Children’s Healthcare of Atlanta at Egleston

PICU Orientation Manual

2016 - 2017
Welcome to the PICU rotation. Although Pediatric Intensive Care is considered a subspecialty rotation, it is in reality a rotation in which you become the "ultimate generalist". Unlike the traditional sub-specialist, the vantage point from which you view the critically ill patient involves all organ systems, rather than a single system. For many of you, this will be the first time you will see children with such a high acuity of illness. This can be very intimidating. Your unfamiliarity with equipment and monitoring devices can be even further daunting. This orientation manual, along with the series of web-based lectures is designed to help you understand your role in the PICU and become familiar with issues that will make you more comfortable in this environment. You will find that the sooner this material is mastered, the more comfortable you will become in addressing the problems in the PICU and the overall management of life threatening cardiopulmonary emergencies. We expect you to have read this manual prior to the first day of your PICU rotation.

Some of the information in this manual is applicable to any pediatric ICU service, and some of it is specific to our practice at Children’s Healthcare of Atlanta at Egleston. During your rotation at Egleston, it will become obvious which practices specifically pertain to Egleston versus those more universal in nature. The lecture series is designed to give you the core education that you will need as part of your residency. These are not meant to be a substitute for curiosity and further reading that will be necessary for you to adequately understand your patients’ conditions. There are several textbooks of critical care in the Fellows’ Office that you can borrow to read. UpToDate is also a good reference when starting to delve into a disease process.

We remain strongly committed to your education and to excellent patient care. Please feel free to contact Dr. Pham (nga.pham@choa.org) or Dr. Stockwell (jana.stockwell@choa.org) with any concerns.

Jana Stockwell, MD, FCCM
Associate Professor of Pediatrics
Director, Critical Care Medicine
Associate Resident Liaison

Li deAlmeida, MD
Assistant Professor of Pediatrics
Associate Fellowship Director
Medical Director, TICU

James Fortenberry, MD, MCCM
Professor of Pediatrics
Pediatrician in Chief, CHOA

Kiran Hebbar, MD, FCCM
Associate Professor of Pediatrics
Associate Fellowship Director
Director, Pediatric Education & Development
Through Stimulation (PEDSIM)

Pradip Kamat, MD, MBA, FCCM
Assistant Professor of Pediatrics
Director, Children’s Sedation

Matthew Paden, MD
Associate Professor of Pediatrics
Director, Pediatric ECMO & Advanced Technologies

Toni Petrillo, MD, FCCM
Associate Professor of Pediatrics
PICU Medical Director
Co-Director, Children’s Response Fellowship Director, Pediatric Critical Care Medicine

Nga Pham, MD, FCCM
Associate Professor of Pediatrics
Director APP Program
Resident Liaison

Keiko Tarquinio, MD
Assistant Professor of Pediatrics

Atul Vats, MD, FCCM
Associate Professor of Pediatrics

Heather Viamonte, MD
Assistant Professor of Pediatrics
Sibley Heart Center

Julie Williamson, DO
Associate Professor of Pediatrics & Anesthesiology
Anesthesiology Residency Program Director

Michael Wolf, MD
Assistant Professor of Pediatrics
Sibley Heart Center
Contents

EXPECTATIONS OF RESIDENTS ON THE PICU ROTATION ................................................................. 4

Goals ..................................................................................................................................................... 4

Misconceptions about the rotation ....................................................................................................... 4

Expectations of you, the PICU resident .................................................................................................. 5

  Be visible .......................................................................................................................................... 5

  Read up on what you are seeing ..................................................................................................... 5

  Complete the required OpenPediatrics modules (www.openpediatrics.org) ................................... 5

How it all works ...................................................................................................................................... 6

Admissions & Transfer Accepts ........................................................................................................... 6

Verbal orders ....................................................................................................................................... 6

Daily notes .......................................................................................................................................... 6

Teams ................................................................................................................................................... 7

  Pod 1 (aka Team A) .......................................................................................................................... 7

  Pod 2 (aka Team B) .......................................................................................................................... 7

  Pod 3 (aka Team C) .......................................................................................................................... 7

Rounds ................................................................................................................................................ 7

  Morning work rounds .................................................................................................................... 7

  Afternoon “sign-out” rounds ........................................................................................................... 8

  “Midnight” rounds .......................................................................................................................... 8

