

Rotation Contacts and Scheduling Details

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Please feel free to contact Dr. Kuo regarding any questions or concerns during your rotation.

Introduction

The pediatric ICU rotation at LPCH helps lay the fundamentals for critical care training. On this rotation, residents are exposed to a wide variety of disease processes ranging from neurosurgery patients to solid organ transplants, trauma, sepsis, and end organ dysfunction. Residents will learn the recognition and preliminary management of overarching critical care pathophysiologic processes such as respiratory failure, shock, and organ dysfunction.

Weekly Schedule

Time	Monday	Tuesday	Wednesday	Thursday	Friday
0700-0800	Pre-round	Pre-round	Pre-round	Pre-round	Pre-round
0800-0830	Morning Report	Morning Report	Morning Report	Morning Report	0800-0900 Grand Rounds
0830-1100	PICU Rounds	PICU Rounds	PICU Rounds	PICU Rounds	PICU Rounds (9-)
1130-1200	Patient Care	Patient Care	Patient Care	Patient Care	Patient Care
1200-1300	Conference	PICU Small Group Conference	PICU Small Group Conference	PICU Fellow Didactic (open to residents)	Conference
1300-1630	Patient Care	Patient Care	Patient Care	Patient Care	Patient Care
1630	Sign-out	Sign-out	Sign-out	Sign-out	Sign-out

Rotation Specifics

Orientation

Residents will receive a power-point orientation prior to starting the rotation. Residents should receive sign-out before beginning the rotation so they are well versed with the patients on the first day. Residents are expected to arrive at the hospital with enough time to pre-round on their patients before Morning Report. There will be a brief orientation on the first afternoon of the rotation at ~4:00pm that will discuss expectations for presentations, pre-rounding, notes, and interaction with medical students, fellows, attendings, and bedside nurses.

The Unit

The Pediatric ICU at LPCH is a 24 bed ICU providing care from both medical and surgically critically ill patients. Diagnoses of patients admitted to the PICU include: trauma, sepsis, pneumonia, solid organ/bone marrow transplants, post-neurosurgery, post-airway reconstruction, organ failure (kidney, lung, liver, heart), patients with neurologic deterioration, and any other child with rapidly progressive critical illness. Residents will be exposed to a broad range of diagnoses in the ICU and should learn the essentials of managing pediatric patients with critical illness.

The Team

There are two teams in the PICU, each team consists of an ICU attending, an ICU fellow, 1 or more pediatric residents, an emergency medicine resident or nurse practitioner (NP)/hospitalist and rotating medical students. In the PICU all patients are covered by the residents or NPs/hospitalists. Medical students may be present on some blocks. The students may either be present for a single week as a portion of their general pediatrics rotation or for a whole month as their core clerkship or a sub-internship. All patients cared for by a medical student must be co-followed by a resident or an NP/hospitalist.

Rounds

Rounds are conducted either by the PICU attending or fellow. The team walks from bedside to bedside to see each patient on rounds. Some patients in the ICU are rounded on with the consulting services. The bedside nurse should be included on rounds (and for all patients except new admissions presents initially as part of our nurse integrated rounds) and the plan should be clearly communicated with her / him. Rounds should be “work rounds” and daily orders should be written as rounds progress. The more acute patients and transfers to the ward should be given priority.

Rounding

Notes / Presentations for rounds

- Patient identification
- Quick assessment: i.e. patient improving, worsening, or unchanged
- Major (not all) interval events
- Pertinent vitals
- Lines: track sites and dates, but does not need to be presented unless concern as infectious source
- Physical exam: present exam pertinent for patient’s disease, e.g. neuro exam on neurosurgical patient (but examine all of patient)
- Present meds in appropriate system: e.g. steroids for asthmatic vs. steroids for liver transplant

Presentations by system (please note that the presentation style will vary somewhat per attending on service)

