Pediatric Anesthesia Basics
Logistics of the Rotation

In-House Call

Work hours

Pain Call Duties

Education Opportunities
In House Call

- Fellow will be in-house with the junior residents for your first month
- Housekeeping Phone Number 10133
- Room 0663 is reserved for the residents. The bed for this room should be made each morning by housekeeping
- Housekeeping should come at 7am to change the linens, etc so please be out of the room by 7am.
- At 7am give phones to ARC for the day or to on-coming resident on the weekends at 7am. (Monday 8 am) Please give sign out of overnight events to ARC each AM.
- Email Janice or Tammy if you get pulled to GOR, OB, or another service.
- Contact us with any issues with the call room (housekeeping, noise, temperature).
- See and complete pre-op note for in-patients added on for the next day (before 10-11 pm)
Pedi Pain Call Duties

- **Goal:** Develop skills to manage routine pediatric perioperative pain
  - Ok to refer chronic/complex pain questions to attending

- **Weekdays:**
  - The morning of the day you are on call, alert your OR attending that you need a **≤30 minute window in the afternoon to round with pain service.**
  - CALL PAIN SERVICE AT 650-724-6000 to give them your planned time range. Usually for us, between 2-4pm works best, but we are flexible.
  - Refer all pain calls/consults received during business hours to 4-6000 phone/pager 28521

- **Weekends:**
  - contact pain attending the evening before to arrange rounds time
  - **Sign-out active patients on weekends to co-residents**
  - Sunday resident: Before 6am Monday leave message at 4-6000 with active patient issues
Education Opportunities

- Weekly Pediatric Resident AM Lecture
  - 6:30 AM Wed – LPCH OR Conference Rm
  - *Attendance is expected*

- Journal Club – alternating months
  - 6:30 AM Wed – LPCH OR Conference Rm
  - Facilitated by fellow. Active participation by residents.

- Division M&M – 4th Monday of the month
  - 6:30 AM Mon – LPCH Board Rm (1st floor)

- Grand Rounds – every Monday LKSC
NPO guidelines

- Solids/formula = 6h
- Breast milk = 4h
- Clears = 2h
- Older kids and outpatients should be NPO after midnight
- Chewing gum and candy are considered clear liquids (2 hours)
Midazolam Premedication

- **IV Versed**
  - 0.1 mg/kg midazolam
  - Max 2 mg for most patients
  - Over 12 yo, IV placed in preop

- **PO/pGT**
  - 0.5 mg/kg up to 20 mg
    - 1st case order medication by 7:05-7:10 AM
    - Subsequent cases, NP will usually call or order for you
  - <6 mo = usually no premed needed
  - ~6 mo to 12y = oral premed (0.5 mg/kg up to 20 mg)

Stranger anxiety starts around 9 months of age
Essential Equipment:
Every case, every day

- Moving chest does NOT equal moving air
- Equal breath sounds and ETT cuff leak with EVERY intubation
- Allows you to assess breath sounds after extubation (rhinoplasty, cleft lip, etc)
Set Up: T-MSMAID

- Table
- Machine
- Suction
- Monitors
- Airway
- IV
- Drugs
<table>
<thead>
<tr>
<th><strong>Table</strong></th>
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<tbody>
<tr>
<td>• Bair Hugger</td>
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<tr>
<td>• Shoulder Roll</td>
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<tr>
<td>• 3 lead EKG</td>
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<tr>
<td>• Pulse Ox</td>
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<td>• Appropriate sized BP cuff</td>
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<td>• Special cable for neonatal cuffs</td>
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Pulse oximeter and BP cuff will be in patient’s chart and should stay on for PACU
Machine

- Standard Machine check
- Drager Perseus machine in ORs 1-7. Apollo in APU
- Monitor set to Neonate or Pediatric Mode
- Reset alarms for age appropriate vitals
- Anything on the machine tray is going to be completely removed between cases
Suction

- Red rubber Rob Nell suction catheter for little kids. Anesthesia techs usually do not set up a Yankauer.

- Yankauers located in anesthesia cart or on surgical shelves. Have available before induction if you anticipate need.

- Turn on suction.
Monitors

- BP cuff of appropriate size
  - Neonatal cuffs require a different cable

- Pulse ox
  - Avoid index finger to minimize corneal abrasions post op. Toes are great!

