

Stanford University Anesthesiology Residency Program
Rotation Goals and Objectives for Residents
Core Curriculum for Post Anesthesia Care Unit (PACU)
Duration: 2 weeks
Rotation Director: Suma Ramzan MD

Description:

The Post Anesthesia Care Unit (PACU) at Stanford University Medical Center offers a broad experience in postoperative care for inpatients and outpatients recovering from colorectal, orthopedic, neurosurgical, urologic, plastic, head and neck, thoracic, and gynecologic surgery. Both senior (CA 2 and 3) and junior (CA 1) level residents are eligible for this 2 week rotation. Residents will work in the Main OR 500p PACU. Supervision will be provided by the general OR attending who was part of the patient's primary anesthesia team and also the attending who is in charge of the schedule for the day. Residents will be responsible for management of emergencies in the PACU, and assessment and management of postoperative pain and PONV, amongst other PACU patient issues. Other goals include achieving proficiency in the management of other common and less common post anesthetic complications, and understanding the roles of the nursing and physician staff in the care of postoperative patients.

The 3 domains of learning - cognitive knowledge, technical or psychomotor skills, and effective behavior lead to a consultant anesthesiologist. In the PACU rotation, residents learn technical and decision-making skills that lead to expertise in postoperative anesthetic management. Resident attendance at the departmental afternoon weekly lecture series and morning grand rounds is expected. It is also expected that residents spend time outside of clinical work for independent reading. Journal articles related to PACU medicine will be provided for review online at the curriculum hub on Ether. Residents will also be asked to provide a brief and focused in-service presentation to the PACU nursing staff on a topic relevant to the PACU, chosen by each resident. In addition, residents will fill out a self assessment form related to the management of PACU patients and complete the six teaching modules and pre/post test questions.

Residents will be evaluated in the 6 core competencies as outlined by ACGME Milestones 2.0 (medical knowledge, patient care, systems based practice, practice based learning and improvement, professionalism and interpersonal and communication skills) using specific web-based evaluation forms completed by faculty incorporating evaluations from the PACU nurses and any other feedback obtained from faculty (pain, regional, scheduler, MSD etc.). Evaluation will occur at the end of the 2-week rotation. Residents must keep an accurate online log of procedures performed in the PACU.

An outline of core competencies with rotation objectives, instructional activities, and evaluations is outlined below in more detail.

Modality for Resident Performance Assessment in PACU:

A. Self Assessment

The resident checks off each criterion below as the material is mastered. Self reflection on your own competencies is expected.

B. Faculty Assessment

The rotation director faculty will review your self assessment, your written projects and your evaluation by the nurses and any feedback from the anesthesiology faculty.

Specific Goals and Objectives For PACU Residents

Medical Knowledge 1: Foundational Knowledge

Overall Intent: To acquire and apply knowledge of established and evolving basic, cognitive and applied clinical sciences that relate to the practice of adult anesthesia in the postanesthesia care unit (PACU). Gain understanding of PACU complications such as airway obstruction, hypoxia, hypotension, hypoventilation, pneumothorax, pulmonary embolism, hypovolemia, arrhythmias, cardiac arrest, EKG changes, incomplete reversal of muscle relaxants, overdose of opioids, nausea and vomiting, hyper and hypothermia, glucose derangements, pain, complications of blood transfusion, emergence delirium, prolonged recovery and discharge criteria.

Milestones	Examples
<p>Level 1: Demonstrates knowledge of common PACU problems and how it relates to patients with common medical and surgical conditions.</p> <p>Identifies common medications used to treat common PACU issues.</p>	<ul style="list-style-type: none"> • Describes pathophysiology and management of patients with hypertension, diabetes and asthma in the PACU setting. • Can list common PACU problems of patients undergoing a general anesthesia. • Can discuss what medications can be used for PONV.
<p>Level 2: Demonstrates knowledge of common and complex PACU problems and how it relates to patients with common medical and surgical conditions.</p> <p>Demonstrates knowledge of pharmacology of medications routinely used in anesthetic care.</p>	<ul style="list-style-type: none"> • Articulates potential complications of anesthesia administration such as bronchospasm and laryngospasm in patients with asthma, URIs or COPD. • Demonstrates knowledge of pharmacology of beta agonists to treat bronchospastic disease
<p>Level 3: Demonstrates knowledge of complex PACU problems in complex medical patients.</p> <p>Demonstrates knowledge of medications used in subspecialty areas (cardiac, neuro).</p>	<ul style="list-style-type: none"> • Distinguishes pathophysiology of myasthenia gravis and Eaton-Lambert myasthenic syndrome in relation to anesthetic agents used and their effects in the PACU. • Articulates the differences between mannitol and hypertonic saline being administered to a neurosurgical patient in the PACU. • Knows the mechanisms of action of medications such as inhaled nitric oxide, vasopressin, and protamine.

