data to help solve clinical problems
  - d. Actively contribute to team's education by providing recent and current data as a result of literature searches
4. Interpersonal & Communication Skills:
- a. Maintain professional and cordial relationships with patients, staff, and co-workers and faculty
  - b. Demonstrate the ability to listen and to accept constructive criticism
  - c. Demonstrate the ability to communicate efficiently with the team members, attendings, referring and consulting physicians
5. Professionalism:
- a. Demonstrate compassion, respect and integrity in the work environment
  - b. Flawlessly uphold the professional standards of the surgical critical care/trauma services
  - c. Respect differences in gender, age, culture, disability or educational levels
  - d. Contribute to all educational activities of the surgical critical care/trauma services
  - e. Has commitment to ethics of confidentiality and informed consent
6. Systems-Based Practice:
- a. Understand one's position within the team, specialty, profession and society
  - b. Demonstrate sensitivity and awareness at the cost of health care delivery
  - c. Advocate for cost-conscious and effective patient care
  - d. Develop skills as a "team leader"
  - e. Develop skills (administrative or otherwise) to organize and lead a busy clinical service

IV. ORGANIZATIONAL STRUCTURE AND INSTITUTIONS

The rotation schedule below shows two **examples**, the surgical critical care fellow spends the required 8 months of surgical critical care in the SICU. The remaining 4 months are spent in electives, which can include: 2 months of Trauma, 1 month in PICU, and 1 month in CVICU. \*The fellow could also choose Neurosciences ICU or the Surgical Critical Care fellow spends the required 8 months of Surgical Critical Care in the ICU. Both fellows will spend the first two months and the last two months rotating in SICU, therefore they can transition to a job having had recent SICU rotations. In every month at least one fellow will be in SICU. This will help to keep the residents oriented to the workflow. Each fellow will have the flexibility to choose their electives, in the example above, the electives can include: 2 months of Trauma, 1 month in PICU, and 1 month in CVICU. \*The fellow could also choose Neurosciences ICU.

Block	1	2	3	4	5	6	7	8	9	10	11	12
Site	UMC	UMC	UMC	UMC	UMC	UMC	UMC	UMC	EPCH	UMC	UMC	UMC
Rotation Name	SICU	SICU	SICU	TRAUMA	TRAUMA	SICU	SICU	SICU	PICU*	CVICU*	SICU	SICU
Elective or Required	R	R	R	E	E	R	R	R	E	E	R	R
% Outpatient	0	0	0	0	0	0	0	0	0	0	0	0
% Research	2	5	5	5	5	5	2	5	0	0	0	0
Vacation Permitted	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Block	1	2	3	4	5	6	7	8	9	10	11	12
Site	UMC	UMC	UMC	UMC	UMC	EPCH	UMC	UMC	UMC	UMC	UMC	UMC
Rotation Name	SICU	SICU	TRAUMA	SICU	SICU	PICU*	CVICU*	TRAUMA	SICU	SICU	SICU	SICU
Elective or Required	R	R	E	R	R	E	E	E	R	R	R	R
% Outpatient	0	0	0	0	0	0	0	0	0	0	0	0
% Research	2	5	5	5	5	5	5	5	0	0	0	0
Vacation Permitted	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Rotation Name	Institution
SICU	UMC

Possible Electives	Institution
Trauma	UMC
PICU	EPCH
CVICU	UMC
NICU	UMC

V. CONFERENCES AND RESPONSIBILITIES

The conferences the fellow is expected to attend include:

- A. Asynchronous Learning: These are the readings and video lectures. (Fellow Competencies: MK, PBLI, PC)
- B. Weekly Didactics. Every Thursday from 1:00-4:00pm and will be held at the AEC building. This will consist of review of the week’s topic, by discussion, PowerPoint or other means. There will be a case discussion every week to bring together and highlight clinical aspects of the week’s topics. (Fellow Competencies: MK, PC, PBLI.)
- C. 7Am Trauma Series: This consists of Multidisciplinary Morbidity and Mortality, Trauma Morbidity and Mortality, Trauma Grand Rounds. (Fellow Competencies: MK, PC, PBLI, CS [when fellow does lecture.])
- D. Trauma Quality Improvement and Patient Safety. (Fellow Competencies: PBLI, MK)
- E. SICU Morbidity and Mortality: This will be fellow-run, see schedule. (Fellow Competencies: PBLI, MK, CS)
- F. Research Project: This will be a year- long project, see schedules. The learning will be built into didactics on Thursdays. (Fellow Competencies: PB, MK) The fellow will learn to define a topic, do a medical literature search, write a protocol for IRB, collect data, analyze data, synthesize project into some type of writing: a presentation, an abstract or paper.
- G. IRB; the fellow will attend at least on IRB meeting as guest, this will be arranged.
- H. ICU subcommittee. The fellows will attend as ex-officio members.

**2023-2024 Master Schedule**

Week	Topics (Learning Objectives in Goals and Objectives Document)	Readings Asynchronous	Other Learning Modules Asynchronous	Case Live	Thursday Didactics Live	Evaluation	Mapped to Goals and Objectives Document
1	<ul style="list-style-type: none"> <li>1. Respiratory failure</li> <li>2. Ventilator modes</li> <li>3. Initial ventilator settings</li> <li>4. Hypoxemic and hypercarbic respiratory failure</li> <li>5. ABG interpretation</li> <li>6. Noninvasive ventilation and high flow oxygen</li> </ul>	VAMKF: Chapter8,62	<ul style="list-style-type: none"> <li>1. <a href="#">Mechanical Ventilation Explained Clearly - Ventilator Settings &amp; Modes (Remastered)</a></li> <li>2. <a href="#">Ventilator Modes Explained! PEEP, CPAP, Pressure vs. Volume</a></li> <li>3. <a href="#">Mechanical Ventilation Explained Clearly   3 of 5</a></li> <li>4. <a href="#">Mechanical Ventilation Explained Clearly   4 of 5</a></li> <li>5. <a href="#">Mechanical Ventilation Explained Clearly   5 of 5</a></li> </ul>	1	Orientation	Task simulation central lines	Vent 1-3 PCPS
2	ARDS <a href="#">ARDSnet</a> protocol PEEP	VAMKF Ch67 <a href="#">ARDSnet</a> article	Stress Management Video 1 <ul style="list-style-type: none"> <li>1. <a href="#">Introduction to ARDS in mechanical ventilation</a></li> <li>2. <a href="#">Obama Discusses Managing Stress</a></li> <li>3. <a href="#">Ventilator Pearls Explained Clearly</a></li> </ul>	2	First Research meeting, define interests, talk about timeline	LEAF 1 Due	Vent 2,3, 4
3	Minute Ventilation definition		Stress Management Video 2 <ul style="list-style-type: none"> <li>1. <a href="#">Prone Positioning for Acute Respiratory Distress Syndrome (ARDS)</a></li> <li>2. <a href="#">Avoiding Intubation – Role of NIV and High-Flow Oxygen Systems</a></li> <li>3. <a href="#">Stressing The Importance of Dealing With Stress</a></li> </ul>	3	Mindfulness: Time to do <a href="#">Ch 1</a> in workbook	LEAF 2 Due	Vent 2, 3,4

4	<u>Bilevel</u> Airway Pressure Release High Frequency Oscillatory ventilation	CTSCC Part XIII, pp: 639-643: Advanced Techniques in mechanical ventilation	1. <a href="#">The Evolution of Lung Protective Ventilation in ARDS</a> 2. <a href="#">Remembering Berlin: ARDS moving forward</a>	4	Month wrap up Monthly evaluations SICU Journal Club		Vent 2-4
5	Measuring <u>transpulmonary</u> pressure Sedation and neuromuscular blockade	VAMKF Ch3 CTSCC Anesthesia in the critical care Unit e-material  AND VAMKF Ch 35	<a href="#">Ventilator Pearls Explained Clearly   Part 2</a>	5	Fatigue mitigation video Discussion Picking problem for a clinical practice guideline	IRB visit (need to get prior approval) LEAF 3 Due	Vent 3 PBLI
6	ECMO overview AA and VA ECMO	VAMKF Ch 42, p200	Stress Management Video 3 1. <a href="#">Dr Jay Winner Stress Management for Healthcare Professionals</a> 2. <a href="#">What is ECMO? The basics explained.</a> 3. <a href="#">VV vs VA ECMO Explained!</a> 4. <a href="#">Hybrid ECMO Strategies - VVV vs VVA vs VAV</a>	6	Research meeting, discuss ideas, make research question, literature search		
7	Spontaneous Breathing Trial Measuring readiness for liberation from mechanical ventilation Use of adjunctive tests Use of proportional assist ventilation (PAV)	VAMKF 63 p380 MIND Ch 2 MINDW Ch 2	1. <a href="#">Weaning mechanical ventilation - Does the Mode Matter?</a> 2. <a href="#">ICU Bootcamp: Arterial Blood Gas (ABG) - Interpretation of Acid / Base Disorders</a>	7	Mindfulness exercise Ch 2 Professionalism: Giving a talk.	LEAF 4 Due	Vent 3
8	Barriers to ventilation weaning: airway, mental status, traditional barriers Emergencies on ventilated patients	VAMKF Ch 63		8	Monthly wrap-up and evaluation SICU Journal Club ICU M&M		Vent 3
9	Endotracheal intubation Tracheostomy <u>Cricothyroidotomy</u> Confirmation of airway; COVID19	CTSCC Part III p57 Surgeon and Airway Mgt.	<a href="#">COVID-19 Ventilator Course: Learn or Review Mechanical Ventilation</a>	9	Simulation, airway, class	LEAF 5 Due	Vent 4
10	Hemodynamic monitoring Troubleshooting monitors	CTSCC Part XII p607 Cardiac hemodynamics 607-613, pp613-616 SICM Ch 9		10	Research meeting		CV1-3
11	Shock overview, definitions 4 main categories of shock Indications for invasive hemodynamic monitoring Calibration of monitoring systems Fever workup	VAMKF Ch 6  MIND Ch 3 MINDW Ch 3	<a href="#">ICU Bootcamp: Types of Shock</a>	11	Mindfulness exercises in Ch 3 MINDW Resiliency lecture	LEAF 6 Due	CV1-3
12	Sepsis and septic shock Definitions Surviving sepsis bundles.	VAMKF Ch 121, 122  CTSCC 683-689, 689-695	1. <a href="#">ICU Bootcamp: Pressor Selection - Inopressors and Vasopressors</a> 2. <a href="#">ICU Bootcamp: Pressor Selection - Inodilators</a> 3. <a href="#">Sepsis and Septic Shock - 2016 Consensus Definitions</a> 4. <a href="#">The Golden Hour of Sepsis and the Hour-1 Sepsis Bundle</a>	12	Monthly evaluation SICU Journal Club	Clinical practice guideline due	CV1,4 PBLI
13	Hypovolemic shock Hemorrhagic shock	CTSCC pp: 24-27,70-76, 415-430		13		Review clinical practice guideline LEAF 7 Due	CV1,2,5,7
14	Shock resuscitation	CTSCC24-27, 70-76, 415-430		14	Research meeting		CV4-7