- 3 lead EKG
  - White lead on right
  - Green lead is V5 and equivalent to red lead in adults
Airway

- ETT (3)
  - One half size bigger and one half size smaller
  - Appropriate size stylet

- Two laryngoscope blades & handles *(check these!)*

- Oral airways

- Flavored face mask

- Cloth white tape to secure ETT
  - Two Y-strips

- Red rubber for suction

- Eye tape (Mepitac)

For every case, the anesthesia techs will set up airway equipment according to age or size of patient. While RN places monitors, double check size of equipment.
ETT

- Size based on the child’s pinky
- Age/4 + 4 (uncuffed)
  - Size down by ½ if cuffed
- Age/4 + 3 (cuffed)
- Have one half-size smaller and larger available

Oral and nasal RAE boxes are available from the anesthesia techs.
Laryngoscope blades

- Neonate to 3 months: Miller 0
- 3 months to 18 months: Miller 1
- 18 month- 3 years: Miller 1.5, Mac 1, Wisc 1.5
- 3-5 years: Miller 1.5, Mac 2, Wisc 1.5
- >5 years: Miller 2, Mac 2-3
- Mac 4 is not standard in room. You will need to request one from tech
## Airway

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LPCH Difficult Airway Equipment

Glidescope
Storz CMAC system
Olympus FOB
IV

- IV supplies – usually set on Mayo stand
  - consider mini-tourniquet (cut adult one) for tiny babies
  - Alcohol pads / Chlorhex
  - PIV catheters (24, 22, 20G)
  - Opsites/Tegaderm
  - 2x2 gauze
  - Paper tape for additional reinforcement
  - Stat-lock
  - May need arm board

One IV setup will be placed on a Mayo stand by techs for every case.
IV continued

- Check all IV sets and buretrols for bubbles and set up
  - A bubble is a bullet to the brain – Boltz
  - Draw back on syringes to de-air before injecting
- Consider a dextrose infusion in children < 6 mo
- Buretrol IV set for < 10 kg
- Microdripper for < 12 yo

Do you know the incidence of PFO in babies? Children? Adults?
Drugs

- **OMNICELL** machines
  - Emergency drugs, opioids, induction agents
  - Note that ketamine comes in 100mg/ml (for IM injection) and 10mg/ml for IV
  - Albumin, Crystalloid, Dextrose
  - SINGLE PATIENT USE VIALS ONLY – ie. Acetaminophen, Dexmedetomidine, Clonidine
  - *Empty the top drawer at the end of the day*

- **CODONICS**

- **LPCH Pharmacy** (near OR 7):
  - Call to have drips made for big cases – 721-2731. Can be ordered in advance under “Anesthesia OR drips” in Epic.
  - 10mcg/ml pre-made Epinephrine syringes available
  - 4 mcg/ml dilute dexmedetomidine syringes available (10 ml)
  - Prefilled Propofol 20 ml and 10 ml occasionally available in pharmacy (recently on back-order!)
  - Preop antibiotics should be ordered by surgery team and brought to OR by pharm tech
Emergency Drugs

- **Succinylcholine** 4-6 mg/kg on IM needle
- **Atropine** 0.02 mg/kg on IM needle
- **Ephedrine** 5 ml of 5mg/ml
- **Phenylephrine**
  - 1 syringe of 100ug/ml
  - 1 syringe of 10ug/ml
- **Epinephrine** 10 mcg/ml
- **Epinephrine** 1 mcg/ml
- Two syringes of saline flush

Have small syringes and needles available. Do not draw up for EVERY case.
Other emergency drugs

- **Calcium Chloride**
  - Code dose = **10 mg/kg**
  - 10cc of 100mg/cc
  - 10cc of 10mg/cc for small infants
- **Sodium bicarbonate**
  - 8.4% **1 mEq/cc** for patients >1 year
- Syringes of **5% albumin**
- “**Cardiac pack**” from pharmacy
Induction Drugs

- **Ketamine** – 0.5-5 mg/kg IV, 3-5 mg/kg IM

- **Propofol** – 3-5 mg/kg IV

- **Rocuronium** 0.6-1.2 mg/kg
  - Consider diluting to 1 mg/cc for children <5 kg (discuss with your attending)
Pain medications

