

**RIVERSIDE UNIVERSITY HEALTH SYSTEM – MEDICAL CENTER  
ORTHOPAEDIC SURGERY RESIDENCY PROGRAM**

**Surgical Intensive Care Unit (PGY-1)  
(Duration: 4 weeks)**

**Supervising Faculty: Dr. John Agapian and Dr. Aaron Depew**

The overall goal of the Surgical Intensive Care Unit (SICU) PGY -1 rotation is to educate the orthopaedic resident in the care and management of the critically ill patient. Faculty supervision is direct or indirect with direct supervision immediately available.

**Patient Care**

**Goals**

The orthopaedic resident must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health programs and the promotion of health.

**Objectives**

- Demonstrate competence in the hospital care, operative care and follow up care (including rehabilitation) of patients.
- Demonstrate competence in their ability to gather essential and accurate information about their patients
- Demonstrate competence in their ability to make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date orthopaedic scientific evidence, and clinical judgment.
- Demonstrate competence in their ability to develop and carry out patient management plans
- Demonstrate competence in their ability to provide health care services aimed at preventing health problems or maintaining health.
- A history and physical exam to identify the shock state
- Able to recognize what is an urgent and what is an emergent medical condition, seeks appropriate guidance and initiates management.
- Stabilizes patients with urgent and emergent medical conditions and seeks appropriate consultations.
- Demonstrates application of BLS and ACLS protocols
- Consistently performs an accurate, thorough, and focused physical examination, and correlates findings with important clinical events.
- Integrates unique patient information and prioritizes a differential diagnosis.
- Orders appropriate basic lab and imaging studies based on an understanding of indications for testing, and initiates a basic therapeutic plan.
- Makes appropriate clinical decisions based on results of lab, EKG, and imaging studies and generates an appropriate management plan based on clinical findings and relevant pathophysiology.
- Is aware of, understands and consistently applies diagnosis and treatment guidelines and recommendations.
- Teaches patients preventative care.
- Understands and counsels patients on the indications, contraindications and complications of common procedures.
- Demonstrates competence in simple suturing, laceration management, venipuncture, IV access, bladder catheter placement, arterial puncture, and nasogastric (NG) tube placement.
- Demonstrates aseptic technique and other infection control measures.
- The resident will recognize his/her limits and utilize more senior residents on the ICU service, critical care fellows, and critical care attendings as appropriate.
- The resident will work his/her assigned shifts in the ICU, as assigned by the chief medical residents, including night float. The resident will not have specific night call responsibilities for general surgery while on the critical care rotation, aside from caring for patients with surgical issues in the ICU.
- The resident will provide appropriate sign-out to the night-float team, ensuring continuous, uninterrupted patient care between work periods.

## **Medical Knowledge**

### **Goals**

The orthopaedic resident must gain medical knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to infectious/rheumatologic patient care.

### **Objectives**

The resident should be able to:

- Demonstrate expertise in the knowledge of those areas appropriate for an orthopaedic surgeon
- Demonstrate investigatory and analytical thinking approach to clinical situations
- Demonstrate an understanding of different pharmacologic interventions including indications, mechanism of action and side effect.
- Learn in depth the fundamentals of basic science as they apply to patients in the intensive care unit. Examples include anatomy, physiology and pathophysiology of the cardiovascular, respiratory, genitourinary, gastrointestinal, musculoskeletal, hematologic, and endocrine systems.
- Understand the rationale for admission and discharge criteria in the ICU.
- Understand factors associated with assessment of preoperative surgical risk. Examples include evaluation of the high risk cardiac patient undergoing non-cardiac surgery.
- Understand fluid compositions and the effect of the losses of such fluids as gastric, pancreatic and biliary from fistulas at various levels.
- Understand the indications for, and complications of blood component therapy.
- Discuss the pathophysiology of respiratory failure.
- Demonstrate an understanding of acid-base disorders, including diagnosis, etiology, and instituting appropriate treatment.
- Discuss the pathophysiology, indications, and complications associated with various modes of mechanical ventilation. Examples include ventilator management of acute lung injury, pneumonia, and ARDS, as well as weaning from ventilator support.
- Understand the role of hormones and cytokines in the graded metabolic response to injury, surgery and infection.
- Understand the indications, routes and complications of administration of parenteral and enteral forms of nutrition.
- Understand the risk factors and common pathogens that are associated with nosocomial infections.
- Understand the factors associated with altered mental status in the critically ill patient, including septic, metabolic and pharmacologic causes.
- Understand the risk factors associated with stress gastritis.
- Understand the causes and treatment regimens for gastrointestinal bleeding from both upper and lower sources.
- Discuss end of life ethical issues. Examples include organ donation and withdrawal of support.

## **Practice-based Learning and Improvement**

### **Goals**

The orthopaedic resident must demonstrate the ability to investigate and evaluate his/her care of intensive care patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning

### **Objectives**

- Identify strengths, deficiencies, and limits in one's knowledge and expertise
- Set learning and improvement goals
- Identify and perform appropriate learning activities
- Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement

- Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.
- Use information technology to optimize learning
- Participate in the education of patients, families, students, residents and other health professionals
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness
- Complete the personal learning project in the practice based learning and improvement curriculum for the rotation.

## **Interpersonal and Communication Skills**

### **Goals**

The orthopaedic resident must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and other health professionals.