	Including hemorrhagic shock Transfusion therapy/adjuncts Transfusion reaction	CTSCC p 665-677 SICM Ch 35					
15	Endpoints of resuscitation Monitoring	CTSCC pp123-126 MINDW Ch 4	<a href="#">What is difference between health and wellness?</a> <a href="#">Eight Dimensions of Wellness</a> <a href="#">Ways to Build Resilience for Healthcare Workers</a>	15	Means of resiliency talk, maintaining wellness MINDW Ch 4	LEAF 8 Due	CV6
16	Neurogenic shock	CTSCC pp 140-152	Biostatistics Video <a href="#">Sensitivity vs Specificity Explained</a> <a href="#">Neurogenic Shock</a> <a href="#">Neurogenic vs spinal shock</a>	16	SICU Journal Club ICU M&M		CV1-2,7
17	Cardiogenic shock	VAMKF Ch 89, 90, 91	<a href="#">Cardiogenic shock brief overview</a> <a href="#">Cardiogenic Shock and Ventricular assist devices treatment</a> <a href="#">Impella Device insertion with narration</a> <a href="#">LVAD cardiac assist device animation</a> <a href="#">Cardiogenic shock overview for cardiology fellows</a> <a href="#">Advanced heart failure therapy and LVADs</a>	17		LEAF 9 Due	CV1-2, 7
18	Cardiac arrhythmias ACLS( taken separately)	VAMKF Ch78-81		18	Research meeting		CA1
19	Cardiac assessment for noncardiac surgery	MINDW Ch 5		19	Wellness curriculum MINDW Ch 5 exercises	LEAF 10 Due	CA2
20	Workup of oliguria Indications for dialysis Evaluating renal function Need for dialysis	CTSCC 644-650	<a href="#">Introducing Precision in AKI prevention in the Surgical ICU</a>	20	Professionalism and writing: writing a short abstract and submitting SICU Journal Club	Implementation of clinical practice guideline	RE1-2,4 PBLI,ICS
21	Common and uncommon fluid and electrolyte disorders and treatment	VAMKF: Ch 13, 14, 15, 16, 18, 19		21		LEAF 11 Due	RE3
22	Altered mental status workup ICU delirium and prevention PADIS guidelines	MINDW Ch 6 MINDW Ch 6	<a href="#">Why a stay in the ICU can leave patients worse off</a> <a href="#">A new frontier in Critical Care: Saving the Injured Brain-J Wesley Ely CAM-ICU Demo</a>	22	Research meeting MINDW Ch 6		NE1
23	Neurologic trauma Identification Early treatment Indications for ventilation Seizures	VAMKF Ch 51,54	<a href="#">A New Frontier in Critical Care: Saving the Injured Brain</a>	23	Neuro ICS: simulation meet with family who needs trach and peg, getting consent Simulation end of life care meeting	LEAF 12 Due	NE2,3, 4 SBP activity Professionalism
24	Nutrition evaluation in critical care Early enteral nutrition Indications for parenteral nutrition Management of fistulas in SICU	MINDW Ch 7 MINDW Ch 7	<a href="#">Nutrition Risk Scores in the Critically Ill</a> <a href="#">Current Trends in Critical Care Nutrition 2021.</a>  Article: Journal of Parenteral and Enteral Nutrition. Volume 40 (2): 159-211. February 2016. DOI: 10.1177/0148607115621063	24	Wellness curriculum MINDW Ch 7 SICU Journal Club ICU M&M	From here on, The SICU fellow will give at least one grand rounds	GI 1,3 ICS, PBLI
25	Feeding tubes, types and indications GI bleeding		1. <a href="#">Post-intensive care syndrome? What is it? How can we help?</a> 2. <a href="#">Update on Sedation: Focus on Prevention of PICS</a>	25	Research meeting Preparing short slide show	LEAF 13 Due	GI2-3
26	Nutrition prescription Modification of nutrition for special populations (liver failure, fistula, AKI,			26	Meeting with registered dietician regarding formulas/TPN		GI3

	hypoxemic respiratory failure, sepsis, burns)				Write at least one TPN order		
27	Common SICU infections Pneumonia VAP bundle Urinary tract infection and CAUTI's	CTSCC 709-715 VAMKF Ch 114, 115, 116,117,123 MIND Ch 8 MINDW Ch 8		27	Wellness curriculum MINDW Ch 8	LEAF 14 Due	ID 1-2
28	Necrotizing soft tissue infections	CTSCC 582-592 VAMKF 125		28	Meeting with bed specialist SICU Journal Club		ID1
29	Bacterial infections	VAMKF 116,117,118		29	Research meeting	LEAF 15 Due	ID1
30	Fungal infections	VAMKF Ch 129 MIND Ch 9 MINDW Ch9		30	MINDW Ch 9		ID1
31	Viral infections/COVID-19	VAMKF 912,919,947	1. <a href="#">Covid 19 and Surgery.</a>	31	Wellness curriculum		ID1
32	Appropriate PPE for differing occasions Immune system issues Antibiotic prophylaxis <a href="#">Antibiograms</a>	MIND Ch 10 MINDW Ch 10	1. <a href="#">PPE for different precautions.</a> 2. <a href="#">droplet vs airborne precautions.</a> 3. <a href="#">PPE for nerve agents.</a> 4. <a href="#">Antibiotic prophylaxis for surgery.</a> 5. <a href="#">How to read and interpret an antibiogram.</a>	32	MINDW Ch 10 SICU Journal Club ICU M&M	LEAF 16 Due	ID1
33	Endocrine emergencies Adrenal insufficiency Diabetes	CTSCC 658-665		33	Research meeting Adrenal lecture		EN 1-4
34	ATLS Initial Resuscitation	ATLS student handbook		34	Meeting with nursing regarding monitors/calibration	LEAF 17 Due	TR1
35	Hypotensive trauma patient Distributive shock Obstructive Shock	VAMKF CH 88,89,90 MIND Ch 11	Wellness curriculum MINDW Ch 11	35			TR2-3
36	Hemorrhagic shock ABC protocol for massive transfusions Adjuncts to resuscitation Lethal Triad/Diamond Traumatic coagulopathy and avoidance Coagulopathies			36	Research meeting Meeting with blood bank director regarding coagulopathies , rotational <a href="#">thromboelastography</a> SICU Journal Club	LEAF 18 Due	TR2-3
37	Abdominal trauma and ICU Abdominal compartment syndrome and temporary abdominal closure Hepatic trauma/IR Damage control surgery	CTSCC 430-446 CTSCC 358-372  MIND CH 12 MINDW CH 12		37	Wellness: MINDW Ch 12		TR4
38	Spine trauma and spinal cord injury Traumatic Brain Injury	CTSCC pp140-152 CTSCC 127-140		38		LEAF 19 Due	TR5
39	Burn Care	CTSCC 571-582	<a href="#">Stress Ulcer Prophylaxis</a> <a href="#">Fluid Resuscitation Pediatric Burn Injuries.</a> <a href="#">Adult Acute Burn Resuscitation Overview.</a> <a href="#">Adult Initial Burn Management.</a>	39			TR6
40	Chest wall injury Pulmonary contusion Thoracic trauma—pulmonary/cardiac	CTSCC 205-260,274-281	<a href="#">Bones of the thoracic wall.</a> <a href="#">Esophagus Injury and repair.</a> <a href="#">Echocardiogram of cardiac tamponade.</a>	40	Research meeting SICU Journal Club ICU M&M		TR7
41	Multiple and massive Casualty Incidents (MCI)	CTSCC 27-32		41	Wellness curriculum/pro	LEAF 20 Due	SS3 ICU-M