- **RECTAL acetaminophen** (check dose with attending)
- **IV acetaminophen** dose is age dependent:
  - 10 mg/kg <2 years
  - 15 mg/kg >2 years
  - Re-dose Q 6 hours. Slow push/infusion over 15 minutes.
- **Toradol** 0.5 mg/kg IV or IM after 6 months of age
- **Fentanyl** single dose 0.5 to 1 mcg/kg, dilute to 1 mcg/cc for babies, 10 mcg/cc for children<10 years
- **Morphine** single dose 0.1 mg/kg IV
- **Hydromorphone** single dose 0.005- 0.01mg/kg IV
Acetaminophen

- From UpToDate

GA ≥32 weeks:

Manufacturer's labeling:

- PNA ≤4 weeks: 12.5 mg/kg/dose every 6 hours; maximum daily dose: 50 mg/kg/day
- PNA >4 weeks: 15 mg/kg/dose every 6 hours; maximum daily dose: 60 mg/kg/day

Alternate dosing:

- Loading dose (Allegaert 2007; Bartocci 2007): 20 mg/kg/dose

- Maintenance dose (Allegaert 2007; Allegaert 2011; Bartocci 2007):
  - PMA 32 weeks: 10 mg/kg/dose every 12 hours; some suggest 7.5 mg/kg/dose every 8 hours; maximum daily dose: 22.5 mg/kg/day
  - PMA 33 to 36 weeks: 10 mg/kg/dose every 8 hours; some suggest 7.5 to 10 mg/kg/dose every 6 hours; maximum daily dose: 40 mg/kg/day
  - PMA ≥37 weeks: 10 mg/kg/dose every 6 hours; maximum daily dose: 40 mg/kg/day
Double Check Infusion Pumps

RN & MD should verify the following:

• Confirm PATIENT MRN on medication syringe against EHR
• Confirm PATIENT WEIGHT programmed against weight listed in EHR
• Confirm Medication NAME programmed with syringe label
• Confirm Medication CONCENTRATION programmed with syringe label
• Correct Medication DOSING UNIT programmed with syringe label

SAFETY DOUBLE CHECK PROCEDURE FOR INFUSIONS

PLACE PATIENT LABEL HERE

1. Confirm PATIENT MRN on medication syringe against EHR
2. Confirm PATIENT WEIGHT programmed against weight listed in EHR
3. Confirm Medication NAME programmed with syringe label
4. Confirm Medication CONCENTRATION programmed with syringe label
5. Correct Medication DOSING UNIT programmed with syringe label
6. Place green sticker on each syringe once check completed

* Timing of the Double Check is at the discretion of the Attending.

PLEASE PLACE COMPLETED FORM IN THE AUDIT ENVELOPE FOR EACH CASE.

LPCH Pediatric Anesthesia Rotation
PONV

STEP 1
PONV Risk Score:
1. Age > 3
2. Surgical Duration > 30 min
3. Strabismus Surgery
4. History of PONV in patient or 1st degree relative or history of motion sickness

STEP 2
PONV Prophylaxis dictated by PONV Risk Score.

STEP 3
Attendings will attest to following algorithm in QI portion of charting
Important personnel & operating room flow
ARC: Anesthesia Resource Coordinator

- Makes daily schedule and runs board: 1-9705
- Holds emergency phone: 1-9706
- Monitors PACU along with SUPRA (block) MD
- Assists with difficult inductions/PIVS
- Must be notified (along with OR desk) of any changes in call or scheduling

- Olga Albert (lead)
- Rebecca Claure
- Sam Rodriguez
- Tammy Wang
- Rita Agarwal
PARC: Pediatric Anesthesia Resource Center

- All elective cases reviewed (RN/NP/MD)
- Phone interview with families (RN/NP)
- Selected patients seen in-person (NP/MD)
- Will try to see inpatients and add-ons (NP/MD)
  - The expectation is that you also see your in-patients the prior day. If you are post-call or not available, ask your in-house colleague to see them for you.
- Dr. Genevieve D’Souza is lead PARC anesthesiologist
  - Birgit Maass, Ellen Wang, Tammy Wang, Sam Mireles, Sheila Rajashekara, Anita Honkanen
Perioperative flow

Intake

- Vitals and NPO verified
- Anesthesia NP examines and begins PreOp note

Patient changed into gown
- Site marked, 24 hour H&P, 1st timeout → GO
- Premed given
- Patient consented by anesthesia team
- PreOp note completed by attending/resident

Operative Location

OR
APU
MRI/CT
IR
ASC
Radiation Therapy

OR RN calls out 20 mins before end of case to make next patient ready.