- Respiratory:
 - o Data: CXR findings, mode of support - NC vs. BiPAP vs. ventilator
 - o A/P: changes in pulmonary compliance and changes in respiratory support accordingly
- CV:
 - o Data: vasoactive support, rhythm, echo results
 - o A/P: changes in hemodynamic status and need to titrate vasoactives
- Neuro:
 - o Data: sedation medications, imaging studies
 - o A/P: changes in neuro status, requirements for sedation or further imaging
- FEN/GI:
 - o Data: I/O’s, nutritional source, calories per day, labs
 - o A/P: Changes in fluid status or liver functions, modifying nutritional support
- Renal:
 - o Data: Urine output, changes in weight, any renal replacement therapy (RRT), changes in BUN/Cr
 - o A/P: Changes in renal function or diuretics
- Heme:
 - o Data: labs, anti-coagulants
 - o A/P: changes in HCT, need for transfusion, coagulation status
- ID:
 - o Data: WBC, cultures, antibiotic levels
 - o A/P: changes in antibiotics, etc.
- Psycho-social:
 - o Family conferences or discussions with family

Orders

- Review orders at end of presentation to assure nothing is missed
- Communicate orders with the bedside nurse

Pagers

Each resident should carry his or her own pager (or have their digital pager via Spok)

Teaching conferences in the ICU

Tuesday 12pm PICU resident small group conference

Wednesday 12 PM PICU resident small group conference

Thursday 12pm PICU fellow didactic (PICU conf room)

Weekend Rounds

Rounds begin at 8:30am and include the resident/APP, post-call resident, fellow, and PICU attending.

Night Team

The Night Team consists of the on-call resident/APP, fellow, and attending. Resident signout is at 4:30pm and fellows sign out at 7 PM. Sign-out should be relatively quick and concise – focusing on significant pertinent issues, the overnight management plan, and treatment options for potential complications. The night float resident should sign out new significant overnight issues to the daytime residents the following morning.

Resident Roles and Responsibilities

- Receive sign-out from overnight resident
- Pre-round on PICU patients
- Present patients at morning rounds beginning promptly at 8:30am (9AM on Fridays given grand rounds)
- After rounds carry out developed plan for each patient: e.g. call consults, follow up on radiologic studies, complete a daily progress note, etc.
- Update ICU attending / fellow of changes on patients
- Discuss any management changes of patients with the attending / fellow prior to carrying out changes
- Be actively involved in stabilization of acutely ill patients
- Evaluate new admissions to the ICU and develop a management plan
- Present new admissions to the ICU fellow / attending
- Attend evening rounds and transfer care of patients to night float resident
- Attend teaching conferences conducted by the ICU attendings / fellows
- Patients in the ICU for longer than a week require an interim summary updated each week
- Patients being transferred from the ICU will need a transfer summary, transfer orders, and need to be signed out to the resident on the floor

Other Tips:

- **PRIORITIZE:** i.e. assure septic patient receives antibiotics within an hour of order being written; vasoactives within 30 minutes of order being written
- **COMMUNICATE:** with bedside nurse about plan for patient; with fellow / attending regarding possible updates, thoughts
- **FOLLOW-UP:** to assure that orders are completed; on radiologic studies, on cultures, on consultant recommendations
- **ASK QUESTIONS:** any questions, concerns, thoughts – ask
- **BE YOUR PATIENT'S DOCTOR:** you are the primary doctor of all your patients
- **KEEP TRACK:** keep track of daily labs, results of radiology studies, biopsy results, etc.
- **BE PRESENT and CIRCLE THE UNIT:** the more you are in the unit, the more you see, the more you do, and the more the nurses will come to you with issues on your patients

Evaluation and Feedback

The methods of evaluation for the PICU will consist of:

- Global Rating Scales – MedHub Resident Evaluations, Faculty Evaluations, Rotation Evaluations
- Verbal feedback from attendings while on the rotation – Be sure to solicit feedback if not provided

These evaluation tools will be included in each resident's portfolio.

Feedback to the supervisor should be provided by the PICU attending on a weekly basis focusing on competency-based goals and objectives and leadership of a patient care team.

Goals and Objectives

The goals and competencies for the rotation listed below are a distilled list derived from the ACGME listing.