	Triage of critically ill Surge capacity Severity of Illness Scores Surgical Risk Scores and predicting outcomes	CTSCC Trauma Scoring, online chapter p 6. MINDW CH 13 MINDW CH 13			Professionalism development MINDW CH 13		
42	VTE/DVT Prophylaxis: for DVT, GI	CTSCC 742-750		42	Talk on medical billing		ST1
43	Postop care of vascular surgery/bariatrics Oncologic issues	MINDW CH 14 MINDW CH 14		43	Mindfulness CH 14 MINDW CH 14	LEAF 21 Due	ST5
44	Geriatric considerations	CTSCC 567-571		44	Research meeting SICU Journal Club		ST5
45	Measuring sensitivity/specificity/P PV/NPV Types of studies Levels of evidence	Video: Sensitivity and Specificity Explained Clearly, Roger <u>Seheult MD.</u>		45	Wellness curriculum/pro fessional development	LEAF 22 Due	ST6
46	Ethics in SICU End of Life issues, decreasing level of support Special Consent Issues Organ Donation	CTSCC 755 ( special e- material chapter		46	End of life discussion simulation Meet with organ donation organization		<u>Soc/System</u> 1-2 ST2
47	Heat Syndromes: malignant hyperthermia, neuroleptic malignant syndrome, heat injury syndromes Cold Syndromes: frostbite, severe hypothermia	CTSCC 750-755 VAMKF Ch 41 MINDW CH 15 (optional) MINDW CH 16 MINDW CH 16- 19		47	Professionalism: Mindfulness MINDW CH 15- 16	LEAF 23 Due	ST3
	Targeted temperature therapy						
48	Post ICU Care Post-ICU Syndrome Enhancing Rehabilitation Outcomes Medical billing introduction	CTSCC p 757	<a href="#">Post-intensive care syndrome? What is it? How can we help?</a>	48	Research meeting SICU Journal Club ICU M&M		<u>Soc/System</u> 1-3 ST 4
49	Pediatric Surgical Conditions and PICU	CTSCC 556-561 CTSCC 561-567		49	Final evaluations	LEAF 24 Due	ST_PE5

**Appendix:**

A. Competency abbreviations are listed below.

Key for Competencies	
Professionalism	PROF
Patient Care and Procedural Skills	PCPS
Medical Knowledge	MK
Practice Based Learning and Improvement	PBLI
Interpersonal and Communication Skills	ICS
Systems-Based Practice	SBP
Learning Enhancement Assessment Formative	LEAF

B. Matching Learning Objectives in the document Goals and Objectives for SICU Rotations for SICU Fellowship.

Key	
Ventilator & Respiratory	Vent
Cardiovascular	CV
Gastrointestinal & Nutrition	GI
Neurological including neurosurgical	Neuro
Endocrine	EN
Infectious Disease	ID
Trauma	TR
ICU Management	ICU-M
Renal	RE

Special Topics ST\_OB=Obstetric and gynecological critical care  
Special Topics: ST\_BIO=Biostatistics and experimental design  
Special Topics ST\_PE=pediatric surgical conditions  
Special Topics ST\_ET=Ethics and legal considerations

## RESOURCES

### Textbooks:

1. Marino: Marino's The ICU Book Forth Edition. Paul L. Marino, editor. Wolters Kluwer/Lippincott, Williams & Wilkins. Philadelphia, 2014. To be used as quick reference.
2. SICM: O'Donnell John M., Nacul Flavio E, Surgical Intensive Care Medicine. Third Edition. Springer International Publishing Switzerland 2016.
3. CTSCC: Asensio, Juan A and Trunkey Donald D., eds. Current Therapy of Trauma and Surgical Critical Care, second edition, Elsevier. Philadelphia, PA. 2016
4. VAMKF: Vincent JL, Abraham E, Moore FA, Kochanek PM, Fink MP. Eds. Textbook of Critical Care, 7<sup>th</sup> edition. Elsevier, Philadelphia PA, 2017.
5. MIND: Alidina, Shamash. Mindfulness for Dummies. Second Edition, John Wiley and Sons, Chichester, West Sussex, United Kingdom. 2015.
6. MINDW: Shamash, Alidina and Marshall, Joelle Jane. Mindfulness Workbook for Dummies. John Wiley and Sons. Chichester, West Sussex, United Kingdom, 2013.

### LECTURE DESCRIPTION/EXPECTATIONS:

The SICU fellow will give at least on grand rounds type lecture. This may be during Trauma Grand Rounds or the annual Rio Grande Trauma Conference. Each of these conferences has a unique perspective and is integrated to either provide an administrative experience, a quality assurance component, or a specific didactic goal and objective. The integration of these into the overall goals and objectives of the program are outlined in detail and the conferences outlined above give you the daily sequence to make this compatible with a weekly schedule. They are designed to be scattered throughout the week so as to not encumber any one particular day and should allow plenty of time for patient care in addition to personal study.

### TRAUMA FELLOW LECTURE (length: 1hr)

45-50 minute high-quality lecture on the assigned trauma topic, with 10-15 minutes for questions/discussion at the end. The lecture must include relevant background information, basic evaluation/management of the injury/condition, and review of the historical and recent literature. You may also choose to focus on a particular injury within the assigned topic, as some of the topics are rather broad (i.e. evaluation/management of rib fractures for thoracic trauma).

### TRAUMA/ED CONFERENCE (length: 1hr)

Held on the 2<sup>nd</sup> Thursday of each month at 7:00 am. ICU multidisciplinary will be on the 4<sup>th</sup> Thursday of each month at 3:00 pm.

### \*NOTES ON PRESENTATIONS

**Good presentations help educate the team and your partner Fellows. There is no better way to master a topic than to teach it in a masterly way.**

1. **Presentations are expected to be of HIGH QUALITY.**  
These should be created from the current literature. All key facts and figures should be referenced on the bottom of the slide. Important trials, metanalysis or guidelines should be presented on their own slide. Last minute, wordy, "cut and paste" jobs from textbooks, etc., are obvious and unacceptable. Try to create a presentation worthy of an expert at a scholarly meeting, because that is what you are going to be. Spelling and grammatical errors annoy the audience and make the faculty grumpy.
2. **Be on time – make sure everything works.**

It's your show! It is the Fellows responsibility to ensure the show starts on time and everything works. Presentations start on time, i.e. a 0700 show may follow a 0645 Handover, so you may have to visit the conference room a bit earlier in the morning (i.e. 0630) to ensure it's unlocked, the equipment is there, etc. You may have to leave rounds slightly early to be ready. Make sure your thumb drive or laptop functions with the projector/monitor as expected a day in advance until you're sure all is reliable. Ask for help if there are issues beforehand.

**3. Presentations should be case-based.**

It's more interesting, relevant and educational for all if you start with a case presentation, ideally one that you saw, ideally at TTUHSC EP. If you don't know of such a case, your attendings do, so ask them. You can close the show with the case's resolution so that all present can apply the knowledge they gained.

**4. Reference the TTUHSC EP Protocol.**

In most cases, we have a protocol for the injury or condition, ensure you show and explain this. Also, your faculty have probably written on the topic, include those articles as they are based on the same population you're treating.

**5. Remember that you are the presenter, not PowerPoint.**

Use your slides to emphasize a point, keep yourself on track, and illustrate a point with a graphic or photo. Don't read the slides. Some of the best presentations are almost entirely pictures and/or short lists.

**6. Slides should be uncluttered:**

Don't make your audience read the slides. Keep text to a minimum (6-8 lines per slide, no more than 4 lines, and not more than 30 words per slide). The bullet points should be headlines, not news articles. Write in sentence fragments using key words, and keep your font size 24 or bigger. Good pictures are better than a slide full of text.

**7. KISS – Keep it simple, seriously: Black, Dark Blue or White themes.**

The department of surgery has several approved templates that need to be used. No weird colors or cute themes, make it easy on the eyes and all about the message. Use easy to read fonts like Arial, Calibri or Times New Roman. Avoid animations or sound effects unless they are relevant.

**8. Never include anything that makes you announce, I don't know if everyone can read this, but..."**

Make sure they can read it before you begin. If unsure, print out your slides on letter-sized paper, and drop them to the floor. The slides are probably readable if you can read them while you're standing.

**9. Embed videos and CT Scans into the slide:**

Avoid switching from PowerPoint to PACS etc. Learn how to embed these into your slides and spare your audience the agony of watching you try to make PACS or video player work.

**10. Use high quality pictures and media.**

There are excellent sources for pictures in Scientific American CCSP, ATOM and ASSET courses and on our website and manuals. Use them.

**If you have questions, issues, problems – please ask!**

## VI. DECISION MAKING AUTHORITY/SUPERVISION POLICY

The Surgical Critical Care fellow is serving as a junior attending; with the exception that the fellow will be supervised by onsite faculty at all times. Using a policy of graded responsibility over time, as the fellow grows clinically, some supervision may be indirect and on-site. An example would be that most fellows will be able to place central lines and chest tubes with indirect supervision. The fellow will likely be able to do follow-up and ongoing ventilator management with indirect supervision later in the fellowship as he/she increases knowledge and experience.

The fellow will be responsible for daily rounds in the surgical intensive care unit (SICU), for supervising all residents and medical students in the SICU. The fellow will make clinical management decisions under the supervision of the critical care attending. The fellow will also interact with other surgical attending staff, medical and surgical consultants, and ancillary care staff.

The fellow will be responsible for initial and ongoing evaluation of management of surgical critical care patients, procedures performed in the SICU. The fellow may participate in surgical procedures in the operating room under the direct supervision of a surgical attending. The fellow will have direct onsite supervision in the SICU by the SICU attending staff. The supervision of ongoing care will be by onsite surgical faculty, ongoing critical care may have indirect onsite supervision.