<p>Level 4: Demonstrates a comprehensive knowledge of medical and surgical diseases as it relates to the patient's PACU course</p> <p>Demonstrates comprehensive knowledge of pharmacology in the setting of complex comorbidities</p>	<ul style="list-style-type: none"> • Able to initiate the care of a PACU patient with Acute Coronary syndrome from identification of the problem and which medications are appropriate to commence. treatment plan to begin in the PACU.
<p>Level 5: Demonstrates scientific knowledge of uncommon, atypical or complex conditions presenting in the PACU and participates in relevant clinical research and protocol creations.</p>	<ul style="list-style-type: none"> • Composes a plan for a PACU patient with a rare disorder such as porphyria and how it relates to their PACU care • Collaborates with a research project investigating PACU complications in sleep apnea patients and devises a protocol to implement to reduce morbidity and mortality
<p>Instructional Activities</p>	<ul style="list-style-type: none"> • Journal Articles • In-Service Talk • PACU Teaching modules • PostOp Note • Weekly, Resident Lectures • Grand Rounds • Annual Stanford Anesthesia Resident Refresher Course (ASARRC) • CME Conference chosen by resident
<p>Evaluation</p>	<ul style="list-style-type: none"> • Faculty Rotation Evaluations (https://stanford.medhub.com) • Review of Self-Assessment form • In-training exams • Practice Oral exams
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> • Complete the reading and answer questions related to 6 modules on PACU topics • Complete 20 board-type PACU questions prior to the rotation and after the rotation • Complete the self assessment form attesting to knowledge acquired. • Complete 3 postoperative notes on patients with complications in PACU

Medical Knowledge 2: Clinical Reasoning

Overall Intent: *To develop a complete and prioritized differential diagnosis while minimizing the impact of cognitive errors in the PACU patient. Able to recognize PACU problems, create differential diagnosis, identify medical interventions and execute treatment plans.*

Milestones	Examples
<p>Level 1: Organize and accurately summarize information obtained from the patient evaluation in the PACU and develop a clinical impression.</p> <p>Recognize the PACU issue occurring.</p> <p>Able to seek medical advice for management under the supervision of the MSD attending and primary OR anesthesia team.</p> <p>List types of clinical reasoning errors</p>	<ul style="list-style-type: none"> • Present a focused and relevant patient history and summarize findings in the PACU such as that the patient has asthma and now presents with hypoxemia. • Understand how bias may play a role in identifying the underlying pathology.
<p>Level 2: Organizes and accurately assesses PACU patient's medical problems.</p> <p>Able to create a PACU intervention plan and initiate it while seeking appropriate guidance and medical support for optimizing patient care by consulting with an attending physician.</p>	<ul style="list-style-type: none"> • Identify the patient with asthma has hypoxemia and create a differential diagnosis of the underlying etiology. • Able to create a PACU intervention while consulting with an attending anesthesiologist.
<p>Level 3: Can appropriately initiate and respond to PACU crisis situations prior to activating help / resources required.</p> <p>Plan to treat PACU patients requires minimal supervision by supervising faculty.</p> <p>Retrospectively apply clinical reasoning principles to identify errors.</p>	<ul style="list-style-type: none"> • Be able to recognize that an asthmatic patient who has hypoxemia may be multifactorial in etiology. • Recognize fixation error after giving bronchodilators without confirming that there are bilateral breath sounds. Realize there may be other etiologies for hypoxemia such as pneumothorax.
<p>Level 4: Able to respond to all PACU related issues and PACU crises, create and implement a medical plan of intervention and execute even on complex patients and diagnoses.</p> <p>Continually re-appraises one's clinical reasoning to improve patient care in real time.</p> <p>Able to call on the appropriate consult services and resources to implement your plan.</p>	<ul style="list-style-type: none"> • Coordinates the care of a PACU patient with Acute Coronary syndrome from identification of the problem, assessment of the patient, treatment plan to begin in the PACU, coordinating the hospital speciality services and handing off to the appropriate next level of care (ICU/Cardiac cath).
<p>Level 5: Coaches others to develop prioritized differential diagnoses in complex patient presentations.</p>	<ul style="list-style-type: none"> • Develops and teaches algorithms for use by residents to diagnosis and management of hypoxemia.

<p>Models how to recognize errors and reflect upon one's own clinical reasoning.</p>	<ul style="list-style-type: none"> • Devises a protocol and curriculum to implement to reduce morbidity and mortality
<p>Instructional Activities</p>	<ul style="list-style-type: none"> • Journal Articles • PACU presentation • PACU Teaching modules • PostOp Note • Weekly, Resident Lectures • Grand Rounds • Annual Stanford Anesthesia Resident Refresher Course (ASARRC) • CME Conference chosen by resident
<p>Evaluation</p>	<ul style="list-style-type: none"> • Faculty Rotation Evaluations (https://stanford.medhub.com) • Nursing evaluations • Review of Self-Assessment form • In-training exams • Practice Oral exams
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> • Direct observation by nursing staff and physicians • Feedback from evaluations • Complete the self assessment form attesting to the clinical reasoning skills listed • Complete 3 postoperative notes on patients with complications in PACU

Patient Care 3: Application and Interpretation of Monitors

Overall intent: To demonstrate proficiency in the use of monitors in anesthesia practice and interpretation and application of data