PostOp

PACU or ICU (NICU, PICU, CVICU)
IPASS Handoff
PostOp Note

Periop Flow

- 1st case of the day
  - Patient may be in Intake or Holding areas
  - *It is expected you see your patient by 7 AM so premed can be ordered (if appropriate) by 7:05 and given by 7:10*
  - OR RN will see patient by 7:20
  - In operating room by 7:30

- Subsequent cases
  - Outpatients will be in Intake area
  - Inpatients will be in Holding area
  - NP will typically see/evaluate patient, order premed, etc → call team with questions
Voalte phones

- Pick up a phone from PACU (near high numbers)
- Log in with your LPCH Epic ID and password
- Or download Voalte Me app
  - Cannot receive calls on your phone until you contact Ellen Wang, MD
- When on call...
  - 19705 phone login – arc/11111
  - 19706 phone login – aemerg/11111
  - Be sure to log out/in before you go to bed as the phones auto-log-out after 12 hours!
To obtain DuoMobile access for LPCH (so you can log in to Epic from home), go to portal.stanfordchildrens.org.

Under “Announcements” click on the “click here” link for Want to Register for 2FA? and follow the instructions.
Clean/Dirty Areas

- Remove gloves and foam hands before touching Omnicell or clean supply cart

- Top of anesthesia machine is a “dirty” zone and will be completely cleared between cases.

- Lower side tray is considered “clean”
- For patient identifier only scan from the patients band
  - Number is patient’s CSN
- Do not use any other barcodes (e.g. on stickers, although iStat machine will let you)
- Do not enter random numbers or we will lose our iStat certification
### PACU Handoff

- **Formalized sign-out by surgeon, OR RN and anesthesiologist to PACU RN**
- **For outpatients, IPASS is in front page of chart**
- **May complete in writing or verbally to PACU RN**
- **Surgeon, OR RN, Anesthesia**

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#### Table: PACU Handoff

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IPASS to ICU
12/20/17
LPCH Pediatric Anesthesia Rotation

**OR to PICU TRANSFER PROTOCOL**

**OR to PICU PRE-TRANSFER ACTIVITIES**

- OR brings 45 Minute Transfer Notification Form to PICU USA/Front Desk
- Within 5 minutes PICU USA notifies bedside RN and test pages Attending and RT (if necessary)
- Within 10 minutes, PICU bedside RN calls OR circulating RN and receives verbal report.
  - Test RT if necessary and not notified already
- OR calls USA with 10 minute notification
- USA test pages 10 minute notification to bedside RN, Charge RN, Attending and RT (if necessary)
- Charge Nurse ensures a step RN is available for handoff

**BEFORE LEAVING OR**

- **PUMP Check**
  - Check programming
  - Correct labels
- **ORGANIZE**
  - All lines-secured, transparent dressings applied, open ports are capped, sutures removed
- **PREPARE for transport**
  - IV on patient
  - Airway equipment
  - Pacemaker and cables
  - Drugs
  - Standard Pharmacy Transport Pack
  - Correct bed
  - Transport monitor working and cables organized
  - Oxygen or Blender
  - [N] ppm

**TRANSFER OF CARE IN THE PICU [Rationale]**

The transfer of critically ill patients from the OR to the PICU should follow a systematic approach. The ANESTHESIOLOGIST is responsible for the care of the patient until the report process below is complete.

The PICU nurses and physician/mid-level assessment of the patient must occur AFTER the report process is complete so that there are no distractions during the process below.

Staf must be present for the transfer of care in the PICU. PICU ATTENDING, PICU FELLOW, MID-LEVEL SURGEON, ANESTHESIOLOGIST, BEDSIDE NURSE, HELPER RN and RT (if needed).

**COMMUNICATION** (initiated by bedside RN)

- Introductions
  - SURGEON gives report on surgery performed
  - Reports intra-op issues
    - Plan and concerns regarding postop recovery
  - ANESTHESIOLOGIST gives report on surgery using IVAS & standard EMR printout
  - Bedside RN uses closed loop communication to verbalize understanding including
    - Formal question regarding Attending/Fellow and RN “Any questions?”
    - Formal question to PICU attending: Handoff of care completed?

