

WEINBERG POST ANESTHESIA CARE UNIT (PACU) CURRICULUM

The Weinberg Post Anesthesia Care Unit ("WACU") offers a broad, two-week experience in post-operative care and perioperative medicine, particularly for those patients recovering from hepatobiliary, colorectal, urologic, oncologic, plastic, head and neck and gynecologic surgery. This rotation will primarily be completed by CA-3 level residents, with occasional coverage as needed by a CA-2 resident. Residents' main responsibility is the immediate post-operative care and recovery of surgical patients in the WACU, pan-hospital code coverage, and occasional assistance in discrete tasks offered to Weinberg OR teams as appropriate. Primary supervision will be provided by the designated PACU/airway attending with additional support by and engagement with the Weinberg OR coordinator attending as well as the attending who was responsible for the patient's intraoperative course. This is a two-week rotation with the resident expected to cover the Weinberg PACU from 0700-1500 with signout to the overnight Weinberg resident.

Goals for the rotation include achieving proficiency in the detection, diagnostic workup, and management of common (e.g., pain, post-operative nausea and vomiting, hypovolemia, postoperative respiratory insufficiency) and less common (e.g., shock, MI, arrhythmias) post anesthetic and perioperative complications in a team-based care setting with appropriate engagement of nursing, primary team and anesthesia staff. Residents will have the opportunity to leverage and build upon their knowledge of perioperative medicine, combining skills learned in the pre-op clinic, OR and ICUs, as well as subspecialty rotations including regional anesthesia and the acute pain service. Suggested materials for review are included herein. Residents will be responsible for independent reading and studying. In addition, the PACU/airway faculty member will be responsible for leading brief lectures and/or discussions on topics pertinent to the anesthesia resident working in the PACU, with example topics listed below.

Residents will be evaluated in the seven core competencies (medical knowledge, patient care, interpersonal and communication skills, professionalism, leadership, practice-based learning and improvement, and systems-based practice) using specific web-based evaluation forms completed by supervising faculty. Formal evaluations will occur during and at the end of the rotation, with informal feedback and evaluations available throughout.

GOALS AND OBJECTIVES:

Medical Knowledge:

- Apply knowledge of established and evolving basic, cognitive and applied clinical sciences related to the practice of adult anesthesia in the PACU.
- Describe, recognize and gain experience managing PACU complications such as airway obstruction, hypoxia, hypotension, hypoventilation, pneumothorax, pulmonary embolism, hypovolemia, arrhythmias, cardiac arrest, ECG changes, incomplete reversal of muscle relaxants, overdose of opioids, nausea and vomiting, hyper and hypothermia, glucose derangements, pain, complications of blood transfusions and emergence delirium.

Patient Care:

- Provide compassionate, appropriate and effective medical management of patients in the PACU.
- Develop and refine skills related to airway management, interpretation of chest radiographs and ECGs, TTE, and POCUS.
- Assess readiness for PACU discharge based on specified criteria.
- Be able to explain when, how and who to call for help.

Interpersonal and Communication Skills:

- Introduce self to PACU staff as appropriate throughout the rotation.
- Be readily available when called by PACU staff.
- Demonstrate interpersonal and communications skills that result in effective information exchange and teaming with patients, their families and health professionals.
- Describe the pertinent facts that must be conveyed when transferring patient care to another provider.
- Complete PACU assessment/sign out forms.

Practice-Based Learning and Improvement:

- Demonstrate practice-based learning and improvement.
- Reflect on individual performance and improve.
- Understand and utilize evidence-based medicine practices.
- Take an active role in furthering knowledge by attending organized educational activities.

RESPONSIBILITIES/TASKS:

- Be present and visible in the PACU; write name and preferred contact method on whiteboards and generally be available to nurses and other personnel.
- Initiate appropriate post-anesthesia recovery management, including diagnosis and treatment of any complications.
- Assess appropriateness of disposition (e.g., floor versus IMC versus surgical ICU) and facilitate needed changes (e.g., contact primary team and HTRIP if patient needs upgrade from planned level of care).
- Assess patients for appropriateness of discharge and complete a post-anesthesia evaluation note in the chart.
- Communicate important information or concerns with the anesthesiologist involved in the surgical case.
- Perform advanced airway techniques, POCUS and TTE exams as appropriate.
- Be a resource for procedures, including invasive line and difficult IV placement.

GENERAL READING:

- [Miller's Anesthesia Review:](#)
 - Chapter 36: Postanesthesia Recovery
 - Chapter 38: Critical Care Medicine
- [Morgan & Mikhail's Clinical Anesthesiology](#)
 - Chapter 54: Anesthetic Complications
 - Chapter 56: Post Anesthesia Care
 - Chapter 57: Common Clinical Concerns in Critical Care Medicine

SUGGESTED DISCUSSION TOPICS & RESOURCES BY DAY OF ROTATION:

Day 1: Disposition

- ☐ [Phases of care in the PACU \(UpToDate\)](#)
- ☐ [Discharge from the PACU \(UpToDate\)](#)
- ☐ [Handoffs of surgical patients \(UpToDate\)](#)

Day 2: Post-operative pain, nausea and vomiting

- ☐ [Acute perioperative pain management \(UpToDate\)](#)
- ☐ [Non-opioid pharmacotherapy for acute pain \(UpToDate\)](#)
- ☐ [Continuous epidural analgesia for postoperative pain \(UpToDate\)](#)
- ☐ [Post-operative nausea and vomiting \(UpToDate\)](#)

Day 3: Delayed awakening and emergence delirium

- ☐ [Delayed emergence and emergence delirium \(UpToDate\)](#)
- ☐ [Perioperative neurocognitive disorders \(UpToDate\)](#)

Day 4: Airway and ventilatory issues

- ☐ [Respiratory problems in the PACU \(UpToDate\)](#)
- ☐ [Management of post-operative pulmonary complications \(UpToDate\)](#)
- ☐ [Post-operative management of patients with OSA \(UpToDate\)](#)

Day 5: Residual neuromuscular blockade

- ☐ [Chapter 55: Postoperative Residual Neuromuscular Weakness \(Yao & Artusio's\)](#)

Day 6: Hypotension, shock and hypertension

- ☐ [Post-operative fluid therapy in adults \(UpToDate\)](#)
- ☐ [Anaphylaxis Diagnosis \(UpToDate\)](#)
- ☐ [Anaphylaxis Management \(UpToDate\)](#)
- ☐ [Perioperative management of hypertension \(UpToDate\)](#)

Day 7: Post-operative myocardial infarction, arrhythmias and stroke

- ☐ [Cardiovascular problems in the PACU \(UpToDate\)](#)
- ☐ [Initial assessment and acute management of stroke \(UpToDate\)](#)

Day 8: Electrolyte and metabolic derangements; urinary retention

- ☐ [Overview of post-operative electrolyte abnormalities \(UpToDate\)](#)
- ☐ [Post-operative urinary retention \(UpToDate\)](#)

Day 9: Local anesthetic systemic toxicity (LAST)

- ☐ [Local anesthetic systemic toxicity \(UpToDate\)](#)

Day 10: Post-op vision loss and corneal abrasion

- ☐ [Postoperative visual loss after anesthesia for nonocular surgery \(UpToDate\)](#)