### A. FELLOW SUPERVISION

It is policy of the Department of Surgery, as well as of Texas Tech University Health Sciences Center at El Paso, that supervision of fellows in the Operating Room shall conform to Medicare regulations in all cases, not just in Medicare cases. The rules are as follows:

1. In order to bill for surgical, high-risk, or other complex procedures, the teaching physician must be present during all critical and key portions of the procedure and be immediately available to furnish services during the entire procedure. In order to bill Medicare for two overlapping surgeries, the teaching surgeon must be present during the critical or key portions of both operations. Therefore, the critical or key portions may not take place at the same time. When all of the key portions of the initial procedure have been completed, the teaching surgeon may begin to become involved in a second procedure. The teaching surgeon must personally document in the medical record that he/she was physically present during the critical or key portion(s) of both procedures. When a teaching physician is not present during non-critical or non-key portions of the procedure and is participating in another surgical procedure, he or she must arrange for another qualified surgeon to immediately assist the resident in the other case should the need arise.
2. Depending upon the complexity of cases, all general surgery faculty are expected to operate with all fellows and thus participate actively in fellows' technical instruction. Similarly, attending surgeons must supervise other aspects of each patient's care as well. This participation is important, not only in the context of patient care and

administrative responsibility, but also in fulfilling the educational mission of the Department.

**B. FELLOW SUPERVISION: INVASIVE PROCEDURES**

While the fellow will be participating in and doing procedures, the primary responsibility is with the attending faculty. The attending surgeon also has responsibility for all invasive procedures performed upon his or her patients inside or outside the operating room. The fellow will be able to perform these procedures with increasing independence as he/she increases in knowledge and experience throughout the fellowship.

**C. TRAUMA CALL SUPERVISION**

The SICU fellow will have direct onsite supervision for Trauma admissions.

**D. LEVELS OF SUPERVISION**

**1. Direct Supervision**

The supervising physician is physically present with the fellow during the key portions of the patient interaction; or, (Core) the supervising physician and/or patient is not physically present with the fellow and the supervising physician is concurrently monitoring the patient care through appropriate telecommunication technology. (Core)

**2. Indirect Supervision**

The supervising physician is not providing physical or concurrent visual or audio supervision but is immediately available to the fellow for guidance and is available to provide appropriate direct supervision. (Core)

**3. Oversight**

The supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered. (Core)

**E. RELATION TO FACULTY:**

The SICU fellow has direct onsite supervision by critical care faculty for critical care, there is a 24/7 onsite supervision for all of general surgery. The SICU is a closed unit; the SICU faculty have primary responsibility for all of the patients. For patients in the SICU, which are admitted from other services, the SICU fellow will work collaboratively with the other surgical services, to include: Obstetrics and Gynecology, Cardiovascular Surgery, General Surgery, Endocrine Surgery, Colorectal Surgery, Plastic Surgery, and Oncologic Surgery. The fellow will also collaborate with consultant services. This collaboration may include: consultation of other services, patient updates to other services, collaborative patient care with other services. For example: a Plastic Surgeon may ask to discontinue external warming on a hand surgery patient and the fellow may

write an order. Another example of patient care would be: if the fellow notices a change in a postoperative status of another services patient, that fellow may call the other services attending and request that a special diagnostic test be ordered, such as a CT scan.

F. RELATION TO RESIDENTS:

The SICU fellow will serve as a junior attending. Thus, the fellow will serve in a teaching role for junior residents. The fellow will not compete with general surgery resident for cases or procedures. The SICU fellow will work collaboratively with the general surgery residents.

G. RELATION TO MEDICAL STUDENTS:

The SICU fellow will serve as a teacher to the medical students. The SICU fellow will supervise medical students, teach medical students, and participate in medical student evaluations.

VII. FELLOW DUTY HOURS AND WORKING ENVIRONMENT POLICY

A. Work Standards

The standard work schedule for the fellow shall be 6:45 a.m. – 5:00 p.m.  
The fellow shall accrue vacation at the official rate of 13.33 hours per month.  
This provides a total of 20 vacation “working days” per year.

Vacation leave will be scheduled in advance at the beginning of the academic year and shall be:

- **4 one week blocks**

**Changes in leave must be requested by the fellow in writing in advance on a “TTUHSC EP Departmental Approval of Absence Form” and scheduled with the agreement of the Program Director.**

Absence Policy:

A fellow must be present for 48 weeks total during the fellowship year. Planned absences for vacations, conferences, appointments, etc. should be noted by filling out the Texas Tech leave sheet. Conferences such as Society of Critical Care Medicine will be counted as workdays.

Unplanned absences for illness, death in family, natural disaster should be called in to the Fellowship Program Coordinators office as soon as you are able. An email will be accepted also.

If we do not hear from you during a time when you are scheduled to work, we will investigate to make sure that you are not harmed. In the past, the office has called the

Sheriff's office, which will send out an officer for a "welfare check". That means that they will go to your house to make sure that you are safe.

If your unplanned absence is only for a few hours, and you subsequently come to work, we will count it as a full workday. Examples include: Power outages, vehicle issues, car wreck, house floods, airplane flight delayed.

If you have an illness lasting longer than 4 weeks, you likely will have to make up time to meet ACGME requirements of completing a fellowship.

Options include adding days to the end of your planned exit from fellowship. In rare instances, a fellow may step out of the curriculum and restart the following academic year. We would have to discuss this and send letters to the ACGME.

For disability information, please go to: <https://el Paso.ttuhsc.edu/hr/Benefits.aspx>.

#### B. Duty Hours

Duty hours are limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities. Hours are averaged within given rotations - not tallied so that heavy and light assignments cancel to leverage compliance - and do not include vacation time. As per ACGME, 80 hour work rules all fellows should be dismissed to go home by 10AM the day following call with no pressures to complete further checkout or follow-up duties. Duty hours must be logged weekly through MyEvaluations.com.

Fellows will be provided with 1 day in 7 free from all educational and clinical responsibilities, averaged over a 4- week period, inclusive of call. One day is defined as one continuous 24-hour period free from all clinical, educational, and administrative activities. In addition, two full weekends per month will be free of clinical activities. In other words, the fellow will be on duty on one weekend day every other weekend.

Continuous on-site duty, including in-house call, do not exceed 24 consecutive hours. Fellows may remain on duty for up to 6 additional hours to participate in didactic activities, transfer care of patients, conduct outpatient clinics, and maintain continuity of medical and surgical care as defined in Specialty and Subspecialty Program Requirements.

#### C. Monitoring of Duty Hours

Fellows and faculty will be provided copies of the rules pertaining to ACGME requirements for limited fellow duty hours. These rules will be discussed in a divisional meeting in which faculty and fellows attend. Minutes will be kept of this meeting. Each month, fellows will be required to enter their duty hours online through the MyEvaluations an online logging module. The results will be evaluated by the Program Director on a regular basis to assure compliance with ACGME resident duty hour requirements.

In addition, the program director meets on a frequent basis with the fellow one-on-one to specifically address working hours, fatigue, any particular problems, and the goals and expectations of the rotation.

If the fellow feels that he or she would like to remain on duty after 10 am for an especially educational case, then the resident must fill out the form in the fellow administration office as to why he/she stayed on duty. In addition, the fellow will adhere to the total hours rules.

D. Moonlighting

Fellows in the Surgical Critical Care training program are ***not*** allowed to moonlight.

F. Support Services

Sleeping quarters and greens are available through the hospital service. Also, fellows have a shared office located at the Academic Education Center (AEC), room 104C. A full function cafeteria is open during hospital hours and available to house staff during this time. Vending machines are available in the cafeteria as well.

G. Pay

The 2023-2024 salary is \$66,941.63/annually. In addition, office supplies and equipment needs will be paid for by the division.

For additional information, please visit <https://elpaso.ttuhsoc.edu/som/gme/>.

VIII. SCHOLARLY ENVIRONMENT

The faculty is committed to maintenance of a scholarly environment including multiple specific activities.

A. Simulation Curriculum:

The Division has opportunities for fellows to become proficient in education via simulation:

The Training and Educational Center for Healthcare Simulation (TECHS) on the campus of Texas Tech University Health Sciences Center El Paso was created in February 2019 as a program expansion from the Gayle Greve Hunt School of Nursing (GGHSON) simulation program, the Center for Advanced Teaching and Assessment in Clinical Simulation (ATACS), and the Regional Simulation and Training Center.

TECHS has over 24,000 square feet of simulation laboratory space to provide experiential learning through task training, high-fidelity simulation experiences, virtual reality simulators, and standardized patient experiences. TECHS continues to be

accredited by the Society for Simulation in Healthcare, a distinction first awarded to ATACS in 2012 under the direction of Hoi Ho, M.D., and expanded in 2017 under the direction of Sanja Kupesic, M.D., Ph.D., to include accreditation in: Assessment, Research, and Teaching/Education.

The simulation laboratory spaces are distributed between two physical locations: TECHS North (TN) and TECHS South (TS). TECHS North is located on the second floor of the GGHSON building, and TECHS South is located on the third floor of the Medical Education Building (MEB).

TECHS has a dedicated staff of technical, educational and research experts to support education and training for all learners at TTUHSC El Paso and throughout the region. They also provide service to numerous simulation organizations, including the Society for Simulation in Healthcare (SSH), the International Nursing Association for Clinical Simulation and Learning (INACSL) and the Gathering of Healthcare Simulation Technology Specialists (SimGHOSTS) to expand the knowledge and scholarship in the field of simulation education.

TECHS is proud to hold SSH accreditation in the areas of Assessment, Research, and Teaching/Education. This accreditation shows the commitment of the staff and educators to provide high-quality, evidence-based practices supported by policy and practice to deliver enhanced education to learners across TTUHSC El Paso and the El Paso region.

B. Biostatistics and Experimental Design/Basic Science Research

The fellow is expected to conduct a literature search on topic of interest. The fellow is also required to develop a research question, write a research protocol, submit the project to the TTUHSC EP IRB, collect data, and conduct an analysis with the department surgical educator or with the biostatistics lab. In addition, the fellow will also need to write a research abstract and submit the abstract. The fellow is also encouraged to participate in an IRB meeting as a visitor.