- Recognize an acutely ill child
- Resuscitation & stabilization of decompensating / arresting pediatric patients
- Formulating management plans for critically ill patients incorporating clinical assessment and laboratory data
- Invasive and non-invasive techniques for monitoring the patient
- Vascular access methods
- Recognition and management of single & multi-organ system failure
- Pre-operative and Post-operative management of surgical patients
- Respiratory management: respiratory failure, asthma, stridor, hypoxia, ARDS, foreign body aspiration
- Basic ventilator management
- Cardiac management: heart failure, arrhythmias, congenital heart disease
- Shock: recognition and appropriate treatment
- Hepatic failure
- Renal failure
- Fluid, electrolytes, and metabolic disorders
- Infection control / treatment
- Trauma management
- Increased ICP: recognition and treatment
- Metabolic disorders: DKA, DI, SIADH
- Near Drowning
- Acute Abdomen

These core competencies will be achieved by both bedside teaching, various lectures during the rotation as time permitted, and of course by daily care and management of the various ICU patients.

ACGME Competency-based Goals and Objectives

Goal 1. Develop an understanding of invasive and non-invasive mechanical ventilation			
Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Discuss the settings on a ventilator and identify the physiologic changes adjustments are likely to generate (PGY2, PGY3)	<ul style="list-style-type: none"> • Bedside teaching • Patient care • Reading: “Mechanical Ventilation” (http://peds.stanford.edu/Rotations/picu/pdfs/12_mechanical_ventilation.pdf) 	<ul style="list-style-type: none"> • Observation on rounds and in the course of patient care • MedHub evaluations by attendings 	PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems MK— Demonstrate knowledge evolving sciences and apply this knowledge to patient care
2. Demonstrate ability to initiate and titrate non-invasive mechanical ventilation (PGY2, PGY3)	<ul style="list-style-type: none"> • Bedside teaching 	<ul style="list-style-type: none"> • Questioning during bedside teaching • Observation on rounds • MedHub evaluations by attendings 	PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems MK— Demonstrate knowledge

			<i>evolving sciences and apply this knowledge to patient care</i>
3. List indications for invasive and non-invasive mechanical respiratory support (PGY2)	<ul style="list-style-type: none"> • Patient care • Bedside teaching 	<ul style="list-style-type: none"> • Observation on rounds and in the course of patient care 	<i>PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i> <i>MK— Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
4. Interpret arterial blood gas measurements (PGY2, PGY3)	<ul style="list-style-type: none"> • Patient care • Presentations on rounds 	<ul style="list-style-type: none"> • Observation on rounds with immediate feedback on accuracy of interpretation 	<i>PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i> <i>MK— Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
5. Describe the properties of commonly used paralytic agent and indications for use in a ventilated patient <ul style="list-style-type: none"> • Vecuronium • Rocuronium • Succinylcholine • Cis-atricurium • (PGY 3) 	<ul style="list-style-type: none"> • Patient care • Reading: “Sedation Chart” (http://peds.stanford.edu/Rotations/picu/pdfs/9_sedation_chart.pdf) 	<ul style="list-style-type: none"> • Observation on rounds with immediate feedback 	<i>PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i> <i>MK— Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
6. List indications extubation (PGY2, PGY3)	<ul style="list-style-type: none"> • Patient care • Rounds 	<ul style="list-style-type: none"> • Discussion on rounds 	<i>PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i>

			MK— <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
7. Define, identify, and list strategies for the management and prevention of acute lung injury and ARDS Barotrauma Volutrauma Oxygen toxicity Permissive hypoxia and hypercarbia	<ul style="list-style-type: none"> • Patient care • Rounds • Reading: “ARDS” (http://peds.stanford.edu/Rotations/picu/pdfs/13_ARDS.pdf) 	<ul style="list-style-type: none"> • Observation on rounds and in the course of patient care 	PC— <i>Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i> MK— <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
Goal 2. Develop familiarity with sedation in an ICU setting			
Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. List the commonly used narcotics and sedatives and describe their distinct properties (duration of effect, analgesia vs anesthesia vs both, risks/contraindications, important adverse effects) (PGY3) Midazolam Diazepam Lorazepam Dexmedetomidine Etomidate Propofol Fentanyl Morphine Dilaudid Ketamine	<ul style="list-style-type: none"> • Independent reading: “Sedation in the ICU” (http://peds.stanford.edu/Rotations/picu/pdfs/9_sedation_in_the_icu.pdf) • Patient care 	<ul style="list-style-type: none"> • Direct observation of plans on rounds • Verbal feedback from supervisor 	PC— <i>Provide effective health care Services</i> MK— <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
Goal 3. Develop familiarity with common medical conditions requiring intensive care			
Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Demonstrate the ability to initiate care for a patient with DKA <ul style="list-style-type: none"> • PE characteristics that inform care • Initial laboratory studies 	<ul style="list-style-type: none"> • Participation in patient care or rounds • Reading: “DKA” (http://peds.stanford.edu/Rotations/picu/pdfs/25_DKA.pdf) 	<ul style="list-style-type: none"> • Review of resident orders • Direct observation of patient care 	PC— <i>Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i>