Milestones	Examples
<p>Level 1: Identifies standard monitors</p> <p>Applies standard monitors to patients</p> <p>Interprets standard monitoring data</p>	<ul style="list-style-type: none"> • Describes American Society of Anesthesiologists (ASA) guidelines for basic monitoring of patients in the PACU • Chooses correct blood pressure cuff size, able to apply 5 lead EKG monitor correctly and chooses appropriate pulse oximetry site for PACU • Describes normal reference ranges for blood pressure, heart rate, pulse oximetry, temperature and end-tidal carbon dioxide
<p>Level 2: Independently selects central and arterial catheters based on patient's comorbidities and PACU complications</p> <p>Inserts central and arterial catheters with supervision</p> <p>Addresses malfunctions in standard monitors and interprets data from central and arterial lines with supervision.</p>	<ul style="list-style-type: none"> • Summarizes appropriate uses and contraindications for central and arterial catheterization; explains the rationale for close blood pressure monitoring in an uncontrolled hypertensive PACU patient to enhance their care. • Describes applicable anatomy, procures and prepares appropriate equipment, demonstrates proper sterile technique, and secures and labels lines. • Identifies dampening or artifact of waveforms and suggests ways to improve tracings.
<p>Level 3: Selects advanced monitors based on patient comorbidities and PACU complications without the need for supervision.</p> <p>Inserts and applies advanced monitors with supervision.</p> <p>Recognizes and addresses malfunctions in the advanced monitors and interprets data with minimal supervision.</p>	<ul style="list-style-type: none"> • Develops a plan for arterial line placement after identifying uncontrolled hypotension in a PACU patient. • Safely intubates an hemodynamically unstable patient and inserts a transesophageal echo (TEE) or other advanced monitors with guidance. • Expresses concern when unable to advance a TEE problem and asks for guidance.
<p>Level 4: Independently selects advanced monitors based on patient comorbidities and PACU complications.</p>	<ul style="list-style-type: none"> • Advocates for central line placement to infuse vasopressors in an unstable patient.

<p>Capable of independently inserting or applying advanced invasive monitors.</p> <p>Independently interprets data, recognizes and addresses malfunctions in monitors and other equipment.</p>	<ul style="list-style-type: none"> • Able to troubleshoot placement of the central line and able to seek help / guidance when required.
<p>Level 5: Functions as a consultant for difficult advanced monitor placement</p> <p>Participates in the research and / or development of protocols for monitoring technology.</p>	<ul style="list-style-type: none"> • Able to identify the need for advanced monitor placement and able to followup through on plan without supervision. • Able to troubleshoot issues on their own. • Pioneers novel ways to enhance patient safety during placement and use of these advanced monitors.
<p>Instructional Activities</p>	<ul style="list-style-type: none"> • Journal articles • PACU presentation • Teaching Modules • Teaching in PACU by OR attending • Grand Rounds • ASARRC • CME conference chosen by resident
<p>Evaluation</p>	<ul style="list-style-type: none"> • Faculty Rotation Evaluations • PACU Nursing Staff Evaluation
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> • Self assessment form review • Direct observation by nurses / physicians • Feedback from multiple sources • Simulation • Log of procedures or problems dealt with during PACU rotation and enter the etiology, treatment and result.

Patient Care 7: Situational Awareness and Crisis Management

Overall intent: To recognize and respond to the dynamic milieu of the PACU environment

Milestones	Examples
<p>Level 1: Demonstrates vigilance during clinical care</p> <p>Articulates causes of common PACU crisis situations</p> <p>Responds to crisis situations as a reliable team member</p>	<ul style="list-style-type: none"> ● Limits use of personal electronic devices to calculate fluids, medication doses or other patient care activities in the PACU ● Describes differential diagnosis for hypoxia ● Actively seeks ways to assist in the care of a PACU patient who is having a complication.
<p>Level 2: Demonstrates awareness of PACU complications as they are occurring and responds to requests by PACU nurses who are concerned.</p> <p>Recognizes crisis situations and calls for help immediately.</p> <p>Participates in the management during crisis situations.</p>	<ul style="list-style-type: none"> ● Informs primary attending for the PACU patient of a PACU complication ● Identifies hypotension and declining patient stability in PACU and calls immediately for help. ● Able to help obtain large IV access in the unstable PACU patient.
<p>Level 3: Demonstrates awareness of PACU complications as they are occurring or just prior to a crisis without notification by the PACU nurses.</p> <p>Anticipates impending crisis and identifies possible etiologies with supervision.</p> <p>Initiates management and resolves crisis situations with some supervision.</p>	<ul style="list-style-type: none"> ● Develops a plan for arterial line placement after identifying uncontrolled hypotension in a PACU patient. ● Safely intubates an hemodynamically unstable patient and inserts a transesophageal echo (TEE) or other advanced monitors with guidance. ● Expresses concern when unable to advance a TEE problem and asks for guidance.
<p>Level 4: Independently demonstrates awareness of PACU issues</p> <p>Independently anticipates impending crisis and identifies possible etiologies with minimal to no supervision.</p> <p>Independently initiates management and resolves crisis situation.</p>	<ul style="list-style-type: none"> ● Informs attending of EKG changes and commences medications as necessary while consulting specialty services for possible medical intervention (cardiac cath or cardioversion). ● Independently recognizes subtle signs of excessive blood loss and prepares for massive transfusion. ● Executes an intubation on a patient with airway compromise or apnea.
<p>Level 5: Leads the health care team in the</p>	<ul style="list-style-type: none"> ● In the setting of conflicting opinions,

