RONALD REAGAN UCLA MEDICAL CENTER TRANSPLANT ICU / SURGICAL CRITICAL CARE
GOALS AND OBJECTIVES

GOALS	EDUCATIONAL OBJECTIVES	CLINICAL RESPONSIBILITIES / ACTIVITIES	EVALUATIONS
Patient Care: To provide the resident with clinical experience in the critical care management of adult patients with end stage liver disease, benign and malignant hepatobiliary problems, and organ transplants (liver, pancreas, and small bowel; kidney in combination with other organs) that is compassionate, appropriate, and effective.	**Standard Practices in Critical Care** 1. Demonstrate the ability to appropriately diagnose and treat patients with interrelated system disorders in the intensive care unit. 2. Place and maintain the following vascular catheters: a) Central venous (femoral, subclavian, internal jugular) b) Peripheral and femoral arterial c) Pulmonary artery 3. Airway management and laryngoscopy 4. Application of ACLS protocol 5. Manage patients using arterial, central venous and pulmonary artery catheters, including interpretation of hemodynamic and oximetric data from these devices. 6. Placement and management of neuroaxial and peripheral nerve blocks 7. Treat patients requiring thromboembolism prophylaxis. 8. Manage patients requiring analgesia and sedation. 9. Understand and interpret electrocardiograms. 10. Understand and interpret major radiologic tests including chest radiography and abdominal sonography, cholangiography and computed tomography. 11. Understand and utilize the major antimicrobial agents. **Organ Failure Syndromes** 1. Define, understand, and utilize severity-scoring systems in critical care. 2. Manage patients with multiple organ failure syndromes. 3. Understand and utilize hemodynamic drugs, including inotropes and pressors. **Hemorrhage and Circulation** 1. Understand and utilize principles of large volume resuscitation. 2. Understand and manage patients with hemorrhagic shock. 3. Understand and manage patients with coagulation disorders, including disseminated intravascular coagulation (DIC). 4. Understand and utilize colloid and crystalloid resuscitation. 5. Understand and utilize component therapies in resuscitation, including blood, plasma products, and platelets. 6. Understand and utilize antifibrinolytic agents. **Pulmonary** 1. Understand and utilize principles of weaning from acute and chronic ventilatory support. 2. Demonstrate ability to interpret arterial and venous blood gases. 3. Understand and apply concepts and treatment of respiratory failure, acute lung injury (ALI), and acute respiratory dysfunction syndrome (ARDS). 4. Understand and utilize respiratory pharmacotherapy, including	1. Direct involvement in patient care and management, under the supervision of faculty (transplant and pulmonary-critical care). 2. Personal performance of procedures 3. Attendance of lectures and conferences.	1. Assessment by the faculty, attending surgeons during resident/attending interaction in the course of the delivery of patient care. 2. Quarterly meeting with program director.

bronchodilators, nebulizers, steroids, and mucolytics.
5. Understand and utilize principles for diagnosis and treatment of pulmonary thromboembolism.
6. Understand and perform diagnostic and therapeutic thoracentesis.

Cardiac
1. Understand concepts and manage patients with acute coronary syndromes and myocardial infarction.
2. Understand and manage atrial and ventricular tachy- and bradyarrhythmias, including use of antiarrhythmic drugs.
3. Understand concepts and manage patients with acute and chronic heart failure.
4. Understand and utilize the major cardioactive drugs.

Gastrointestinal
1. Understand causes and management concepts for acute and chronic liver failure.
2. Understand and utilize treatment principles for patients before and following liver transplantation.
3. Understand and treat sequelae of portal hypertension, including ascites, encephalopathy, and gastrointestinal bleeding.
4. Understand and utilize management principles for patients following liver resection and major biliary procedures.
5. Understand and perform diagnostic and therapeutic paracentesis.

Renal
1. Understand and manage major acid base disorders.
2. Understand and manage major electrolyte abnormalities.
3. Understand features of acute and chronic renal failure and manage patients with these disorders.
4. Understand indications for use of renal replacement therapies, including hemodialysis and venous hemofiltration, and manage patients receiving these therapies.

