

## RONALD REAGAN UCLA MEDICAL CENTER SIMULATION ELECTIVE GOALS AND OBJECTIVES

GOALS	EDUCATIONAL OBJECTIVES	CLINICAL RESPONSIBILITIES / ACTIVITIES	EVALUATIONS
<p><b>Patient Care:</b> To provide the resident with simulation experience in the anesthetic management of adults and pediatric surgical patients that is compassionate, appropriate, and effective.</p> <p>Residents will develop skills in both managing anesthesia crises and using simulation and debriefing tools for practice and teaching.</p>	<p>Residents must demonstrate patient care skills that result in effective management of situations in which the patient's condition or environment are rapidly deteriorating.</p> <ol style="list-style-type: none"> <li>1. <i>Cognitive Objectives (Knowledge):</i> <ol style="list-style-type: none"> <li>a) Recognize signs/symptoms of impending perioperative complications.</li> </ol> </li> <li>2. <i>Psychomotor Objectives (Skills):</i> <ol style="list-style-type: none"> <li>a) Calmly manage common crisis situations by initiating appropriate acute therapies (i.e. airway management, medication administration).</li> <li>b) Act in a leadership role in a crisis event.</li> <li>c) Communicate important information directly and clearly during an event</li> </ol> </li> <li>3. <i>Affective Objectives (Attitude):</i> <ol style="list-style-type: none"> <li>a) Appreciate the importance of effective event management.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. The elective consists of the equivalent of one month protected time (20 working days) spread over the academic year as appropriate for maximal simulation exposure and research activities.</li> <li>2. They will attend a formal simulation instructor course to learn educational theories of experiential learning and debriefing.</li> <li>3. Each resident will have a staff mentor to ensure a smooth and productive elective.</li> <li>4. Project will be broken down such that specific benchmark goals will be met as appropriate to the specific projects designed.</li> <li>5. The resident will attend one 2-day course to learn the essentials of simulation instruction including scenario design and debriefing. Core to this curriculum is educational theory and behavioral skills, such as CRM.</li> <li>6. Residents will take call in the main OR.</li> </ol>	<ol style="list-style-type: none"> <li>1. End of rotation evaluation.</li> <li>2. Quarterly meeting with program director.</li> </ol>
<p><b>Medical Knowledge:</b> To acquire the clinical and applied science knowledge pertinent to the management of the surgical patient.</p>	<ol style="list-style-type: none"> <li>1. Demonstrate proficiency at interpretation of preoperative findings in history, physical and laboratory work and importance in choice of inpatient vs. ambulatory surgery, anesthetic technique, and monitors.</li> <li>2. Defend choice of monitoring, anesthesia technique and discuss options.</li> <li>3. Understand the pathophysiology of medical diseases in surgical patients and implications for anesthesia (pulmonary, cardiovascular, hepatic, renal, endocrine).</li> <li>4. Understand the physiology and pathophysiology of significant respiratory events (hypoxemia, hypercapnia, bronchospasm).</li> <li>5. Understand the physiology and pathophysiology of significant cardiovascular events (caval compression, hypovolemia, hypervolemia, pulmonary embolism, myocardial ischemia, myocardial depression, aortic cross-clamp, fat emboli).</li> <li>6. Discuss indications for use and how to obtain and apply information from an arterial line, CVP line, and pulmonary artery catheter.</li> <li>7. Accurately estimate fluid requirements (crystalloid/colloid/blood).</li> <li>8. Demonstrate working knowledge of pharmacology of vasoactive and anesthetic drugs.</li> <li>9. Understand the pharmacology and physiology of acute pain.</li> </ol>	<ol style="list-style-type: none"> <li>1. Individual supervision and instruction by the mentoring faculty.</li> <li>2. Directed independent study.</li> <li>3. Attend annually scheduled lectures.</li> <li>4. Discuss topics listed under Educational Objectives with the supervising faculty.</li> <li>5. The resident will participate in simulator activities (medical students, residents, team training, etc.) and serve in various roles: actor, facilitator of debriefings, assistant to the simulator operator.</li> <li>6. Design novel scenario to be added to UCLA simulator curriculum library, complete with: <ol style="list-style-type: none"> <li>a) <b>Plot</b>, Actors, and Prop Set-up written in an adaptation from the Duke Simulation Patient Design Template, which is the preferred format for submission to the Journal of the Society for Simulation in Healthcare and offers a comprehensive standardized format for our library.</li> <li>b) <b>Patient Chart</b>: Obtain/create notes, labs, images, ECGs, etc. Must be accurate in</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. End of rotation evaluation.</li> <li>2. Quarterly meeting with program director.</li> </ol>