management of a crisis situation.	recognizes acute surgical blood loss and initiates crisis response.
Instructional Activities	<ul style="list-style-type: none"> • Journal articles • PACU presentation • Teaching Modules • Teaching in PACU by OR attending • Grand Rounds • ASARRC • CME conference chosen by resident
Evaluation	<ul style="list-style-type: none"> • Faculty Rotation Evaluations • PACU Nursing Staff Evaluation
Assessment Models or Tools	<ul style="list-style-type: none"> • Self assessment form review • Direct observation by nurses / physicians • Feedback from multiple sources • Simulation • Log of procedures or problems dealt with during PACU rotation and enter the etiology, treatment and result.

Patient Care 8: Post-Operative Care

Overall intent: To effectively manage routine post-operative care and complications related to anesthesia. To provide compassionate, appropriate, and effective anesthetic management of adults in the PACU. Develop skills related to management of PACU issues such as airway obstruction, stridor, emergency intubation, interpretation of chest radiographs and EKGs, need for placement of peripheral nerve blocks, peripheral nerve and plexus catheters and epidural catheters to provide postoperative pain relief, setup and troubleshoot epidural and PCA pumps.

Milestones	Examples
<p>Level 1: Outlines post-operative disposition options for patients in the PACU.</p> <p>Lists complications commonly encountered post-operatively.</p> <p>Understands when, how and who to call for help.</p>	<ul style="list-style-type: none"> • Can identify home, floor, telemetry, step-down or ICU as possible dispositions for a patient. • Identifies postoperative nausea and vomiting, pain, hypoxia and residual muscle weakness, delirium etc.
<p>Level 2: Plans disposition for uncomplicated PACU patients and can assess readiness based on discharge criteria.</p> <p>Diagnoses, manages, and documents commonly encountered complications arising from anesthetic care, with supervision.</p> <p>Understands when, how and who to call for help.</p>	<ul style="list-style-type: none"> • Identifies the need to admit a planned outpatient with COPD for an acute exacerbation. • Recognizes a corneal abrasion, implements treatment, documents the complication in the postoperative note and informs the attending.
<p>Level 3: Identifies unexpected changes in the patient status meriting a change in disposition from PACU with supervision.</p> <p>Diagnoses, manages and documents uncommon complications arising in PACU with some supervision.</p> <p>Can manage routine PACU complications without supervision but understands when they need to call for help.</p>	<ul style="list-style-type: none"> • With supervision: Identifies serotonin syndrome, implements treatment and documents the complication in the chart.
<p>Level 4: Independently identifies unexpected changes in patient status meriting change in disposition from PACU.</p> <p>Independently diagnoses, manages and documents uncommon complications arising in the PACU.</p>	<ul style="list-style-type: none"> • Independently: identifies respiratory failure in PACU needing reintubation and ICU admission. Informs attending.
<p>Level 5: Develops protocols for disposition based on PACU course and patient comorbidities.</p>	<ul style="list-style-type: none"> • Develops a sleep apnea protocol for PACU care.

<p>Instructional Activities</p>	<ul style="list-style-type: none"> ● Journal articles ● PACU presentation ● Teaching Modules ● Teaching in PACU by OR attending ● Grand Rounds ● ASARRC ● CME conference chosen by resident
<p>Evaluation</p>	<ul style="list-style-type: none"> ● Faculty Rotation Evaluations ● PACU Nursing Staff Evaluation
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Self assessment form review which attests to knowing management of various situations. ● Direct observation by nurses / physicians ● Mock orals ● Feedback from multiple sources ● Simulation ● Log of procedures or problems dealt with during PACU rotation and enter the etiology, treatment and result.

Systems-Based Practice 2: System Navigation for Patient-Centered Care

Overall intent: To effectively navigate the healthcare system, including the interdisciplinary team and other care providers; to adapt care to a specific patient population to ensure high-quality patient outcomes. To demonstrate an awareness of and responsiveness to 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. Know the flow of patients through PACU and how bottlenecks in different areas of hospital affect PACU including concepts of Phase 1 and Phase 2 recovery, “fast-tracking” and “home readiness” and facilitate efficient patient flow through PACU.