- Q & As
  - ONE person speaks at a time
  - Relax as anticipated course for the patient

**ONE MESSAGE: ONE TIME**

---

**IPASS Handoff - Anesthesia to PICU**

**Patient Summary**

<table>
<thead>
<tr>
<th>Patient Name</th>
<th>EMR</th>
<th>MRN</th>
<th>DOB:</th>
<th>VN:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illness Severity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code: Status</td>
<td>Full Code</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R:RR</td>
<td>Airways/Pneumonia</td>
<td>Neurovascular</td>
<td>Metabolic</td>
<td>Blood Loss</td>
</tr>
<tr>
<td>Yello:</td>
<td>Vascular/Access</td>
<td>Neurovascular</td>
<td>Pain Control</td>
<td></td>
</tr>
<tr>
<td>Green:</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td></td>
</tr>
</tbody>
</table>

**Patient Information**

<table>
<thead>
<tr>
<th>Scheduled Procedure</th>
<th>Scheduled Diagnosis</th>
<th>Scheduled Surgeon</th>
<th>Scheduled Anesthesiologist</th>
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</thead>
<tbody>
<tr>
<td>Level 3 Fetal</td>
<td>Stable</td>
<td>Peds</td>
<td>Pediatric Anesthesia</td>
</tr>
<tr>
<td>History of Present Illness</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>History of Relevant History</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glucose:</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood Pressure:</td>
<td>120/80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature:</td>
<td>37.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intubated:</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticonvulsant:</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antibiotic:</td>
<td>None</td>
<td></td>
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</tbody>
</table>

**Respiratory Support**

<table>
<thead>
<tr>
<th>Action List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enema</td>
</tr>
<tr>
<td>Cannula</td>
</tr>
<tr>
<td>Airway:</td>
</tr>
<tr>
<td>Defibrillator:</td>
</tr>
<tr>
<td>Ventilator:</td>
</tr>
<tr>
<td>Oxygen:</td>
</tr>
<tr>
<td>Nasal Cannula:</td>
</tr>
<tr>
<td>Endotracheal:</td>
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</tbody>
</table>

**Family History**

<table>
<thead>
<tr>
<th>Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
</tr>
<tr>
<td>Alcohol</td>
</tr>
<tr>
<td>Anticonvulsants</td>
</tr>
<tr>
<td>Antidepressants</td>
</tr>
<tr>
<td>Anticoagulants</td>
</tr>
<tr>
<td>Antihistamines</td>
</tr>
<tr>
<td>Beta Blockers</td>
</tr>
<tr>
<td>Blood Thinners</td>
</tr>
<tr>
<td>Calcium channel blockers</td>
</tr>
<tr>
<td>Corticosteroids</td>
</tr>
<tr>
<td>Diuretics</td>
</tr>
<tr>
<td>Erythropoietin</td>
</tr>
<tr>
<td>Estrogen</td>
</tr>
<tr>
<td>Insulin</td>
</tr>
<tr>
<td>Narcotics</td>
</tr>
<tr>
<td>Opioids</td>
</tr>
<tr>
<td>Oral contraceptives</td>
</tr>
<tr>
<td>Tranquilizers</td>
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<tr>
<td>Warfarin</td>
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</table>

**Blood Products Available**

<table>
<thead>
<tr>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

**Informed Consent**

<table>
<thead>
<tr>
<th>Signed by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending</td>
</tr>
<tr>
<td>Patient</td>
</tr>
<tr>
<td>Guardian</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway Options:</td>
</tr>
<tr>
<td>Blood Volume:</td>
</tr>
<tr>
<td>Central Venous:</td>
</tr>
<tr>
<td>PICC Lines:</td>
</tr>
<tr>
<td>PICC Lines:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location of Blood Products Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Line</td>
</tr>
<tr>
<td>PICC Line</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

12/20/17 LPCH Pediatric Anesthesia Rotation
ICU to OR handoff

- OR circulator calls ICU clerk 45 minutes prior to patient pick up
- Patient should be on monitor with medications transferred to OR syringe pumps
- ICU team available to sign out patient to anesthesia team
- Translator available PRN in person or via iPad
- Parents available by phone or at bedside for consent
ACGME Case Minimums

- < 3 months (5 patients)
- 3 months – 3 years (20 patients)
- 3 years – 12 years (100 patients)

Each is inclusive of the category above...if you meet your <3 month and 3 month – 3 year requirements, you only need 75 more 3 year – 12 year patients.