Transfer / Discharges ........................................................................................................................... 8

  Discharge ....................................................................................................................................... 9

  Off service duties ........................................................................................................................... 9

Deaths / Autopsy .................................................................................................................................. 9

  Notifying the Attending(s) .............................................................................................................. 10

  Autopsy Information ....................................................................................................................... 10

  Notifying the Medical Examiner .................................................................................................... 10

  LifeLink ......................................................................................................................................... 11

  Death Certificate ............................................................................................................................ 11

Code Blue & PICU Alerts ...................................................................................................................... 11

Other tidbits about the rotation ........................................................................................................... 11

  Your role on the team ..................................................................................................................... 11
Consultants ............................................................................................................................................. 12
Labs ......................................................................................................................................................... 12
Administration of vasoactive medications.............................................................................................. 12
Respiratory care ...................................................................................................................................... 12
Bed control.............................................................................................................................................. 13
Resident education ..................................................................................................................................... 13
OpenPediatrics –MANDATORY! .............................................................................................................. 13
Tuesday teaching conference PICU Classroom, noon-2 Nov-Aug, 1:30-3:30 Aug-Oct ....................... 13
Pediatric core curriculum (Peds residents, mandatory 1st Thursday of rotation) ............................ 13
Egleston Grand Rounds ........................................................................................................................... 13
Emergency Medicine Core Curriculum ................................................................................................. 13
Evaluations .................................................................................................................................................. 14
Who’s who? ................................................................................................................................................ 14
  Social Workers ........................................................................................................................................ 14
  Child Life .................................................................................................................................................. 14
  Nurses ..................................................................................................................................................... 14
  Respiratory care (RRTs) ........................................................................................................................ 14
Order sets .................................................................................................................................................... 15
Where is the…? ........................................................................................................................................... 16
  Coffee .................................................................................................................................................... 16
  Ice machines/ water ............................................................................................................................... 16
  Lounge .................................................................................................................................................. 16
  Bathrooms ............................................................................................................................................ 16
  Place for me to stash my stuff ............................................................................................................... 16
  Cafeteria ............................................................................................................................................. 16
EXPECTATIONS OF RESIDENTS ON THE PICU ROTATION

Goals

- Recognize life-threatening diseases, and the life-threatening complications of other diseases.
- Appropriately prioritize patient care and the approach to their problems.
- Recognize and manage the acute failure syndromes as they relate to patient age:
  - acute airway obstruction
  - acute respiratory failure
  - acute circulatory collapse
  - acute liver failure
  - acute renal failure
  - septic shock
  - coma and encephalopathy
  - DIC
- Develop the communication skills necessary to present the patient's admission workup, diagnosis, and treatment course in a succinct and concise manner.
- Learn to integrate clinical assessment and organ systems review as a tool for patient evaluation and management.
- Interpret and integrate necessary laboratory and radiologic tests into the care plan.
- Recognize and respond to rapidly changing data.
- Determine the need for system specific invasive and non-invasive monitoring.
- Recognize the indication for achieving vascular access and airway management, and recognize the complications of each of these procedures. Observe, and possibly perform, placement of a central venous line, an arterial catheter, and intubation of a pediatric patient.
- Understand and participate in the management of preoperative and postoperative surgical patients as well as those admitted for traumatic injuries.

Misconceptions about the rotation

- **This is a procedure-intensive rotation**
  It is not. Our primary responsibility is for our Critical Care Fellows to achieve and maintain procedural competency. With 4 new trainees each year, this means that many lines and intubations will be directed towards them first. This is not to mean that you cannot be engaged in a procedure. Scrubbing in to assist on lines and chest tubes is welcomed. Please let the team know your interest in participation. We do recognize that some residents have no interest in performing procedures and others are eager for the experience.

- **This fellows make all of the decisions**
  We hope not! It is not unusual for residents coming in to the PICU to feel they are in an unfamiliar environment and therefore are a bit hesitant to present plans for their patients. We encourage you to formulate a plan for each organ system presented (more on that later). It may or may not be the plan the
team goes with, but that is why we round, to discuss options. If you do not understand why a certain
diagnostic or treatment path has been chosen, then please ask!