Milestones	Examples
<p>Level 1: Demonstrates knowledge of care coordination.</p> <p>Identifies key elements for safe and effective transitions of care and hand-offs.</p> <p>Demonstrates knowledge of population and community health needs and disparities</p>	<ul style="list-style-type: none"> ● For a critically ill PACU patient, can identify surgeons, anesthesiologists, nurses etc. as members of the team. ● Lists the essential components of a standardized tool for sign-out, care transition and hand-offs ● Identifies that inpatients may have different needs than ambulatory patients and barriers present to discharge home.
<p>Level 2: Coordinates care of patients in routine clinical situations effectively using roles of the interprofessional team members</p> <p>Performs safe and effective transitions of care/hand-offs in routine clinical situations</p>	<ul style="list-style-type: none"> ● Coordinates care with the PACU and primary medical team on arrival to PACU ● Can conduct a good PACU sign-out when needed. ● Identifies communicating challenges with patients such as hard of hearing, non-English speaking or cognitive impairment.
<p>Level 3: Coordinates care of patients in complex clinical situations effectively and efficiently using the roles of the interprofessional team members while avoiding bottlenecks.</p> <p>Performs safe and effective transitions of care/hand-offs in complex clinical situations</p> <p>Uses institutional resources effectively to meet the needs of a patient population and community</p>	<ul style="list-style-type: none"> ● Works with patient, family and peri-operative team to coordinate care of patient with a DNR order ● Routinely does hand-offs / sign outs when transferring patients to and from the ICU. ● Follows institutional guidelines to provide safe care for Jehovah’s witness patients.
<p>Level 4: Role models effective coordination of patient centered care among different disciplines and specialties and successfully avoiding all bottlenecks</p>	<ul style="list-style-type: none"> ● Proactively discusses complex patients before they arrive in PACU with the primary team.

<p>Role models and advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems</p> <p>Participates in changing and adapting practice to provide for the needs of various populations</p>	<ul style="list-style-type: none"> • Is a clear leader when handling complex transfers of patients from PACU to a non planned ICU admission. • Advocates for direct to phase 2 admissions for the appropriate PACU patients.
<p>Level 5: Analyzes the process of care coordination and participates in the design and implementation of improvements.</p> <p>Advocates for patients identified with health care inequities</p>	<ul style="list-style-type: none"> • Devises a formal protocol for improving transitions to unanticipated ICU admissions from PACU. • Identifies and implements programs in the PACU to reach the disadvantaged patients.
<p>Instructional Activities</p>	<ul style="list-style-type: none"> • Journal articles • PACU presentation • PACU Teaching Modules • Teaching in PACU by OR attending • Grand Rounds • ASARRC • CME conference chosen by resident • Modeling by Faculty • Collaboration with nurses and nursing management • Review relevant online PACU lectures on Ether
<p>Evaluation</p>	<ul style="list-style-type: none"> • Faculty Rotation Evaluations • PACU Nursing Staff Evaluation
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> • Self assessment form review which attests to knowing aspects of the overall system of care at the hospital that can be improved upon (ICU overflow, PACU to phase 2 flow, efficient flow during high volume). • Direct observation by nurses / physicians • Mock orals • Feedback from multiple sources • Simulation • Log of procedures or problems dealt with during PACU rotation and enter the etiology, treatment and result.

Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice

Overall intent:

To demonstrate practice-based learning and improvement that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvement in patient care. To understand evidence – based medicine, take an active role in furthering knowledge by attending organized educational activities, use information technology to evaluate and assimilate current PACU literature. Become a life-long learner.

Milestones	Examples
Level 1: .Accesses and uses evidence in routine patient care	<ul style="list-style-type: none"> • Reviews the most recent practice advisory for the PACU patient with hypotension.
Level 2: Articulates clinical questions and elicits patient preferences and values to guide evidence-based care	<ul style="list-style-type: none"> • In a patient with congestive heart failure, anticipates the most common PACU complications based on the literature.
Level 3: Locates and applies the best available evidence, integrated with patient preference, to the care of the complex patients	<ul style="list-style-type: none"> • Accesses the primary literature to discuss current evidence about PACU management of the hypotensive patient when preparing the PACU presentation for the nursing staff.
Level 4: Appraises and applies evidence, even in the face of uncertainty and conflicting evidence, to guide individualized care	<ul style="list-style-type: none"> • Accesses the primary literature to discuss current evidence for PACU management beyond preparation for the PACU presentation (but for daily issues that come up in PACU).
Level 5: Coaches others to appraise and apply evidence for complex patients and/or participates in the development of guidelines.	<ul style="list-style-type: none"> • Leads clinical teaching to junior residents on the application of best practices of PACU management. • Improves upon or develops new protocols for rapid response to a crisis in PACU.
Instructional Activities	<ul style="list-style-type: none"> • Journal articles • PACU presentation • Teaching Modules • Teaching in PACU by OR attending • Grand Rounds • ASARRC • CME conference chosen by resident • PACU presentation
Evaluation	<ul style="list-style-type: none"> • Faculty Rotation Evaluations • PACU Nursing Staff Evaluation • Review of Self assessment form

	<ul style="list-style-type: none">● Review of PACU presentation
Assessment Models or Tools	<ul style="list-style-type: none">● Self assessment form● Direct observation by nurses / physicians● Mock orals● Feedback from multiple sources● Simulation● Provide a list of PACU related journal articles that were read (min 1 paper/day)

Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth

Overall intent: To seek clinical performance information with the intent to improve care; to reflect on all domains of practice, personal interactions and behaviors and their impact on colleagues and patients (reflective mindfulness); to develop clear objectives and goals for improvement in some form of a learning plan.