- Try to advocate for a diverse experience – urology, ENT, general surgery, orthopedics and neurosurgery can be very different in pediatrics!
Packard 2.0

LPCH Pediatric Anesthesia Rotation

12/20/17

West Building
- Access Main Building via Bridge on Level 1
- ORs
- OR Front Desk
- NICU – 2nd floor West Bldg
- CVICU – 2nd & 3rd floor
- Main Bldg (South Wing)
- PICU – 3rd & 4th floor Main Bldg (South Wing)

Main Building
- Access West Building via Bridge on Level 1
- ORs
- PACU
- INTAKE
- HOLDING
- NICU – 2nd floor West Bldg
- CVICU – 2nd & 3rd floor
- Main Bldg (South Wing)
- PICU – 3rd & 4th floor Main Bldg (South Wing)

Legend:
- Department Entry
- Welcome Desk
- Building Entry
- Restrooms
- Security
- Elevators
- Stairs
- Valet Services Main (Drop-Off)
pedsanesthesia.stanford.edu
<table>
<thead>
<tr>
<th>Basics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Orientation Information</strong></td>
</tr>
<tr>
<td>Preparation Evaluation</td>
</tr>
<tr>
<td>MIP</td>
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<tr>
<td><strong>Resuscitation</strong></td>
</tr>
<tr>
<td>2019 AHA Guideline Changes</td>
</tr>
<tr>
<td>Pediatric BLS, AHA 2015 Guidelines</td>
</tr>
<tr>
<td>Neonatal Resuscitation: AHA 2015 Guidelines</td>
</tr>
<tr>
<td>Pediatrics ALS, AHA 2015 Guidelines</td>
</tr>
<tr>
<td><strong>Complex Pediatric Cases</strong></td>
</tr>
<tr>
<td>Congenital Heart Disease</td>
</tr>
<tr>
<td>Patients with Mitochondrial Disease</td>
</tr>
<tr>
<td>Thoracoabdominal and Upper Extremity Surgery</td>
</tr>
<tr>
<td>The Child with Diabetes</td>
</tr>
<tr>
<td>Critical Airway</td>
</tr>
<tr>
<td><strong>Pain</strong></td>
</tr>
</tbody>
</table>

- Goals and objectives
- Transplant – setup, education
- Resuscitation
- Mitochondrial disease
- EB
- Critical Airway
- Pain
Pediatric Critical Events Checklist
By The Children's Hospital of Philadelphia

Description
The blood pressure rises to 160/90 than enough muscle relaxant. Adr anesthesia fails to control the BP's

Call for help!
- Overhead
- Code Team
- Blood Bank
- PICU
- Fire

Local Anesthetic Toxicity
- Call for help.
- Stop local anesthetic.
- Request Intralipid kit.
- Give 100% oxygen.
- Confirm or establish IV access.
- Confirm and monitor continuous ECG, BP, and SaO2.

Seizure treatment: midazolam 0.05-0.1 mg/kg IV or propofol 1-2 mg/kg IV. Treat resultant hypoventilation.
- Treat hypertension with small doses of ephedrine 1 mg/kg.
- Monitor and correct acidosis, hyperthermia and hyperkalemia.
- Avoid vasopressin, calcium channel blockers and beta blockers.
- If cardiac instability occurs:
  - Start CPR
  - Start Intralipid therapy (see inoset box)
  - Continue chest compressions (lipid must circulate)
- Consider alerting nearest cardiopulmonary bypass center and ICU if no ROSC.
Code Cart

Broselow © Tape (ED only)
Most importantly... HAVE FUN!

- QUESTIONS or CONCERNS?! 
- EMAIL or CALL us
  - Rotation Directors
  - Janice Man
    - janice.man@stanford.edu
    - 714-496-7117
  - Tammy Wang
    - tamwang@stanford.edu
    - 408-401-6145

- Don’t hesitate to ask your attending for a PM break so you can pre-op your patients for the next day AND see your in-patients

- Remember to get some candy for call from the pain office during sign-out!

- Additional snacks available in ARC office