C. Additional Program Information

Texas Tech University Health Sciences Center El Paso (TTUHSC EP) Libraries, accredited in 2018, with two libraries, the TTUHSC Libraries of the Health Sciences form one of the resource libraries of the National Library of Medicine/South Central Region.

The TTUHSC Libraries of the Health Sciences support the schools of medicine, nursing, allied health, pharmacy, dentistry, as well as the Graduate School of Biomedical Sciences. The Libraries of the Health Sciences exist to meet the curricular, research, and patient care information needs of the students, faculty, and staff of TTUHSC, as well as the information needs of the larger biomedical and health care community of the U.S. - Border area. See section XV for additional information.

## IX. EVALUATION METHODOLOGY

### A. Evaluation of the Fellow

The fellow will be evaluated by faculty, trauma nurse practitioners, residents and students. There will be various evaluation methods. One method is through MyEvaluations (pages 26-27).

Another evaluation method is through the SIMPL app. SIMPL will be used by faculty to evaluate fellows on procedures where they assisted. All fellows must register and forward their requests to the faculty within 72 hours of the procedure. SIMPL evaluations are rated on how much supervision was provide (show and tell, active help, passive help, and supervision only), performance (beginner, intermediate, or practice ready), and complexity of the case.

The fellow will be required to maintain a case log of all operative procedures. In addition, the fellow will be provided case logs of their critical care experience in the surgical intensive care unit and their resuscitation experience. The fellows are strongly encouraged to maintain a log of ultrasounds performed and observed as well as bedside procedures. This will allow the fellow to review and maintain an active understanding of their experience and adjust during the year for any inadequacies. In addition, this will allow the program director to assure that operative experience does not exceed the rules of the RRC. Lastly, each fellow is encouraged to develop a Critical Care Index Case (CCIC) log of at least 25 patients who best represent the full breadth of critical care management. At least two out of the seven categories that follow should be applicable to each chosen patient. The completed CCIC log should include experience, with at least one patient, in all seven of the following essential categories: ventilatory management, bleeding (non-trauma) greater than 3 units, hemodynamic instability, organ dysfunction/failure, dysthymias, invasive line management/monitoring, and nutrition. The American Board of Surgery will require a case log of Critical Care cases to be submitted with the Program Directors Signature at the end of the month.

Due to the close ratio of faculty to fellows, evaluation of each fellow occurs on a contemporaneous ongoing daily basis through feedback and personal interaction between the fellows and the faculty. In addition, a formal performance evaluation of the fellow by the faculty is completed twice per year by the Program Milestones committee using the ACGME Milestones developed specifically for Surgical Critical Care. Milestones are competency-based developmental outcomes (e.g., knowledge, skills, attitudes, and performance) that can be demonstrated progressively by the fellow from the beginning of their education through graduation to the unsupervised practice of their specialties. Lastly, a final (summative) evaluation is completed by the Faculty during the final period of the fellowship verifying that the fellow has demonstrated sufficient competence to enter practice without direct supervision. The fellows will also be evaluated by the trauma program manager, trauma nurse practitioners, and students semiannually. They will also be encouraged to undergo a self-evaluation process on their own.

B. Evaluation of the Faculty and Program by the Fellow

The fellows will be expected to evaluate the faculty using standardized forms on a semiannual basis (see pages 26-27). The fellows will also be expected to evaluate the program annually using a standardized form (see pages 26-27).

Fellows are encouraged to discuss any issues or concerns regarding the fellowship program, their progress in the fellowship, and the correction of any identified problems. The feedback received by fellows is used to improve the educational program and the curriculum is updated in the handbook as needed.

## Fellow Evaluation Of Program & Faculty (v.1)

Evaluation Period: [First Name] [Last Name] [99/99/9999] to [99/99/9999] Evaluator: [First Name] [Last Name] [Rotation Name]

- Display Map to Milestones  Hide Map to Milestones  
 Display Evaluation Details  Hide Evaluation Details  
 Display Competency Headings  Hide Competency Headings

Drag and Move each question or group name in order to change the order displayed

### Educational Experience

#### PROGRAM DIRECTOR

Provides adequate oversight to the administration of the fellowship (Select one) v

Obtains adequate input from the fellow before making important decisions (Select one) v

Communicates all important fellow issues to me (Select one) v

Is available to discuss issues with me (Select one) v

Is even-handed and fair in making decisions about the fellowship (Select one) v

Supports the fellows educational environment in my rotations (Select one) v

Positively addresses lifestyle issues (i.e. work hours, stress, working conditions, etc.) of concern to the fellows (Select one) v

Establishes goals and objectives of the fellow and encourages appropriate fellow achievement (Select one) v

Adequately addresses "problem areas" in the fellow (Select one) v

Optional Comments:

Comments and/or Observations:

#### PROGRAM COORDINATOR

Provides adequate oversight to the fellowship office (Select one) v

Understands the organization and function of the fellowship program (Select one) v

Is available to handle my needs as they relate to the fellowship program (Select one) v

Deals with fellowship needs in a timely fashion (Select one) v

Communicates pertinent issues to me appropriately (Select one) v

Is pleasant and represents the residency well.

[Select one] v

Optional Comments:

Comments and/or Observations:

#### INSTRUCTIVE SESSIONS

Adequately covers pertinent surgical ICU information to help prepare me for a clinical care practice and the Boards

[Select one] v

The format is effective

[Select one] v

The attending involvement is appropriate

[Select one] v

Didactic evaluation is adequate. Optional Comments:

[Select one] v

Comments and/or Observations:

#### ICU M & M CONFERENCE

The attending involvement is appropriate.

[Select one] v

Optional Comments:

Comments and/or Observations:

#### EVALUATION OF INDIVIDUAL ROTATING: EVALUATION PROCESS

The evaluation of my performance on the clinical rotation is fair and adequately characterizes my abilities

[Select one] v

The rotation evaluation form is an effective and appropriate evaluation

[Select one] v

I receive adequate feedback from my attending during the rotations

[Select one] v

I receive adequate feedback on my performance from the fellowship director

[Select one] v

The rotation provides the appropriate educational needs and clinical experience.

[Select one] v

Optional Comments:

Comments and/or Observations:

## X. QUALITY IMPROVEMENT

Quality Improvement is related to both trauma and surgical critical care.

Regarding Surgical Critical Care, quality improvement is monitored from the hospital by assessment of core measures, which are included on the daily note. This includes items such as foley catheter removal, initiation of chemical DVT prophylaxis. The hospital has a wound care team which makes weekly rounds for pressure ulcer monitoring. Blood product utilization is monitored by blood bank. We want to improve by assessment of ventilator days month to month. At present, the usage of daily spontaneous breathing trial and sedation vacation is followed by the nursing staff. Quarterly Infection Control reports are given at the SICU subcommittee meeting which is held every third Friday on the hospital 8th floor boardroom.

Trauma quality improvement is monitored daily, weekly and yearly. The trauma department does this monitoring. They monitor DVT prophylaxis, outcomes, ICU days and ventilator days. There are monthly meetings of Trauma Quality Improvement held on the first Friday of every month also in the hospital 8th floor boardroom. There, reports on infection control, physical therapy outcomes, radiology reads, and special cases are reported. Every department of the hospital that relates to trauma attends this meeting. Trauma QI is also reported and assessed at Trauma morbidity and mortality conference, held the second Thursday of every month at 0700 in Auditorium B at Texas Tech.

## XI. ELIGIBILITY, RECRUITMENT, SELECTION, NONDISCRIMINATION, PROMOTION, EVALUATION, AND DISMISSAL PROCESS

TTUHSC EP Policy on Eligibility, Selection, Nondiscrimination, Promotion, Evaluation and Dismissal of House Staff in ACGME Accredited Graduate Medical Education Training Programs.

A. Fellow Eligibility. Applicants with one of the following qualifications are eligible for appointment to the TTUHSC EP Surgical Critical Care Residency:

1. Graduates of medical schools in the United States accredited by the Liaison Committee on Medical Education (LCME.)
2. Graduates of colleges of osteopathic medicine in the United States accredited by the American Osteopathic Association (AOA).
3. Graduates or Graduate—Eligible surgeons or surgery residents. A graduate—eligible surgery resident will be in the mid-fourth year or fifth year of residency. A graduate of a general surgery residency could be working as a surgeon or in a surgical fellowship, or other employment.

B. Recruitment Process

The recruitment process starts by posting an advertisement to science journals. Fellows then apply by completing an application online via the Surgical Critical Care and Acute Care Surgery Fellowship Application Service (SAFAS) website managed by the Surgical Critical Care Program Directors Society.

Based on an initial screening, candidates are invited for one day to meet faculty and other key personnel.

The program has participated in the Surgical Critical Care Match and the program director reserves the right to define the number of spots that will be made available to the match, 1, 2, or 3 as well as to hire fellows off match within the quota (2 for instance) accredited by the ACGME.

C. Fellow Selection

TTUHSC EP selects from among eligible applicants on the basis of their preparedness, ability, aptitude, academic credentials, communication skills, and personal qualities such as motivation and integrity. The TTUHSC EP Surgical Critical Care Program does not discriminate with regard to sex, race, age, religion, color, national origin, disability, or veteran status.

D. Enrollment of Noneligibles

TTUHSC EP will not appoint noneligible individuals.