Milestones	Examples
<p>Level 1: Accepts responsibility for personal and professional development by establishing goals</p> <p>Identifies the factors that contribute to performance deficits</p> <p>Actively seeks opportunities to improve</p>	<ul style="list-style-type: none"> Identifies gaps in knowledge based on the PACU checklist of topics and utilizes resources to fill the gap.
<p>Level 2: Demonstrates openness to performance feedback</p> <p>Analyzes and acknowledges the factors that contribute to performance deficits</p> <p>Designs and implements a learning plan, with prompting</p>	<ul style="list-style-type: none"> Adapts to clinical management in an uncooperative PACU patient. When prompted, will assess time management skills and how they impact PACU patient management efficiency.
<p>Level 3: Seeks performance data episodically, with adaptability and humility</p> <p>Institutes behavioral changes to improve performance</p> <p>Independently creates and implements a learning plan</p>	<ul style="list-style-type: none"> Completes focused literature review if they are unclear the best course of action when dealing with a PACU complication
<p>Level 4: Intentionally seeks performance data consistently, with adaptability and humility</p> <p>Considers alternatives to improve performance</p> <p>Integrates performance data to adapt the learning plan</p>	<ul style="list-style-type: none"> After patient encounters in the PACU, will debrief with nurses / physicians to optimize future collaboration in the care of the patient.
<p>Level 5: Role models consistently seeking performance data, with adaptability and humility</p> <p>Models reflective practice</p> <p>Facilitates the design and implementation of learning plans for others</p>	<ul style="list-style-type: none"> Shares instances of near misses with more junior learners in hopes to improve everyone's patient management. Assists junior learners by providing constructive feedback.

Instructional Activities	<ul style="list-style-type: none">● PACU presentation● Modeling in PACU by OR attending● Grand Rounds● ASARRC● CME conference chosen by resident
Evaluation	<ul style="list-style-type: none">● Faculty Rotation Evaluations● PACU Nursing Staff Evaluation
Assessment Models or Tools	<ul style="list-style-type: none">● Self assessment form review which attests to knowing areas the resident can improve upon following the rotation.● Direct observation by nurses / physicians● Mock orals● Feedback from multiple sources● Simulation

Professionalism 1: Professional Behavior and Ethical Principles

Overall intent: To demonstrate a commitment to professional responsibilities, adherence to ethical principles, and sensitivity to diversity. To recognize and address lapses in ethical and professional behavior, demonstrate ethical and professional behaviors and use appropriate resources for managing ethical and professional dilemmas. Understand HIPAA regulations as they pertain to patient data. Describe role of the anesthesiologist in the PACU to patients and team members. Demonstrate respect for staff. Act with sensitivity and responsiveness to patient's culture, age, gender identification and disabilities.

Milestones	Examples
<p>Level 1: Identifies potential triggers for professionalism lapses</p> <p>Describes when and how to report lapses in professionalism</p> <p>Demonstrates knowledge of the ethical principles underlying patient care</p>	<ul style="list-style-type: none"> Recognizes personal bias that may interfere with professionalism Describes impact of fatigue on clinical performance
<p>Level 2: Demonstrates insight into professional behavior in routine situations</p> <p>Takes responsibility for one's own professionalism lapses</p> <p>Analyzes straightforward situations using ethical principles</p>	<ul style="list-style-type: none"> Maintains patient confidentiality in public situations Notifies appropriate supervisor when unable to fulfill responsibilities as a PACU resident.
<p>Level 3: Demonstrates professional behavior in complex and stressful situations</p> <p>Recognizes need to seek help in managing and resolving complex interpersonal situations</p> <p>Analyzes complex situations using ethical principles</p>	<ul style="list-style-type: none"> Appropriately responds to distraught family member who may be bedside in the PACU. Reviews institutional policies regarding Jehovah's witness patients and clarifies any confusion with the patient in a respectful manner.
<p>Level 4: Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in oneself</p> <p>Actively solicits help and facts on recommendations to resolve complex interpersonal situations</p> <p>Recognizes and utilizes resources for managing and resolving ethical dilemmas</p>	<ul style="list-style-type: none"> Actively solicits others' perspectives Recognizes and uses ethics consult when appropriate
<p>Level 5: Coaches others when their behavior fails to meet professional expectations</p>	<ul style="list-style-type: none"> Identifies and seeks to address system-wide factors or barriers to promoting a culture of

<p>Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution</p>	<p>ethical behavior through participation in a work group, committee or taskforce.</p>
<p>Instructional Activities</p>	<ul style="list-style-type: none"> ● Self Directed reading ● PACU presentation ● Modeling by attending ● Teaching in PACU by OR attending ● Grand Rounds ● CME conference chosen by resident
<p>Evaluation</p>	<ul style="list-style-type: none"> ● Faculty Rotation Evaluations ● PACU Nursing Staff Evaluation ● Attendance at Lectures ● Updating Case Logs ● Complete documentation
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Self assessment form attesting to the ethical dilemma issues reviewed. ● Direct observation by nurses / physicians ● Seek feedback from your observers (patients, nurses, attendings) ● Mock orals ● Simulation ● Complete postoperative notes on patients describing their PACU care

Professionalism 2: Accountability/Conscientiousness

Overall intent: To take responsibility for one's own actions and the impact on patients and other members of the health care team in the PACU.