<ul style="list-style-type: none"> Initial fluid management Serial laboratory studies Adjustments in fluid management 			MK— <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
(PGY2, PGY3)			
<p>2. Review the physiologic consequences of liver failure</p> <p>Coagulopathy Hypoalbuminemia Toxin accumulation Hepatorenal syndrome</p>	<ul style="list-style-type: none"> Participation in patient care Reading: “Acute Renal Failure” (http://peds.stanford.edu/Rotations/picu/pdfs/21_acute_renal_failure.pdf) 	<ul style="list-style-type: none"> Direct observation 	<p>PC—<i>Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i></p> <p>MK—<i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i></p>
<p>3. Review the physiologic consequences of renal failure</p> <p>Electrolyte disturbance Fluid overload Hematologic disturbance Hypertension Immune compromise</p>	<ul style="list-style-type: none"> Participation in patient care Reading “Liver Failure” (http://peds.stanford.edu/Rotations/picu/pdfs/20_liver_failure.pdf) 	<ul style="list-style-type: none"> Direct observation 	<p>PC—<i>Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i></p> <p>MK—<i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i></p>
<p>4. Illustrate an understanding of management of increased ICP</p> <p>Signs and symptoms reflective of elevated ICP Treatment of acutely herniating patient Approach to increased ICP</p>	<ul style="list-style-type: none"> Participation in patient care Reading: “ICP” (http://peds.stanford.edu/Rotations/picu/pdfs/7_ICP.pdf) 	<ul style="list-style-type: none"> Direct observation by attending/fellow 	<p>PC—<i>Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i></p> <p>MK—<i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i></p>
Goal 4: Demonstrate competency in handling end-of-life issues			
Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals

<p>1. Understand the considerations involved in decision to withdraw support</p> <ul style="list-style-type: none"> Recognize when hospice care is appropriate Involve multidisciplinary team (e.g., subspecialty services, chaplain, hospice, ethics committee) 	<ul style="list-style-type: none"> Attending example Reading “End-of-Life Issues” (http://peds.stanford.edu/Rotations/picu/pdfs/28_end_of_life_issues.pdf) 	<ul style="list-style-type: none"> Observation in the context of patient care 	<p>P— <i>Demonstrate commitment to carrying out professional responsibilities and adherence to ethical principles</i> PLI – <i>Evaluate your care of patients, appraise scientific evidence, and improve care through self-evaluation and life-long learning</i> SBP – <i>Be aware and responsive to the larger context of health care. Call effectively on the resources in the system to provide optimal care.</i></p>
<p>2. Understand culture-specific context to end-of-life decision making</p>	<ul style="list-style-type: none"> Attending example 	<ul style="list-style-type: none"> Observation in the context of patient care 	<p>ICS – <i>Communicate effectively with patients, families, and the public as appropriate across a broad range of socioeconomic and cultural backgrounds</i></p>
<p>3. Demonstrate understanding of appropriate timing of discussions with family regarding DNI/DNR status (allowing for natural death)</p>	<ul style="list-style-type: none"> Attending example Reading “End-of-Life Issues” (http://peds.stanford.edu/Rotations/picu/pdfs/28_end_of_life_issues.pdf) 	<ul style="list-style-type: none"> Observation in the context of patient care 	<p>ICS—(a) <i>Communicate effectively with physicians, other health professionals, and health related agencies; (b) Work effectively as a member or leader of a health care team</i></p>
<p>4. Demonstrate skill in working with team to support end-of-life transition</p> <ul style="list-style-type: none"> Involve palliative care team 	<ul style="list-style-type: none"> Attending example Patient care Reading “End-of-Life Issues” (http://peds.stanford.edu/Rotations/picu/pdfs/28_end_of_life_issues.pdf) 	<ul style="list-style-type: none"> Observation in the context of patient care 	<p>SBP – <i>Be aware and responsive to the larger context of health care. Call effectively on</i></p>