## XII. GRIEVANCE PROCEDURES AND ISSUES DURING FELLOWSHIP:

### A. There are multiple avenues to discuss problems:

1. The program director: for program issues, personnel issues, any issues related to fellowship or first contact for harassment/discrimination, if the fellow is comfortable. The program director's office is located in the Academic Education Center (AEC) building, second floor of the Surgery department. Phone (915) 215-5310, ask for program director. The fellow may also contact the program director directly to their cell phone.
2. The fellow's assigned mentor: as above, also contact if problems with program director.
3. The associate program director, Dr. Tyroch, who is also Chief of Surgery may also be contacted for any of the reasons stated above. Dr. Tyroch's office is also located at the AEC building, second floor of the Surgery department. Office number (915) 215-5310, or may contact directly to their cell phone.
4. Designated Institutional Officer through the Graduate Medical Education Officer: for program issues if fellow is not comfortable talking to anyone in Surgical Department or program director.
5. For house staff-related issues, the fellow can contact the house staff Association. The website is:  
<https://el Paso.ttuhs.c.edu/som/gme/HSA/default.aspx>.
6. Residency Assistance Program (RAP) a program run by the Department of Psychiatry to residents, fellows, immediate family members living under the same household. This program is intended to help with a wide variety of personal issues including relational, family, cognitive, emotional, and behavioral problems.
7. Title IX Coordinator: Linda S. Ellis, MD, MJ, MA, FABP, Associate Dean of Student Affairs. (915) 215-5439. For gender discrimination or sexual misconduct issues. This individual serves in this role for students, faculty and residents. There is also an online form for reporting sexual harassment at  
<https://el Paso.trtuhs.c.edu/title-ix/report-incident.aspx>.
8. Racial/ethnic/age/national origin/religion/disability/sexual orientation or other discrimination: Texas Tech Office of Equal Employment Opportunity, (806) 742-3627. Note that we encourage the fellows to discuss the complaint with the program director or associate program director prior to discussing with the Office of Equal Employment Opportunity.

### B. Computer problems:

1. Call TTUHSC EP IT department at 215-4111 Option 1. Note that looking up your "team viewer" number beforehand expedites process.
2. For UMC Hospital computer problems, call their IT department by using the operator.

### XIII. MONITORING STRESS AND FATIGUE

Working with the critically ill can be stressful. The fellows will be monitored for undue stress and fatigue. The schedule is designed for time off to rest and relax. If there is undue stress such that the fellow cannot perform duties, or take care of patients, the fellow will be relieved of clinical responsibilities and encouraged to seek assistance. See also under "Grievances and Problems". There are also learning experiences in the form of readings and video lectures in the core curriculum to help the fellow identify stress and fatigue and to initiate fatigue mitigation techniques. Any surgical faculty as well as the program director will help in these circumstances. If the fellow is not comfortable discussing with surgical faculty or program director, the fellow may call the ACGME office or the Resident Assistance Program. There will be cab/car ride fare reimbursement for fellows who are too fatigued to drive. Receipts need to be turned in to the Program Coordinator.

XIV. ADDITIONAL PROGRAM INFORMATION AND SAMPLE SCHEDULES:

A. Yearly rotation schedule.

Fellows Schedule 2021-2022

Month	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
<b>SC</b>	SICU	SICU	PEDS	SICU	TRA	SICU	CARD	SICU	TRA	SICU	SICU	SICU
<b>KM</b>	SICU	SICU	SICU	TRA	SICU	CARD	SICU	TRA	SICU	Neuro	SICU	SICU
<b>Comments</b>			1.	2.	3.		4.			5.	6.	7.

Note that during electives, the fellow will still be doing night call once a week and one 12 hour shift every other weekend, with two weekends per month without call.

B. Weekly schedule while in SICU:

Note that every other weekend there will be no call.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM: rounds, orders	AM: rounds, orders	AM: rounds, orders	Early AM: 7:00 Trauma Morbidity and Mortality, Trauma Grand Rounds Midday: Fellows conference 12-1pm AM: rounds, orders	AM: rounds, orders Selected Fridays: ICU subcommittee Trauma TPI,	OFF 24 hours	AM: rounds, orders
PM: Rounds, procedures, pm rounds	PM: Rounds, procedures, PM rounds	PM: rounds, procedures, PM rounds	Rounds, Procedures, PM rounds	PM: rounds, procedures, PM rounds		

C. Daily/Monthly Call Schedule: (Sample schedule)

Aug 1- Sun	Not on call
Aug 2 - Mon	CR2
Aug 3 - Tue	PGY4-1
Aug 4 - Wed	SCC-1
Aug 5 - Thurs	SCC-2
Aug 6 - Fri	CR1

<b>Aug 7 - Sat</b>	SCC1/CR1
<b>Aug 8 - Sun</b>	CR1
<b>Aug 9 - Mon</b>	CR2
<b>Aug 10 - Tues</b>	PGY4-1
<b>Aug 11 - Wed</b>	SCC2
<b>Aug 12 - Thur</b>	SCC1
<b>Aug 13 - Fri</b>	CR2
<b>Aug 14 - Sat</b>	CR2
<b>Aug 15 - Sun</b>	SCC2/CR2
<b>Aug 16 - Mon</b>	SCC1
<b>Aug 17 - Tues</b>	PGY4-1
<b>Aug 18 - Wed</b>	CR1
<b>Aug 19 - Thurs</b>	SCC2
<b>Aug 20 - Fri</b>	CR1
<b>Aug 21 - Sat</b>	CR1
<b>Aug 22 - Sun</b>	SCC1/CR1
<b>Aug 23 - Mon</b>	CR2
<b>Aug 24 - Tues</b>	PGY4-1
<b>Aug 25 - Wed</b>	SCC2
<b>Aug 26 - Thur</b>	CR1
<b>Aug 27 - Fri</b>	CR2
<b>Aug 28 - Sat</b>	PGY4-1
<b>Aug 29 - Sun</b>	PGY4-1
<b>Aug 30 - Mon</b>	CR1
<b>Aug 31 - Tues</b>	CR2

## XV. LEARNING MATERIALS

There are three textbooks from which readings occur. There are videos, these can be accessed via clicking on the highlighted link in the schedule. The learning schedule will be posted on the website tab devoted to fellowship. There is a book and handbook on “Mindfulness”. This series runs throughout the fellowship and is part of the wellness program.

Computers: There are two computers, one for each fellow in the fellows’ office located in the AEC building, 1<sup>st</sup> floor. TTUHSC EP libraries are a great resource. Locate this on the Texas Tech El Paso website, on the tab at the top. Once in the library portal, one can look up specific journals, and also do detailed searches via OVID. The library has extensive online resources. There are numerous books available. Most holdings are online. The librarian can get articles for you if needed for your research project, ask the surgery department, because sometimes there is a cost.

Online textbook app. Two of the textbooks have a code for getting access to the book on an app called “inkling”™. The two texts are: “Current Therapy of Trauma and Surgical Critical Care” and “Textbook of Critical Care”. A recommendation is to download these apps early on your cell phone. Then you can use small pieces of time to do the asynchronous readings.

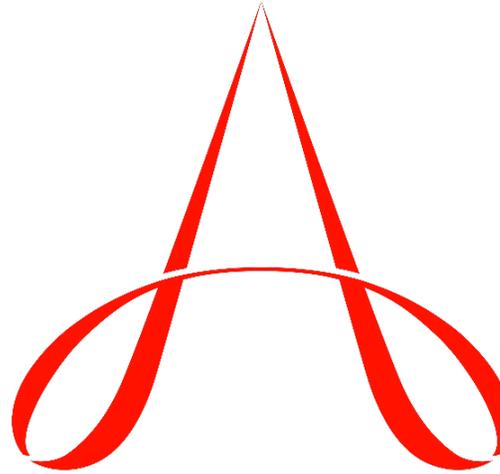
Videos: Videos in the asynchronous materials are sourced from YouTube. In the event a video has been taken down, please inform the surgical critical care fellowship director, who will find another source. One of the textbooks has an extensive video collection on procedures, please review as needed. YouTube: if doing searches and want to find some quick information, sometimes YouTube has a great video already done. If using YouTube, be sure to check the credentials of the person supplying the video.

Google Scholar: This is an excellent resource for medical information, especially literature. This is one of the best ways to do a literature search on a topic.

## XVI. ACGME SURGICAL CRITICAL CARE MILESTONES (PAGES 35-65)

# Surgical Critical Care Milestones

The Accreditation Council for Graduate Medical Education



ACGME

Implementation Date: July 1, 2021  
Second Revision: May 2021  
First Revision: February 2014

# Surgical Critical Care Milestones

The Milestones are designed only for use in evaluation of fellows in the context of their participation in ACGME-accredited residency or fellowship programs. The Milestones provide a framework for the assessment of the development of the fellow in key dimensions of the elements of physician competence in a specialty or subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competence, nor are they designed to be relevant in any other context.

## **Surgical Critical Care Milestones Work Group**

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**The ACGME would like to thank the following organizations for their continued support in the development of the Milestones:**

American Board of Surgery

Review Committee for Surgery

Surgical Critical Care Program Directors Society

## Understanding Milestone Levels and Reporting

This document presents the Milestones, which programs use in a semi-annual review of fellow performance, and then report to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME Competencies organized in a developmental framework. The narrative descriptions are targets for resident/fellow performance throughout their educational program.

Milestones are arranged into levels. Tracking from Level 1 to Level 5 is synonymous with moving from novice to expert fellow in the specialty or subspecialty. For each reporting period, the Clinical Competency Committee will review the completed evaluations to select the milestone levels that best describe each learner's current performance, abilities, and attributes for each subcompetency.

These levels *do not* correspond with post-graduate year of education. Depending on previous experience, a junior fellow may achieve higher levels early in his/her educational program just as a senior fellow may be at a lower level later in his/her educational program. There is no predetermined timing for a resident to attain any particular level. Fellows may also regress in achievement of their milestones. This may happen for many reasons, such as over scoring in a previous review, a disjointed experience in a particular procedure, or a significant act by the fellow.

Selection of a level implies the fellow substantially demonstrates the milestones in that level, as well as those in lower levels (see the diagram on page vi).