Milestones	Examples
<p>Level 1: Responds promptly to requests or reminders to complete tasks</p> <p>Takes responsibility for failure to complete tasks</p>	<ul style="list-style-type: none"> Responds promptly to PACU director's request for submission of the PACU presentation
<p>Level 2: Performs tasks and responsibilities in a timely manner</p> <p>Recognizes situations that may impact one's own ability to complete tasks and responsibilities in a timely manner</p>	<ul style="list-style-type: none"> Before going out of town, complete tasks in anticipation of lack of computer access.
<p>Level 3: Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations</p> <p>Takes responsibility for tasks not completed in a timely manner and identifies strategies to prevent recurrence</p>	<ul style="list-style-type: none"> Notifies attending of multiple competing demands that prevent them from completing their self assessment on time. Apologies to the team members for unprofessional behavior without prompting.
<p>Level 4: Prioritizes tasks and responsibilities in a timely manner and with appropriate attention to detail in complex or stressful situations</p> <p>Proactively implements strategies to ensure that the needs of patients, teams and systems are met.</p>	<ul style="list-style-type: none"> Follows up with a patient who had a complicated PACU course to assess current medical status.
<p>Level 5: Designs and implements an institutional systems approach to ensure timely task completion and shared responsibility</p>	<ul style="list-style-type: none"> Leads multidisciplinary team in a PACU root cause analysis to improve system practices around a complication.
<p>Instructional Activities</p>	<ul style="list-style-type: none"> Journal articles PACU presentation Teaching Modules Teaching in PACU by OR attending Grand Rounds ASARRC CME conference chosen by resident
<p>Evaluation</p>	<ul style="list-style-type: none"> Faculty Rotation Evaluations PACU Nursing Staff Evaluation Attendance at Lectures Updating Case Logs

	<ul style="list-style-type: none">• Complete documentation on self assessment
Assessment Models or Tools	<ul style="list-style-type: none">• Self assessment form• Direct observation by nurses / physicians• Mock orals• Feedback from multiple sources• Simulation• Submission of documents at end of rotation

Interpersonal and Communication Skills 1: Patient- and Family-centered Communication

Overall intent: To demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals in the PACU. To deliberately use language and behaviors to form constructive relationships with patients, to identify communication barriers including self-reflection on personal biases, and minimize them in the doctor-patient relationships; to organize and lead communication around shared decision making. Understand the role of the PACU in the patient's overall hospitalization.

Milestones	Examples
<p>Level 1: Communicates with patients and their families in an understandable and respectful manner</p> <p>Provides timely updates to patients and, when pertinent, patients' families</p>	<ul style="list-style-type: none"> ● Introduces self to the patient and explains their role in the PACU. ● Updates family on an unanticipated ICU admission from the PACU in a timely fashion.
<p>Level 2: Customizes communication in the setting of personal biases and barriers with patients, and when pertinent, patients' families</p> <p>Actively listens to patients to elicit patient preferences and expectations</p>	<ul style="list-style-type: none"> ● Avoids medical jargon when speaking to the patient.
<p>Level 3: Explains complex and difficult information to patients, and when pertinent, patients' families</p> <p>Uses shared decision making to make a personalized care plan</p>	<ul style="list-style-type: none"> ● Acknowledges the patient's request for DNR but explains the complexity of such an issue in the PACU pre-emptively.
<p>Level 4: Facilitates difficult discussions with patients and patients' families</p> <p>Effectively negotiates and manages conflict among patients, patients' families and the health care team</p>	<ul style="list-style-type: none"> ● Explains etiology, goals and risks of treatment plan to patients efficiently and effectively when there is confusion.
<p>Level 5: Mentors others in the facilitation of crucial conversations</p> <p>Mentors others in conflict resolution</p>	<ul style="list-style-type: none"> ● Coordinates a discussion with the patient and their care team when there is conflict. ● Serves on committees to make changes hospital wide
<p>Instructional Activities</p>	<ul style="list-style-type: none"> ● Modeling by Faculty ● In-Service Talk ● Grand Rounds ● Anesthesia Crisis Resource Management (ACRM)

Evaluation	<ul style="list-style-type: none">● Faculty Rotation Evaluations● PACU Nursing Staff Evaluation
Assessment Models or Tools	<ul style="list-style-type: none">● Self assessment form review.● Direct observation by nurses / physicians● Mock orals● Feedback from multiple sources● Simulation

Interpersonal and Communication Skills 2: Interprofessional and Team Communication

Overall intent: To effectively communicate with the health care team, including consultants, in both straightforward and complex situations. Describe the pertinent facts that must be conveyed when transferring patient care to another provider. Learn to maintain good interactions and effective communication with all members of PACU team. Be readily available within 5-10 mins when called by PACU staff. The resident should introduce him/her self to the nursing staff in PACU as appropriate throughout the rotation. Demonstrate the ability to work effectively with all members of the PACU. Take report from the primary anesthesia team on most patients and give verbal report when transferring care.