- **Patient rounds are just a recitation of numbers**
  Although the PICU has its share of important numbers, the more important take-home is why a certain lab is up or down. For instance, reporting that the AST is 1,500 is meaningless; is that higher, lower, trending up, falling precipitously? Is it a good sign or bad? Another example, chest tube drainage: up or down, if down – is the patient better or the chest tube clogged?

- **No one tells me what is going on with my patient**
  This one may actually be more true than false. We do not spend a lot of time looking for you to tell you what is going on with your kids. We expect you to be checking on your kids several times each day, preferably each hour. Tell the nurses to call you with changes, new labs, when their patient gets back from scans, etc. Be visible.

- **Residents are just here to do H&Ps, Transfer Summaries, and Discharges.**
  A number of years ago we became concerned about the amount of resident busy work. Notes were a large part of that. After evaluation we thought that the best way to have you spend more time thinking about the disease or injury presentation and stabilization was for the residents to be actively engaged in that assessment. The Transfer & Discharge Summaries are actually initiated the day the child is admitted and updated daily, as needed, by you, so completing them should be rather quick. This system allows you to consider each organ system and any progress or setbacks seen, but not worry about what labs or xray reports to put in a note. Of note, most of the attendings have already read each chart well before morning rounds; what we have not done is talked to the nurse or parent to know of new issues or changes. You are crucial in that process.

**Expectations of you, the PICU resident**

**Be visible**

**Read up on what you are seeing**
  If you need help finding info, check out these resources:

  - **Videos & animations (YouTube) of a ton of cardiac lesions**
    - Cincinnati Cardiac Lesion Animations

  - **NEJM procedure videos – check out both the Pediatrics and the Critical Care sections**
    - NEJM Procedure Videos

  - **Go to Careforce / Patient Care tab for a link to many sites: UpToDate, PubMed, RedBook, OVID, Visual DX, etc.**
    - Careforce clinical resources

**Complete the required OpenPediatrics modules (www.openpediatrics.org)**
  You must complete these to pass the rotation. This must be done during the first PICU rotation for the Peds residents.
These modules cover the basics of PICU information. One module must be completed before you can enter the next.

You have been sent an email login by Dr. Pham. Password is the password. Please change to whatever you want.

Once logged in, go to Community tab, then Groups. Find the Emory PICU group. This takes you to “7S curriculum”. You can then begin the modules. Each must be completed before the next can be started. Here are other modules in OpenPediatrics; all are free. Take time to poke around and view the respiratory and cardiac ones.

**How it all works**

**Admissions & Transfer Accepts**

All patients admitted to the PICU will be assigned to a CCM resident. If the patient is admitted directly to the CCM service, an H&P (.PICU Eg Resident H&P) should be completed in EPIC. All medical patients are admitted to the CCM service. If the patient is transferred from one of the medical services, a Transfer Accept (.PICU Eg Resident Transfer Accept) should be completed. On occasion, an APP may do an admission note in lieu of the resident. Typically this occurs when several patients are being admitted at the same time, a divide-and-conquer event. If, at all possible, please be certain to obtain the history in a private area. All orders are to be entered by the resident after discussing with the attending or fellow.

Notification of arrival of admissions are made over the PICU intercom system. Use the PICU General Admission order set to make life easier. Please make sure that patients actually have an admission order.

If a patient is admitted to general surgery or a surgical subspecialty service, a consult note is needed (.PICU Eg Resident H&P template). The H&P done by the admitting surgical service will serve as the patient's H&P; yours should be labelled a “Consult Note”. Please discuss all non-respiratory matters with the 4th year surgical resident or the pediatric surgery fellow and the surgical team prior to initiating any therapy unless it is emergent. The surgical personnel should write all the non-respiratory orders unless you are specifically requested to do so. Documentation regarding the discussion and agreed upon plan of care should be done in the progress notes. Remember, we are the consultant, not the primary team for surgical patients. That being said, we are the ones in the PICU and are expected to intervene for any issues as needed on these patients. Obviously, the surgical team needs to be informed of any major changes. We want to cooperate fully with all services, providing them the on-site assistance and the expertise they have requested, while at the same time communicating directly with them. All surgical service patients need to have a “consult CCM” order from surgery – sometimes this needs a reminder call.

**Verbal orders**

Just say no. No phone or verbal orders, as the PICU is a very busy place, and mistakes here are likely to be serious ones. By hospital policy, verbal orders should only be given only in an emergency or code situation. Nurses are instructed to obtain written orders unless these conditions exist.