Nutrition and Metabolism
1. Understand and apply elements of nutritional assessment.
2. Understand and utilize indications for enteral and parenteral nutritional support.
3. Understand and manage complications of nutritional support.
4. Understand and manage diabetic problems in ICU patients.
5. Understand and manage other endocrine problems including thyroid and adrenal diseases.
6. Understand assessment and management of cortisol deficiencies in ICU patients.

Neurologic
1. Understand and utilize principles of diagnosis and management of coma and other disorders of mentation, including central pontine myelinolysis.
2. Understand and utilize principles of diagnosis and management of seizures.
3. Understand and utilize principles of diagnosis and management of movement disorders, including critical illness polyneuropathy.

	4. Understand and utilize principles of radiologic diagnosis of neurologic conditions.		
Medical Knowledge: To acquire the advanced clinical and applied science knowledge pertinent to the management of the transplant patient.	1. Understand basic concepts of vascular access 2. Understand techniques for placement, maintenance, and removal of indwelling vascular catheters, including related complications 3. Understand risk factors for venous thromboembolism and principles of prophylaxis. 4. Understand principles of analgesia and sedation in the ICU 5. Understand indications for and principles of arterial, central venous and pulmonary artery monitoring. 6. Understand principles for assessment and measurement of tissue oxygenation. 7. Define and understand the following syndromes: systemic inflammatory response (SIRS), multiple organ dysfunction MODS, sepsis, severe sepsis. 8. Understand indications for use and major types of mechanical ventilation. 9. Understand principles of mechanical cardiac support. 10. Understand causes, prophylaxis and treatments of bacterial, viral, fungal, and protozooal infections in the ICU. 11. Understand causes, prophylaxis and treatment of nosocomial respiratory and urinary infections. 12. Understand principles of diagnosis and treatment of resistant organisms (MRSA, VRE). 13. Understand the workup of fever in postoperative patients with and without immunosuppression. 14. Understand the special problems of the immunocompromised patient. 15. Demonstrate knowledge of the principles associated with the diagnosis and management of critically ill patients, including knowledge of simple and complex multiple organ system interactions and abnormalities. 16. Diagnosis and management of ICU-related psychosomatic disorders. 17. Ethical issues related to ICU care.	1. Patient evaluations. 2. Individual supervision and instruction in the ICU. 3. Directed independent study. 4. Annually scheduled lectures. 5. Daily didactic sessions. Subjects include topics listed under Educational Objectives.	1. End of rotation evaluation of resident performance to assess the resident's demonstrated fund of knowledge with respect to the stated objectives. 2. Performance on the annual ABSITE examination, Clinical Management and Basic Science sections. 3. Quarterly meeting with program director.
Practice Based Learning: To be able to investigate and evaluate their own patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.	1. Utilize the medical literature to hone practice indications and guidelines and critically evaluate current management. 2. Understand modern concepts of evidence grading and outcome assessment. 3. Use information technology, on-line resources, expert consultation, and primary texts to expand their knowledge base. 4. Learn to critically evaluate the critical care literature. 5. Apply scientific evidence to decision making. 6. Compare evidence-based practice to commonly taught experience based decision making to develop a personal practice strategy.	1. Use information technology to perform literature search and access on-line medical literature. 2. Find and assess evidence from studies related to transplant medicine. 3. Review and discuss supporting literature with the supervising faculty. 4. Attend faculty lectures on statistics and critical literature evaluation.	1. Daily faculty-resident interaction in the ICU. 2. Self evaluations. 3. Faculty evaluations. 3. Quarterly meeting with program director.