Milestones	Examples
<p>Level 1: Respectfully requests or receives consultations</p> <p>Uses language that values all members of the healthcare team</p> <p>Respectfully receives feedback from the health care team</p>	<ul style="list-style-type: none"> • Requests for a pain consult, clarifying questions politely and expresses appreciation for the help through the consult. • Acknowledges the contribution of each member of the patient care team to the patient.
<p>Level 2: Clearly, concisely and promptly requests or responds to a consultation</p> <p>Communicates information effectively with all health care team members</p> <p>Solicits feedback on performance as a member of the healthcare team</p>	<ul style="list-style-type: none"> • Communicates PACU concerns with attending who managed the patient in the OR. • Reflects on the care provided in PACU with the supervising attending.
<p>Level 3: Uses closed-loop communications to verify understanding</p> <p>Adapts communication style to fit team needs</p> <p>Communicates concerns and provides feedback to peers and learners</p>	<ul style="list-style-type: none"> • Asks other members of health care team to repeat back recommendations to ensure understanding • Provides constructive feedback to a medical student during an IV insertion
<p>Level 4: Coordinates recommendations from different members of the health care team to optimize patient care</p> <p>Maintains effective communication in crisis situations</p> <p>Communicates constructive feedback to superiors</p>	<ul style="list-style-type: none"> • Collaborates with surgical colleagues and pain team for the plan for PACU and post PACU patient control for patient on buprenorphine • Alerts a breach in sterility for a line placement by a faculty member
<p>Level 5: Role models flexible communication strategies that value input from all health care team members, resolving conflict when needed</p>	<ul style="list-style-type: none"> • Leads a post code team debrief • Mediates a conflict resolution between different members of the health care team

<p>Leads an after-event debrief of the health care team</p> <p>Facilitates regular health care team-based feedback in complex situations</p>	
<p>Instructional Activities</p>	<ul style="list-style-type: none"> ● Modeling by Faculty ● In-Service Talk ● Grand Rounds ● Anesthesia Crisis Resource Management (ACRM)
<p>Evaluation</p>	<ul style="list-style-type: none"> ● Faculty Rotation Evaluations ● PACU Nursing Staff Evaluation
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Self assessment form review. ● Direct observation by nurses / physicians ● Mock orals ● Feedback from multiple sources ● Simulation ● Deliver a 10 minute presentation on a topic interesting to nurses, applying knowledge of study, design and statistical methodology to critically analyze clinical studies.

Interpersonal and Communication Skills 3: Communication within Health Care Systems

Overall intent: To effectively communicate using a variety of methods

Milestones	Examples
<p>Level 1: Accurately records information in the patient record; demonstrates judicious use of documentation shortcuts</p> <p>Safeguards patient personal health information</p> <p>Communicates through appropriate channels as required by institutional policy</p>	<ul style="list-style-type: none"> • Uses secure communications to send protected health information • Documentation is accurate but may include extraneous information • Avoids talking about patients in public spaces
<p>Level 2: Accurately records information in the anesthetic record for basic cases</p> <p>Documents required data in formats specified by institutional policy</p> <p>Respectfully communicates concerns about the system</p>	<ul style="list-style-type: none"> • Completes all components of the postoperative note in a timely manner for patients requiring involved PACU interventions • Completes intubation note for urgent reintubation in PACU
<p>Level 3: Accurately records information in the anesthetic record for communicates complex care decisions for complex cases</p> <p>Appropriately selects direct and indirect forms of communication based on context</p> <p>Respectfully communicates concerns about the system and contributes to solutions</p>	<ul style="list-style-type: none"> • Documents critical event notes in the medical record concisely and in a timely manner • Follows up with a patient in person regarding a difficult intubation or difficult management of their symptoms
<p>Level 4: Uses medical record functionality to highlight challenges in anesthetic care to facilitate future perioperative management</p> <p>Models exemplary written or verbal communication</p> <p>Uses appropriate channels to offer clear and constructive suggestions to improve the system</p>	<ul style="list-style-type: none"> • Creates consistently accurate, organized, and concise documentation, frequently incorporating anticipatory guidance. • Talks directly with colleagues about breakdowns in communication in order to prevent recurrence.
<p>Level 5: Explores innovative uses of the medical record to facilitate PACU management</p>	<ul style="list-style-type: none"> • Actively participates in committees or task forces to help develop plans to improve PACU management and communication.

<p>Guides departmental or institutional policies and procedures around communication</p> <p>Initiates difficult conversations with appropriate stakeholders to improve the system</p>	
<p>Instructional Activities</p>	<ul style="list-style-type: none"> ● Modeling by Faculty ● In-Service Talk ● Grand Rounds ● Anesthesia Crisis Resource Management (ACRM)
<p>Evaluation</p>	<ul style="list-style-type: none"> ● Faculty Rotation Evaluations ● PACU Nursing Staff Evaluation
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> ● Self assessment form review including the attestation that you have completed post-op notes on relevant patients. ● Direct observation by nurses / physicians ● Mock orals ● Feedback from multiple sources ● Simulation