### **Objectives**

- Develops positive relationships with patients and families.
- Negotiates and manages simple patient/family-related conflicts.
- Is aware of factors that affect communications (e.g. modality; language: appropriate use of interpreters; hearing, vision and cognitive impairments).
- Identifies special communication needs of vulnerable populations.
- Can organize both written and oral information to be shared with patient and family, and engage patients in shared and decision-making.
- Adapts patient- and family-related information gathering to social cultural context.
- Effectively communicates with vulnerable populations, both patients and families.
- Uses strategies to ensure patient understanding.
- Recognizes interpersonal and communication conflicts with other physicians and health professionals.
- Expands communication using proper medical terminology and by giving therapeutic rationale.
- Effectively communicates patient information during transitions in care.
- Develops working relationships in complex situations and across specialties.
- Documents results of communications, such as patient preferences, conflict resolution, and advance directives.
- Communication reflects a comprehensive understanding of all elements of a patient's clinical condition.
- Actively participates in team-based care
- Supports activities of other team members
- Actively participates in interdisciplinary meetings to improve patient care
- Participates in family/patient/team member conferences, and incorporates patient and family values and preferences.
- Provides legible, accurate, complete and timely documentation that is congruent with medical standards.
- Demonstrates appropriate use of the electronic health record.
- Effectively and ethically uses all forms of communication, including face-to-face, telephone, and electronic.
- Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds
- Communicate effectively with physicians, other health professionals, and health related agencies
- Act as a consultative role to other physicians and health professionals
- Maintain comprehensive, timely, and legible medical records
- Use effective listening skills and elicit and provide information using effective nonverbal,
- Explanatory, questioning, and writing skills, if applicable.

## Professionalism

### Goals

The orthopaedic resident must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles

### Objectives

- Demonstrates an understanding of the importance of compassion, integrity, respect, sensitivity, and responsiveness, and is able to exhibit these attitudes consistently in common and uncomplicated situations.
- Is aware of personal beliefs and values that impact interactions with others and may influence provision of medical care; is able to manage these values and beliefs so that they have minimal impact on patient care.
- Is able to exhibit these attitudes in complex and complicated situations.
- Recognizes how one's own personal beliefs and values impact medical care; consistently manages one's own values and beliefs to optimize relationships and medical care.
- Exhibits an interest in and formulates strategies to learn about issues of diverse populations.
- Is knowledgeable about the beliefs, values, and practices of diverse patient populations and their potential impact on patient care.
- Consistently recognizes ethical issues in practice; is able to discuss, analyze, and manage these in common clinical practice.
- Effectively analyzes and manages frequently encountered ethical issues.
- Recognizes personal beliefs and their potential impact on patient care.
- Effectively manages personal beliefs to avoid any negative impact on patient care.
- Defines and understands physician accountability to patients, society, and the profession.
- Develops an understanding of one's own beliefs and values and how they impact one's attitude and behavior; is able to understand and balance the needs of oneself and others to prioritize and provide appropriate medical care.
- Consistently recognizes limits of one's own knowledge in common and frequent clinical situations, and asks for assistance.
- Consistently recognizes limits of one's own knowledge in uncommon and complicated clinical situations; develops and implements plans for the best possible patient care.
- Recognizes the needs to develop and demonstrate leadership skills.
- Identifies basic principles of physician wellness, including rest, diet, exercise, personal health, and balance in life.
- Demonstrates adequate management of personal emotional, physical, and mental health.
- Is knowledgeable about and effectively manages the issues related to fatigue and sleep deprivation.
- Recognizes signs of physician impairment.
- Is able to assess application of principles of physician wellness, alertness, delegation, teamwork, and optimization of personal performance to the practice of medicine in one's own self and others.
- Is able to identify and manage situations in which maintaining personal emotional, physical, and mental health is challenged by common and typical clinical care solutions.
- Demonstrate respect, integrity and compassion for others
- Demonstrate responsiveness to patient needs that supersedes self interest
- Demonstrate accountability to patients, society and the profession
- Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in culture, age, gender, disabilities and sexual orientation
- Demonstrate commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent and business practice

## Systems-based Practice

### Goals

The orthopaedic resident must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

### Objectives

- Understands the need for an interdisciplinary approach to effectively coordinate care.
- Understands coordination of care between different systems.
- Transmits relevant information during transitions of care.
- Facilitates safe and effective transitions of care.
- Works with other members of the health care team to identify system errors and areas of potential quality improvement
- Works in interdisciplinary teams to identify solutions (action plans) to identified system errors.
- Is respectful of other team members and actively seeks their input to solve problems.
- Provides examples of cost and value implications of care and begins to incorporate these into patient care decisions
- Practices cost-effective care with awareness of risk-benefit considerations, and uses cost considerations in medical decision-making
- Work effectively in various health care delivery settings and systems relevant to general surgery
- Coordinate patient care within the health care system relevant to their general surgical issues
- Practice cost-effective health care and resources allocation that does not compromise quality of care.
- Advocate for quality patient care and optimal patient care systems
- Work in inter-professional teams to enhance patient safety and improve patient care quality
- Participate in identifying system errors and implementing potential system solutions

### ASSESSMENT METHOD:

Direct and indirect observation by faculty with assessment on formal end of resident rotation evaluation form.

### DIDACTIC CURRICULUM REQUIRED ATTENDANCE:

Ortho Monday Pre-Op Conference (Monday AM)

Wednesday Pediatric Conference (Wednesday AM)

Friday Post-Op Conference (Friday AM)

Ortho Monthly Research Meeting (Wednesday AM)

Monthly Ortho Department Meeting/Educational Grand Rounds (Monday PM)

Bi-Monthly M&M Conference (Monday PM)

Ortho Basic Surgical Skills Lab (As scheduled)

General Surgery M&M and Grand Rounds (Tuesday AM)

Tumor Board (Tuesday PM)