		<p>order to make the experience realistic and credible (e.g. if labs were drawn QD for past 3 days, all of the results should be available in the chart. Similarly, labs that are likely to be ordered <i>during</i> the scenario should not appear in the chart)</p> <p>c) <b>Debriefing Guide:</b> contains the key teaching points to facilitate and explore according to the formal goals and objectives as outlined in the Duke Template. Includes at least two Crisis Resource Management skills and two clinical topics.</p> <p>d) <b>References:</b> review recent articles related to the medical subject/behavioral issues involved. Especially crucial for controversial topics. At least one article should be identified for post-debriefing distribution.</p> <p>7. The resident will pilot a scenario at least twice on peers during usual simulation activities. Script and set-up revisions as needed. Resident will gain appreciation for semi-controlled nature of simulation, and develop skill in contingency planning when either subject or simulator itself do not act as expected.</p> <p>8. Residents will take call in the main OR.</p>	
<p><b>Practice Based Learning:</b> To be able to investigate and evaluate their own patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.</p>	<p>Residents will be able to investigate and evaluate their own patient care practices, and appraise and assimilate scientific evidence to improve practice.</p> <ol style="list-style-type: none"> <li>1. <i>Cognitive Objectives (Knowledge):</i> <ol style="list-style-type: none"> <li>a) Understand the multifactorial nature of medical errors including: personal biases, perceptions and behaviors, team/group dynamics, and system failures.</li> <li>b) Look up practice guidelines, apply evidenced based medicine to their own practice and adhere to established hospital policies and protocols.</li> <li>c) Understand the principles of debriefing as a learning tool.</li> </ol> </li> <li>2. <i>Psychomotor Objectives (Skills):</i> <ol style="list-style-type: none"> <li>a) Demonstrate ability to debrief a crisis scenario.</li> <li>b) Participate in self-observation and reflection towards improving practice.</li> </ol> </li> <li>3. <i>Affective Objectives (Attitude)</i> <ol style="list-style-type: none"> <li>a) Appreciate the value of self-reflection and debriefing to improve skills, behavior, and teamwork.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Obtain feedback from the supervising faculty.</li> <li>2. Review and discuss scientific literature with the supervising faculty.</li> <li>3. Attend faculty lectures on statistics and critical literature evaluation.</li> <li>4. The resident will submit a manuscript for publication/poster (WARC, SEA, IMSH, ASA, etc.).</li> <li>5. Residents will take call in the main OR.</li> </ol>	<ol style="list-style-type: none"> <li>1. Daily faculty-resident interaction in simulation.</li> <li>2. End of rotation evaluation.</li> <li>3. Quarterly meeting with program director.</li> </ol>

<p><b>Interpersonal and Communication Skills:</b> To be able to demonstrate communication skills that result in effective information exchange and appropriate interaction with colleagues, surgeons, patients, and ancillary personnel</p>	<p>Residents will be able to demonstrate interpersonal and communication skills for effective information exchange with members of the perioperative team.</p> <ol style="list-style-type: none"> <li>1. <i>Cognitive Objectives (Knowledge):</i> <ol style="list-style-type: none"> <li>a) Know key principles of crisis management: role clarity, effective communication, personnel support, resource management, and global assessment.</li> <li>b) Understand the models of high-performance teams.