<ul style="list-style-type: none"> Participate in care conferences 			<i>the resources in the system to provide optimal care. ICS—(a) Communicate effectively with physicians, other health professionals, and health related agencies; (b) Work effectively as a member or leader of a health care team</i>
Goal 5. Acquire ability for overall assessment of a critically-ill child			
Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
<p>1. Incorporate PE findings into development of plan of care</p> <ul style="list-style-type: none"> Capillary refill Lung exam Mental status/pain <p>(PGY2, PGY3)</p>	<ul style="list-style-type: none"> Pre-rounds and rounds with feedback on rounds 	<ul style="list-style-type: none"> Attending/Fellow feedback in the course of patient care MedHub evaluation 	<i>PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i>
<p>2. Incorporate data from bedside monitoring equipment in development of plan of care</p> <ul style="list-style-type: none"> Pulse oximetry (PGY2, PGY3) Heart rate (PGY2, PGY3) RR (PGY2, PGY3) Cardiac tracing (PGY2, PGY3) End tidal CO2 (PGY2, PGY3) Invasive and non-invasive BP (PGY2, PGY3) CVP (PGY2, PGY3) ICP monitor (PGY 3) 	<ul style="list-style-type: none"> Pre-rounds and rounds with feedback on rounds 	<ul style="list-style-type: none"> Direct observation followed by timely verbal feedback Procedure documentation by resident 	<i>PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i>
<p>3. Incorporate information from ancillary studies in development of plan of care</p> <ul style="list-style-type: none"> Review radiology results prior to Rounds 	<ul style="list-style-type: none"> Pre-rounds and rounds with feedback on rounds 	<ul style="list-style-type: none"> Direct observation during rounds with on-the-spot verbal feedback 	<i>PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i>

<ul style="list-style-type: none"> Review laboratory results prior to Rounds 			
<p>4. Demonstrate an understanding of the indications for initiation of various invasive and non-invasive monitoring modalities, e.g.:</p> <ul style="list-style-type: none"> Pulse oximetry Heart rate RR Cardiac tracing End tidal CO2 Invasive and non-invasive BP CVP ICP monitor 	<ul style="list-style-type: none"> Rounds 	<ul style="list-style-type: none"> Direct observation during rounds 	<p>PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</p>
Goal 6. Understand the assessment, classification, and management of patients in shock			
Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
<p>1. List the common and contrasting characteristics of septic, cardiogenic, and hypovolemic shock (PGY 2)</p>	<ul style="list-style-type: none"> Reading: “Shock”, “Shock Tables” (http://peds.stanford.edu/Rotations/picu/pdfs/16_shock.pdf) 	<ul style="list-style-type: none"> Direct observation during rounds with verbal feedback 	<p>MK—Demonstrate knowledge evolving sciences and apply this knowledge to patient care</p>
<p>2. Manage a patient in shock tailoring treatment to etiology</p> <ul style="list-style-type: none"> Prompt fluid resuscitation as indicated Initiation of inotropic support Complementary therapies (e.g., antibiotics) Indications for surgical intervention (e.g., cardiac obstructive shock) Indications for mechanical intervention <p>(e.g., ECMO, VAD)</p>	<ul style="list-style-type: none"> Reading: “Shock”, “Shock Tables” (http://peds.stanford.edu/Rotations/picu/pdfs/16_shock.pdf) 	<ul style="list-style-type: none"> Direct observation during rounds with on-the-spot verbal feedback 	<p>MK—Demonstrate knowledge evolving sciences and apply this knowledge to patient care</p> <p>PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</p>
<p>3. List the commonly used inotropes and vasopressors and identify their indications</p>	<ul style="list-style-type: none"> Independent reading: “Inotropes and Vasopressors”, “Inotropes” (http://peds.stanford.edu/Rotations/picu/pdfs/15_inotropes_vasopressors.pdf) 	<ul style="list-style-type: none"> Direct observation during rounds with verbal 	<p>MK—Demonstrate knowledge evolving sciences and apply this</p>