## Additional Notes

Level 4 is designed as a graduation *goal* but *does not* represent a graduation *requirement*. Making decisions about readiness for graduation and unsupervised practice is the purview of the program director. Furthermore, Milestones 2.0 include revisions and changes that preclude using Milestones as a sole assessment in high-stakes decisions (i.e., determination of eligibility for certification or credentialing). Level 5 is designed to represent an expert fellow whose achievements in a subcompetency are greater than the expectation. Milestones are primarily designed for formative, developmental purposes to support continuous quality improvement for individual learners, education programs, and the specialty. The ACGME and its partners will continue to evaluate and perform research on the Milestones to assess their impact and value.

Some milestone descriptions include statements about performing independently. These activities must occur in conformity to ACGME supervision guidelines as described in the Program Requirements, as well as to institutional and program policies. For example, a fellow who performs a procedure independently must, at a minimum, be supervised through oversight.

A Supplemental Guide is also available to provide the intent of each subcompetency, examples for each level, assessment methods or tools, and other available resources. The Supplemental Guide, like examples contained within the Milestones, is designed only to assist the program director and Clinical Competency Committee, and is not meant to demonstrate any required element or outcome.

Additional resources are available in the [Milestones](#) section of the ACGME website. Follow the links under “What We Do” at [www.acgme.org](http://www.acgme.org).

The diagram below presents an example set of milestones for one sub-competency in the same format as the ACGME Report Worksheet. For each reporting period, a fellow's performance on the milestones for each subcompetency will be indicated by selecting the level of milestones that best describes that fellow's performance in relation to those milestones.

Systems-Based Practice 2: System Navigation for Patient-Centered Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of indications and resources for care coordination	Coordinates multidisciplinary care of patients in routine critical care situations	Coordinates and/or leads multidisciplinary care of patients in complex critical care situations	Coordinates care of patients with barriers to health care access or other disparities in care	Leads the design and implementation of improvements to care coordination
Performs safe and effective transitions of care/hand-offs in routine clinical situations	Performs safe and effective transitions of care/hand-offs in complex clinical situations	Supervises safe and effective transitions of care/hand-offs of junior residents	Resolves conflicts in transitions of care between teams	Leads in the design and implementation of improvements to transitions of care
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="float: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>				

Selecting a response box in the middle of a level implies that milestones in that level and in lower levels have been substantially demonstrated.

Selecting a response box on the line in between levels indicates that milestones in lower levels have been substantially demonstrated as well as **some** milestones in the higher level(s).

Patient Care 1: Respiratory Failure				
Level 1	Level 2	Level 3	Level 4	Level 5
Requires direct supervision in basic management of patients with respiratory failure	Manages patients with respiratory failure	Recognizes the need for and initiates advanced ventilator techniques for patients with respiratory failure	Independently manages patients with respiratory failure, including use of advanced ventilator techniques	Is recognized as a resource or completes a quality improvement or research project regarding management of patients with respiratory failure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/> Not Yet Assessable <input type="checkbox"/>

Patient Care 2: Nutritional Support				
Level 1	Level 2	Level 3	Level 4	Level 5
Requires direct supervision in assessment and initial management of nutritional support in critically ill patients	Recognizes the need for nutritional support in critically ill patients but still requires indirect supervision in the assessment and initial management	Independently performs assessment of nutritional needs and initiates nutritional support in critically ill patients	Independently performs nutritional assessment and manages nutritional support for special populations of critically ill patients, including traumatic brain injury, immunodeficient, extracorporeal membrane oxygenation (ECMO), complex gastrointestinal surgical patients	Is recognized as a resource or completes a quality improvement or research project in nutritional assessment and support of critically ill patients
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="float: right; text-align: right;">                     Not Yet Completed Level 1 <input type="checkbox"/>                      Not Yet Assessable <input type="checkbox"/> </div>				

Patient Care 3: Shock/Resuscitation				
Level 1	Level 2	Level 3	Level 4	Level 5
Independently recognizes shock and initiates indicated resuscitation in critically ill patients	Individualizes resuscitation based on the type of shock and assessment of the response to therapy, and employs monitoring for critically ill patients	Employs advanced monitoring techniques to guide resuscitation for critically ill patients, including special patient populations	Performs complex resuscitation, including use of advanced monitoring techniques, particularly in special patient populations	Is recognized as a resource or completes a quality improvement or research project or develops a protocol for shock resuscitation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/> Not Yet Assessable <input type="checkbox"/>

Patient Care 4: Renal Disorders of Critically Ill Patients				
Level 1	Level 2	Level 3	Level 4	Level 5
Recognizes and categorizes patients with renal disorders	Initiates treatment of renal disorders based on stage and etiology	Directs management and assesses response to treatment	Provides comprehensive management of patients with renal disorders, including management of patients requiring renal replacement therapy	Recognized by peers as a resource, completes quality improvement or research project regarding management of patients with renal disorders
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/> Not Yet Assessable <input type="checkbox"/>

Patient Care 5: Trauma and Thermal Injury				
Level 1	Level 2	Level 3	Level 4	Level 5
With direct supervision, initiates appropriate management of the critically injured patient	With indirect supervision, assesses critically injured patients and prioritizes and initiates management	Independently assesses and manages critically injured patients and prioritizes management in the treatment of common injuries and complications	Independently assesses and manages critically injured patients, including treatment of complex injuries and complications through initial evaluation and into the operating room/intensive care unit (ICU)	Is recognized as a resource in the assessment and management of critically injured patients or completes a quality improvement or research project regarding management of critically injured patients
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="float: right; text-align: right;">                     Not Yet Completed Level 1 <input type="checkbox"/>                      Not Yet Assessable <input type="checkbox"/> </div>				

Patient Care 6: Cardiovascular Disorders of Critically Ill Patients				
Level 1	Level 2	Level 3	Level 4	Level 5
Requires direct supervision in the assessment and initial management of common cardiovascular disorders in critically ill patients	Requires indirect supervision in the assessment and management of common cardiovascular disorders in critically ill patients	Independently performs assessment and manages common cardiovascular disorders in critically ill patients	Independently diagnoses and provides comprehensive management of complex cardiovascular disorders in critically ill patients	Is recognized as a resource or completes a quality improvement or research project regarding management of critically ill patients with cardiovascular disorders
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/> Not Yet Assessable <input type="checkbox"/>

Patient Care 7: Neurologic Disorders of Critically Ill Patients				
Level 1	Level 2	Level 3	Level 4	Level 5
Requires direct supervision to recognize the stages and treatment of coma, delirium, seizures, and other neurologic disorders	Requires indirect supervision to assess and treat patients with coma, delirium, seizures, and other neurologic disorders	Independently recognizes and manages multiple etiologies of coma, delirium, and other neurologic disorders	Provides comprehensive management of multiple etiologies of coma, delirium, seizures, and other neurologic disorders	Is recognized as a resource or completes a quality improvement or research project regarding management of patients with coma, delirium, seizures, and other neurologic disorders
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/> Not Yet Assessable <input type="checkbox"/>

Patient Care 8: Gastrointestinal (GI) Disorders of Critically Ill Patients				
Level 1	Level 2	Level 3	Level 4	Level 5
Requires direct supervision to diagnose and manage acute GI disorders	Requires indirect supervision to diagnose and manage acute GI disorders	Independently diagnoses and manages acute GI disorders	Provides comprehensive management of acute GI disorders	Is recognized as a resource or completes a quality improvement or research project regarding management of patients with acute GI disorders
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="float: right; text-align: right;">                     Not Yet Completed Level 1 <input type="checkbox"/>                      Not Yet Assessable <input type="checkbox"/> </div>				

Patient Care 9: Infectious Diseases of Critically Ill Surgical Patients				
Level 1	Level 2	Level 3	Level 4	Level 5
Requires direct supervision to diagnose common infections and infectious complications (e.g. pneumonia, bacteremia)	Demonstrates the ability to diagnose and initiate management for frequently encountered infectious diseases and infectious complications	Diagnoses and manages atypical infectious diseases and infectious complications and demonstrates appropriate antimicrobial stewardship	Provides comprehensive management (prevention, diagnosis, and treatment) of infectious diseases, infectious complications, and multi-drug resistant organisms	Is recognized by peers as a resource or completes quality improvement or research project regarding management of an infectious complication
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/> Not Yet Assessable <input type="checkbox"/>

Patient Care 10: Procedural Competence				
Level 1	Level 2	Level 3	Level 4	Level 5
Requires direct supervision to perform common ICU procedures (e.g., peripheral arterial or central venous catheterization) and recognize complications	Independently performs routine ICU procedures  Recognizes and manages straightforward procedural complications	Performs routine ICU procedures in patients at high risk for procedural complications  Assesses patients at high risk for procedural complications and describes management	Performs specialized ICU procedures (e.g., transvenous pacing, inferior vena cava filter placement)  Independently manages procedural complications	Independently performs advanced ICU procedures (e.g., ECMO, intra-aortic balloon pump), and appropriately manages their complications
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="float: right; text-align: right;">                     Not Yet Completed Level 1 <input type="checkbox"/>                      Not Yet Assessable <input type="checkbox"/> </div>				

Medical Knowledge 1: Pathophysiology, Pharmacology, and Therapeutics in Critical Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of pathophysiology, pharmacology, therapeutics, and complications of common critical care conditions	Demonstrates knowledge of pathophysiology, pharmacology, therapeutics, and complications of complex critical care conditions	Synthesizes and applies knowledge of pathophysiology, pharmacology, therapeutics, and complications of complex critical care conditions	Serves as a resource for knowledge of pathophysiology, pharmacology, therapeutics, and complications of complex critical care conditions	Advances knowledge of pathophysiology, pharmacology, therapeutics, and complications of complex critical care conditions
Synthesizes and prioritizes differential diagnosis for common critical care conditions, with indirect supervision	Synthesizes and prioritizes differential diagnosis for common critical care conditions	Independently synthesizes and prioritizes differential diagnosis for complex critical care conditions	Synthesizes and prioritizes differential diagnosis and anticipates potential complications for complex critical care conditions	Is recognized by peers as an expert in synthesizing and prioritizing differential diagnosis complex critical care conditions and anticipating potential complications
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				
				Not Yet Completed Level 1 <input type="checkbox"/>
				Not Yet Assessable <input type="checkbox"/>