</li> </ol> </li> <li>2. <i>Psychomotor Objectives (Skills):</i> <ol style="list-style-type: none"> <li>a) Explicitly establish roles for the team members during a crisis.</li> <li>b) Communicate in a direct fashion using a closed-loop technique.</li> <li>c) Solicit and effectively utilize help.</li> <li>d) Use global assessment techniques to avoid fixation errors</li> </ol> </li> <li>3. <i>Affective Objectives (Attitude):</i> <ol style="list-style-type: none"> <li>a) Appreciate the importance of both event management and medical management in attaining a good perioperative or crisis event outcome.</li> <li>b) Appreciate the importance of information sharing with all members of the patient care team.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Residents will be expected to participate in various roles for scheduled simulation activities.</li> <li>2. Modeling by the mentoring faculty.</li> <li>3. Participate in teaching participants in simulation.</li> <li>4. Residents will take call in the main OR.</li> </ol>	<ol style="list-style-type: none"> <li>1. Daily faculty-resident interaction in simulation.</li> <li>2. End of rotation evaluation.</li> <li>3. Feedback from simulation participants.</li> <li>4. Quarterly meeting with program director.</li> </ol>
<p><b>Professionalism:</b> Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.</p>	<p>Residents will be able to demonstrate professional behavior and composure</p> <ol style="list-style-type: none"> <li>1. <i>Cognitive Objectives (Knowledge):</i> <ol style="list-style-type: none"> <li>a) Learn methods for managing disagreements between healthcare providers in an acute clinical situation.</li> </ol> </li> <li>2. <i>Psychomotor Objectives (Skills):</i> <ol style="list-style-type: none"> <li>a) Demonstrate the language used for collaborative conflict management.</li> </ol> </li> <li>3. <i>Affective Objectives (Attitude):</i> <ol style="list-style-type: none"> <li>a) Appreciate the importance, ethical necessity, and feasibility of collaborative decision-making even during time-constrained crisis events.</li> <li>b) Appreciate the importance of managing practitioner conflict.</li> </ol> </li> <li>4. Demonstrate ability to appropriately take on, share and delegate patient care responsibilities.</li> <li>5. Demonstrate the ability to effectively balance one's own personal affairs with clinical and educational duties as outlined in this document.</li> <li>6. Demonstrate a commitment to ongoing professional development.</li> </ol>	<ol style="list-style-type: none"> <li>1. Modeling by the mentoring faculty.</li> <li>2. Attend conferences where many of these issues are discussed.</li> <li>3. Residents will take call in the main OR.</li> </ol>	<ol style="list-style-type: none"> <li>1. Daily faculty-resident interaction in simulation.</li> <li>2. End of rotation evaluation.</li> <li>3. Quarterly meeting with program director.</li> </ol>
<p><b>Systems Based Practice:</b> 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.</p>	<p>Residents will be able to demonstrate an awareness of and responsiveness to the larger context of healthcare systems, as well as utilize system resources to provide optimal care.</p> <ol style="list-style-type: none"> <li>1. <i>Cognitive Objectives (Knowledge):</i> <ol style="list-style-type: none"> <li>a) Know how to effectively deploy resources and direct a multidisciplinary team.</li> <li>b) Employ simulation to practice teamwork among perioperative professionals.</li> </ol> </li> <li>2. <i>Psychomotor Objectives (Skills):</i> <ol style="list-style-type: none"> <li>a) Educate peers and team members in patient safety related skills and behaviors using simulation as a technique.</li> </ol> </li> <li>3. <i>Affective Objectives (Attitude):</i> <ol style="list-style-type: none"> <li>a) Appreciate that failures in the system can lead to patient care mishaps.</li> <li>b) Appreciate how simulation can change a healthcare system.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Interact with participants from various disciplines in a unique environment, which will require a structured and multidisciplinary approach.</li> <li>2. Residents will take call in the main OR.</li> </ol>	<ol style="list-style-type: none"> <li>1. Daily faculty-resident interaction in simulation.</li> <li>2. End of rotation evaluation.</li> <li>3. Quarterly meeting with program director.</li> </ol>