**Daily notes**

Daily progress notes are generated by the attending during rounds. You are responsible for pre-rounding and presentation of the patient during rounds. Daily you need to update the pending Transfer/Discharge Summary and any sign-out lists being maintained by the residents. Accuracy helps prevent your co-workers from providing wrong information.
Teams
There are 3 teams M-F weekly throughout the year. They are divided geographically. On weekends and at night we divide into two geographic teams 1-18 and 19-36. If at any time one team is getting proverbially slammed, please make yourself available to help out. Every Pod has a Pixis and resuscitation equipment. Teams are composed of an attending, a fellow or NP, and a resident or NP.

Pod 1 (aka Team A)
Rooms 4101 – 4113. Main nurses area is here.

Pod 2 (aka Team B)
Rooms 4114 – 4125. Fellow office is across from room 19. Some textbooks are in there. The main equipment storage is also in Pod 2.

Pod 3 (aka Team C)
Rooms 4126 – 4136. Room 4136 is also our Simulation room.

Rounds
Morning work rounds
Rounds begin at 0800. You will round with your respective team.

The exception to that rule occurs if we have an ECMO patient. Everyone (fellows, attendings, residents, nutritionists, RRT, RN, ECMO specialists, pharmacist & parents; yes, it is crowded) rounds together on those patients. Residents do not present ECMO patients, the fellows do. We do this because we want you to focus on patient physiology and see no purpose in trying to have you learn the additional ECMO pump physiology.

Each morning we will expect you to briefly present what happened in the previous 24 hours, and then go through each system in an organized fashion. As you assimilate this material, think ahead, and try to predict what you expect to happen in the next 24 hours and what interventions you will need to make to improve patient care and outcome. We recognize that changes in vent settings, new labs, etc will occur between the times that you pre-round and when you present. You are not expected to have ESP, but we do want you to know the problems and treatments ongoing. In order to facilitate the prompt institution of therapy and/or transfer of patients, orders will be written as each patient is presented on rounds. As you are presenting the patient, be certain that one of the other residents or the fellow on-service is completing orders accurately as dictated on rounds.

We suggest that you have some things available to you on rounds:

1. Computer on wheels – The 2 main screens to have open are:
   a. On the Summary tab: CCM Rounding Report – This one goes in the order that we like to have patients presented in. Even if you have no handoff notes, you should be able to present from this screen.
   b. Other reports that are fantastic in the PICU are:
      i. Ane/Pain Rounds (for PCAs)
ii. Diabetic report (DKA)
iii. PTA/Home Meds
iv. MAR report
v. Code Timeline – If your patient has coded in the past 24 hours, you will see a red banner across the top of the screen when you enter their chart.

  c. On the orders tab: “PICU Rounding Orders”

2. A list of your patients – residents usually have a handoff list (maintain it!) We love it if you can actually present your patient from memory; maybe not all the numbers but an overall assessment.

3. A pen to make a list of stuff to be done, calls to make, scans to check, families to call, etc.

**Afternoon “sign-out” rounds**

Rounds begin at ~1600

The teams join together (all 3 pods, attending, NP, & fellow on at night) at the front or back to do a quick pass to all of the patient rooms. The purpose is to:

- Update day team on any results and plans for the next day
- Let on call team know about issues for the evening
- Discuss difficult patients or situations.
- See if the nurses have any new issues or concerns
- Set expectations for next shift’s care

All residents are expected to attend sign-out rounds unless excused for their continuity clinics and have been signed out appropriately. Sometimes the fellows present and sometimes an NP, sometimes the resident. There seems to be little discernible pattern. No matter who presents, it is succinct and focused. As an example, “this is a 14 month old on the vent for a few days with RSV. Now rapidly improving, may be able to wean enough tonight to extubate in the morning. NPO & fluids are written for 4 AM in case. Sedation has not been an issue since we added dex. No abx.”

**“Midnight” rounds**

Rounds usually occur between 2100 -2300, but that all depends on what the unit is like. Sometimes they may not begin until well into the wee hours of the morning. These are brief team rounds (attending, charge nurse, all residents, NP, fellows, bedside RN, RRT). Family is not usually a part of these, but we will not turn them away if they come out. As in all other PICU rounds, we go bedside to bedside and will discuss every patient.