Medical Knowledge 2: Prognosis in Critical Care Conditions				
Level 1	Level 2	Level 3	Level 4	Level 5
Recognizes clinical course, including prognosis, of common critical care conditions	Identifies clinical course for patients with complex critical care conditions, including prognostic uncertainty	Formulates anticipated clinical course for patients with complex critical care conditions by integrating prognostic factors, tools, and models	Facilitates consensus of prognosis for patients with complex critical care conditions in collaboration with other care providers	Advances knowledge of application of tools for prognostication in complex critical care conditions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/> Not Yet Assessable <input type="checkbox"/>

Medical Knowledge 3: Clinical Reasoning in Critical Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates sound clinical reasoning in common critical care problems	Identifies errors in clinical reasoning within critical care	Applies clinical reasoning principles to direct patient care in complex critical care problems	Reviews the clinical decision-making of oneself and the team to identify areas for improvement	Coaches and mentors others in clinical reasoning and helps them to recognize and avoid cognitive errors
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/> Not Yet Assessable <input type="checkbox"/>

Systems-Based Practice 1: Patient Safety and Quality Improvement				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of common patient safety events	Identifies system factors that lead to patient safety events	Participates in analysis of patient safety events (simulated or actual)	Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)	Actively engages teams and processes to modify systems to prevent patient safety events
Demonstrates knowledge of how to report patient safety events	Reports patient safety events through institutional reporting systems (simulated or actual)	Participates in disclosure of patient safety events to patients and their families (simulated or actual)	Discloses patient safety events to patients and their families (simulated or actual)	Mentors others in the disclosure of patient safety events
Demonstrates knowledge of basic quality improvement methodologies and metrics	Describes local quality improvement initiatives (e.g., infection rate, hand hygiene, opioid use)	Participates in local quality improvement initiatives	Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project	Creates, implements, and assesses quality improvement initiatives at the institutional or community level
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>				

Systems-Based Practice 2: System Navigation for Patient-Centered Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of indications and resources for care coordination	Coordinates multidisciplinary care of patients in routine critical care situations	Coordinates and/or leads multidisciplinary care of patients in complex critical care situations	Coordinates care of patients with barriers to health care access or other disparities in care	Leads the design and implementation of improvements to care coordination
Performs safe and effective transitions of care/hand-offs in routine clinical situations	Performs safe and effective transitions of care/hand-offs in complex clinical situations	Supervises safe and effective transitions of care/hand-offs of junior residents	Resolves conflicts in transitions of care between teams	Leads in the design and implementation of improvements to transitions of care
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/>

Systems-Based Practice 3: Community and Population Health				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of population and community health needs and disparities	Identifies specific population and community health needs and inequities for the local population	Uses local resources effectively to meet the needs of a patient population and community	Participates in changing and adapting practice to provide for the needs of specific populations	Leads innovations and advocates for populations and communities with health care inequities
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>				

Systems-Based Practice 4: Physician Role in Health Care Systems				
Level 1	Level 2	Level 3	Level 4	Level 5
<p>Describes basic health payment systems, including government, private, public, and uninsured care, as well as different practice models</p> <p>Describes and identifies administrative roles in a surgical critical care unit</p>	<p>Describes how working within the health care system impacts patient care</p> <p>Identifies the key components and responsibilities of an ICU director for administration for a surgical critical care unit</p>	<p>Analyzes how personal practice affects the system</p> <p>Demonstrates knowledge of administrative leadership activities for the surgical critical care unit</p>	<p>Uses shared decision making in patient care, taking into consideration patient risks and benefits</p> <p>Participates in key activities of administrative leadership for surgical critical care unit</p>	<p>Advocates or leads change to enhance systems for high-value, efficient, and effective patient care</p> <p>Demonstrates proficiency in administrative leadership, including knowledge of regulatory requirements</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Comments:</b></p> <p style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></p>				

Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates how to access and use available evidence, and incorporate patient preferences and values into the care of critically ill patients	Articulates clinical questions and uses scientific literature, guidelines, and algorithms integrated with patient preference to guide care of critically ill patients	Locates and applies the best available evidence, integrated with patient preference, to the care of critically ill patients with complex conditions	Critically appraises and applies evidence, even in the face of uncertain and/or conflicting evidence, to guide care of critically ill patients	Coaches others to critically appraise and apply evidence to the care of critically ill patients with complex conditions, and/or participates in the development of guidelines
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/>

Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth				
Level 1	Level 2	Level 3	Level 4	Level 5
Establishes goals for personal and professional development	Identifies opportunities for performance improvement; designs a learning plan	Integrates performance feedback and practice data to develop and implement a learning plan	Revises learning plan for personal growth based on performance data	Coaches others in the design and implementation of learning plans
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>				

Professionalism 1: Ethical Principles				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of the ethical principles underlying informed consent, surrogate decision making, advance directives, confidentiality, error disclosure, stewardship of limited resources, and related topics	Analyzes straightforward situations using ethical principles	Recognizes need to seek help in managing and resolving complex ethical situations	Independently recognizes and uses appropriate resources for managing and resolving ethical dilemmas as needed	Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>				

Professionalism 2: Professional Behavior and Accountability				
Level 1	Level 2	Level 3	Level 4	Level 5
Describes when and how to appropriately report lapses in professional behavior	Takes responsibility for one's own professional behavior	Demonstrates professional behavior in complex or stressful situations and reports lapses in professional behavior	Intervenes to prevent and correct lapses in professional behavior in oneself and others	Coaches others when their behavior fails to meet professional expectations
Recognizes limits in one's own knowledge/skills and seeks help	Recognizes limits in the team's knowledge/skills and seeks help	Exhibits appropriate confidence and self-awareness of limits in knowledge/skills	Aids junior learners in recognition of limits in knowledge/skills	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>				

Professionalism 3: Self-Awareness and Help-Seeking				
Level 1	Level 2	Level 3	Level 4	Level 5
<p>Identifies the institutional resources available to manage personal, physical, and emotional health</p> <p>Demonstrates knowledge of the principles of physician well-being and fatigue mitigation</p>	<p>Monitors personal health and wellness and appropriately mitigates fatigue and/or stress</p> <p>Manages personal time and assures fitness for duty</p>	<p>Promotes healthy habits and creates an emotionally healthy environment for colleagues</p> <p>Models appropriate management of personal health issues, fatigue, and stress</p>	<p>Recognizes and appropriately addresses signs and symptoms of burnout, depression, suicidal ideation, potential for violence, and/or substance abuse in other members of the health care team</p> <p>Proactively modifies schedules or intervenes in other ways to assure that those caregivers under one's supervision maintain personal wellness and do not compromise patient safety</p>	<p>Coaches others when emotional responses or limitations in knowledge/skills do not meet professional expectations</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Comments:</b></p> <p style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></p>				

This subcompetency is not intended to evaluate a fellow's well-being. Rather, the intent is to ensure that each fellow has the fundamental knowledge of factors that affect well-being, the mechanisms by which those factors affect well-being, and available resources and tools to improve well-being.

Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication				
Level 1	Level 2	Level 3	Level 4	Level 5
<p>Communicates with patients and their families in an understandable and respectful manner</p> <p>Provides timely updates to patients and their families</p>	<p>Customizes communication, avoiding personal biases and communication barriers, with patients and families</p> <p>Actively listens to patients and their families to elicit preferences and expectations</p>	<p>Delivers complex and difficult information to patients and their families</p> <p>Uses shared decision making to make a personalized care plan</p>	<p>Facilitates difficult discussions specific to patient and patient's family needs</p> <p>Effectively negotiates and manages conflict among patients, their families, and the health care team</p>	<p>Coaches others in the facilitation of crucial conversations</p> <p>Coaches others in conflict resolution</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Comments:</b></p> <p style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></p>				

Interpersonal and Communication Skills 2: Interprofessional and Team Communication				
Level 1	Level 2	Level 3	Level 4	Level 5
Clearly and concisely requests and responds to a consultation	Verifies understanding of recommendations when providing or receiving a consultation	Coordinates recommendations from different members of the health care team to optimize patient care	Resolves conflict within the interdisciplinary team	Coaches flexible communication strategies that value input from all health care team members
Uses language that values all members of the health care team	Communicates information effectively to all health care team members	Uses active listening to adapt communication style to fit team needs	Maintains effective communication in a crisis situation	Facilitates regular health care team-based feedback in complex situations
	Solicits feedback on performance as a member of the health care team	Communicates concerns and provides feedback to peers and learners	Communicates constructive feedback to superiors	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>				

Interpersonal and Communication Skills 3: Communication within Health Care Systems				
Level 1	Level 2	Level 3	Level 4	Level 5
Verifies and accurately records current and relevant information in the patient's chart	Concisely documents diagnostic and therapeutic reasoning, accurately reflecting patient course for common conditions	Concisely documents diagnostic and therapeutic reasoning, accurately reflecting patient course for complex conditions	Concisely documents diagnostic and therapeutic reasoning, accurately reflecting patient course for all conditions while satisfying institutional billing needs and compliance	Mentors others in documenting diagnostic and therapeutic reasoning, and accurately reflecting patient course
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				Not Yet Completed Level 1 <input type="checkbox"/>