<ul style="list-style-type: none"> • Dopamine • Dobutamine • Epinephrine • Norepinephrine • Milrinone • Vasopressin • Phenylephrine <p>(PGY3)</p>	<ul style="list-style-type: none"> • Beside care 		<i>knowledge to patient care PC—Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems</i>
Goal 7. Demonstrate competency in resuscitation and stabilization of an acutely decompensating or arresting child			
Resident Objectives	Instructional Strategies	Assessment of Competence	
<p>1. Run/participate in a code or mock code addressing one of the following scenarios required advanced life support</p> <ul style="list-style-type: none"> • Bradycardia with poor perfusion • Ventricular fibrillation • Ventricular tachycardia • Pulseless ventricular tachycardia • Asystole/PEA <p>(PGY 2, PGY 3)</p>	<ul style="list-style-type: none"> • Mock codes • CAPE (prior to start of rotation) • PALS manual • PALS cards 	<ul style="list-style-type: none"> • Direct observation with on-the-spot feedback from code proctor 	
<p>2. Recite the PALS algorithm for the following code scenarios</p> <ul style="list-style-type: none"> • Bradycardia with poor perfusion • Ventricular fibrillation • Ventricular tachycardia • Pulseless ventricular tachycardia • Asystole/PEA <p>(PGY 2, PGY 3)</p>	<ul style="list-style-type: none"> • Mock codes • CAPE (prior to start of rotation) • PALS manual • PALS cards • Reading: “Codes” (http://peds.stanford.edu/Rotations/picu/pdfs/6_Codes.pdf) 	<ul style="list-style-type: none"> • Direct observation 	
<p>3. Demonstrate the correct use of a defibrillator and cardioverter</p> <ul style="list-style-type: none"> • Indications • Pad/paddle position 	<ul style="list-style-type: none"> • Supervisor demonstration 	<ul style="list-style-type: none"> • Direct observation 	

<ul style="list-style-type: none"> • Selection of voltage • Safety steps 			
(PGY2)			
Goal 8. Develop skills in pre and post-operative management in patients requiring post-operative intensive care			
Resident Objectives	Instructional Strategies	Assessment of Competence	
<p>1. Understand management of and potential complications from surgical procedures (neurosurgical procedures, airway reconstruction, major orthopedic and plastic surgery procedures, solid organ transplants)</p> <ul style="list-style-type: none"> • Fluid and electrolyte imbalance • Bleeding diathesis • Difficult airway • Hemodynamic instability • Infection • ICP changes • Primary dysfunction of transplanted organ 	<ul style="list-style-type: none"> • Participation in patient care or rounds • Surgical accept notes 	<ul style="list-style-type: none"> • Direct observation 	
(PGY2, PGY3)			
Goal 9. Demonstrate competency in airway management and respiratory support			
Resident Objectives	Instructional Strategies	Evaluation	ACGME Competency Goals
<p>1. Understand differences between oxygen delivery devices and their indications</p> <p>Standard nasal cannula High flow nasal cannula Simple face mask Partial rebreathing mask Non-rebreathing mask (PGY 1,2,3)</p>	<ul style="list-style-type: none"> • Independent reading: “Airway Management” (http://peds.stanford.edu/Rotations/picu/pdfs/11_airway_management.pdf) • Beside care 	<ul style="list-style-type: none"> • Discussion during lecture 	<p>PC—Provide effective health care services MK— Demonstrate knowledge evolving sciences and apply this knowledge to patient care</p>
<p>2. Demonstrate correct technique in bag-mask ventilation</p>	<ul style="list-style-type: none"> • Independent reading: “Airway Management” (http://peds.stanford.edu/Rotations/picu/pdfs/11_airway_management.pdf) • Beside care 	<ul style="list-style-type: none"> • Direct observation 	<p>PC—Provide effective health care services MK— Demonstrate knowledge evolving sciences and apply this knowledge to patient care</p>

<p>3. Demonstrate correct technique in endotracheal intubation, including preparation for intubation</p> <ul style="list-style-type: none"> • Selection of appropriate equipment (blade type and size, ETT, suction) 	<ul style="list-style-type: none"> • Independent reading: "Airway Management" (http://peds.stanford.edu/Rotations/picu/pdfs/11_airway_management.pdf) • Beside care 	<ul style="list-style-type: none"> • Direct observation 	<p>PC—<i>Provide effective health care services</i> MK—<i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i></p>
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PBLI = practice based learning and improvement

ICS = interpersonal and communication skills

P = professionalism

MK = medical knowledge

PC = patient care

SBP = systems based practice