	7. Use self-reflection in the analysis of the practice experience and perform practice-based improvement activities	5. Facilitate the learning of interns, students and other health care professionals.	
Interpersonal and Communication Skills: To be able to demonstrate communication skills that result in effective information exchange and appropriate interaction with colleagues, patients, and ancillary personnel	1. Interact effectively and professionally with patients, families, physicians, nurses, and other members of the health-care team. 2. Practice compassionate end-of-life care 3. Provide effective consultation to other physicians and health care professionals 4. Maintain comprehensive, timely, and legible medical records 5. Demonstrate the ability to present information about patient care to their attendings, attendings from other services, fellows, residents, nursing staff, family members and other members of the care team. 6. Effectively conduct patient interviews, obtain consents for treatment or procedures performed, clearly communicate therapeutic plans, share bad news, and explain treatment expectations. 7. Learn techniques to decrease patient and patient family anxiety. 8. Learn effective communication techniques during periods of stress in order to decrease patient and family anxiety. 9. Demonstrate the ability to effectively communicate concerns with members of the healthcare team. 10. Demonstrate effective communication about medical literature and relevant publications applicable to common ICU problems. 11. Learn strategies and techniques for teaching medical students the principles of critical care medicine.	1. Modeling by the ICU faculty 2. Interact with patients and their families. 3. Discuss patient evaluation and plan with the supervising faculty and pertinent members of the health care team. 4. Experience teaching medical students.	1. Daily faculty-resident interaction in the ICU. 2. Faculty evaluations. 3. Feedback from medical students. 4. Quarterly meeting with program director.
Professionalism: Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	1. Learn to work within a multidisciplinary critical care team. 2. Demonstrate respect, compassion, integrity, and kindness in relationships with patients, families, and colleagues. 3. Demonstrate sensitivity and responsiveness to gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behaviors and disabilities 4. Understand concepts of patient confidentiality and informed consent. 5. Develop the ability to formulate constructive feedback in response to problems encountered in the workplace. 6. Residents' behavior and demeanor is expected to reflect their adherence to ethical principles, manifesting respect, compassion and integrity at all times. 7. Demonstrate sensitivity to patients' gender, beliefs, needs, disabilities and must demonstrate a commitment to their duties towards the patients, the family members and all other parties involved in patient care, including attendings, fellows and residents, nursing staff and ancillary staff. 8. Learn communication techniques with patients and families of different cultural backgrounds who possibly speak little English. 9. Understand the legal and ethical issues involved in patient consent. 10. Demonstrate a commitment to advocating patient care that is appropriate for their individual needs. 11. Adhere to institutional and departmental standards and policies. 12. Demonstrate ability to appropriately take on, share and delegate patient care responsibilities. 13. Demonstrate the ability to effectively balance one's own personal affairs with	1. Modeling by the ICU faculty. 2. Participate in weekly multidisciplinary rounds. 3. Attendance at conferences where many of these issues are discussed.	1. Daily faculty-resident interaction in the ICU. 2. Faculty evaluations. 3. Quarterly meeting with program director.

	clinical and educational duties as outlined in this document. 14. Demonstrate a commitment to ongoing professional development. 15. Learn how to discuss and record cases with complications and/or poor outcomes.		
Systems Based Medicine: To be familiar with the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.	1. Understand and utilize indications for ICU admission. 2. Understand and utilize criteria for ICU discharge. 3. Understand concepts related to transfer of patients from outside institutions. 4. Understand concepts of cost-efficiency in the ICU. 5. Understand limitations of ICU care and concepts of futility. 6. Residents must be cognizant of and practice cost effective health care and resource allocation without compromising the quality of patient care or patient safety. 7. Residents are expected to team with physicians from other specialties and all the other health care providers involved with patient care in order to improve patient outcomes. 8. Learn how to manage consultations and referrals to other services. 9. Understand the complex systems that form the foundation for care of patients suffering from various diseases. 10. Appreciate the complex interactions that go on between primary care teams, intensive care specialists, and nurses in the overall hospital management of these complex patients. 11. Learn how to effectively use information management in patient care.	1. During their experience in the transplant ICU, the trainees will interact with intensive care, anesthesia, surgical and nursing services in a unique environment, which will require sensitivity to structured and multidisciplinary, simultaneous patient care.	1. Daily faculty-resident interaction in the ICU. 2. Faculty evaluations. 3. Quarterly meeting with program director.