**Transfer / Discharges**

Due to the complexity nature of the PICU patients, it is recommended that all transfer/off service and discharge summaries are organized by organ system. They should include pertinent medical information, physical findings and labs. They should also include treatment plan, length of treatment and pending studies

**Transfer**

A note (.PICU Eg Transfer/Discharge/Death Summary) must be written on all non-surgical patients. Surgical team patients do not need a transfer note from CCM as we are not the primary team. If in doubt, just ask a fellow or attending. We do not want you duplicating work. In your transfer note, clearly outline
any procedures that may need to be done in the next few days (i.e. line changes, chest tube removals, etc.) Before a patient is transferred to the floor, please make sure that a suitable service has agreed to accept the patient, and that the patient has been discussed with the resident covering that service. Be sure that the PICU attending or fellow has also discussed the patient with the attending of the accepting service before the patient leaves the PICU. All percutaneous CVL placed by the CCM team need to be removed prior to transfer. If, under unusual circumstances a patient goes to the floor with a percutaneous CVL, discuss it with the on-service fellow or attending, and make a plan for where, when, and by whom the line will be discontinued. Ideally, these catheters should only be used in the supervised areas of the PICU because of the risk of perforation of vessels.

Transfer order should include a phrase “Notify House Office when patient arrives”. Transfer orders are to be completed at the time it is decided that the patient may be transferred. Of course, there needs to be an accepting team to do this. All transfers need to be called out to a resident, ‘gen peds’ or ‘subs’. The CCM fellow or attending will call out the patient to the (hopefully) accepting attending. In some instances, a bed space may not be available and the patient will remain in the PICU for an undetermined amount of time. If this should occur, the Critical Care Medicine service will continue to follow these patients until they are physically transferred out of the PICU. The transfer orders do expire and you need to check each if new ones need to be entered.

**Discharge**

A Discharge Summary needs to be done on the day of discharge for all patients. It is easiest if this is started at admission, updated with pertinent information and completed at the time of discharge organized in the organ-system. Discharge notes should include all medications and follow-up plan. A discharge note is also required for all transferring patients to different facilities (including Scottish Rite) at the time of transfer.

*Do* call the PMD to let them know the child is being discharged.

List all diagnoses using the .probr list. This will then include any resolved hospital problems, which may be crucial for the PMD to be aware of.

If the patient has died, then make sure that a physical exam, & discharge meds are **NOT** in the summary.

**Off service duties**

At the end of your month in the PICU, each patient should have a comprehensive off service note delineating all problems past and present. A definitive plan of care should outline treatment expectations and discharge plans. An updated transfer summary is beneficial.

The on call resident on the night prior to the rotation change will be expected to collect data on all the patients in the ICU and present them on morning rounds to the incoming residents.

**Deaths / Autopsy**

During the rotation in the intensive care unit, it is inevitable that the death and dying process will be observed. As a member of the health care team, you will be closely involved in the management of patients near death. In order to minimize stress as much as possible, several details require your attention. The development of techniques for
“orchestrating death” is an integral part of your rotation. These skills are some of the most difficult to master. It is wise for you to participate in any such discussions, along with the attending physician. The unit secretary or bedside nurse can provide you with a “Death Packet” which you will be required to complete. It is organized to help guide you through process and notify you of who needs to be informed. It is your responsibility to dictate a death summary for any patient on our CCM service.

**Notifying the Attending(s)**

The PICU attending must be informed of any death or any event requiring cardiopulmonary resuscitation. The primary care attending and all consulting physicians should also be notified as a courtesy. Coordinate with the fellow to make sure they are only getting called once each, especially in the middle of the night. We always call when the event occurs. PMD offices will contact an on call MD. Do not let this “wait till morning”.

**Autopsy Information**

If a patient dies, a request for autopsy must be made. In the vast majority of instances, the attending physician, or ICU fellow, will be responsible for obtaining an autopsy request. In the unlikely event that it is necessary for you to obtain an autopsy request, you should adhere to the following guidelines. The consent form for autopsy is in a packet that you can obtain from the unit secretary (see appendix). The patient’s name must be filled in on the first line of the “permission for autopsy” request. The scope of the autopsy must be discussed in detail. This should include: 1) the reason for the autopsy, 2) the conditions under which the autopsy will be performed, (i.e., that it is a surgical procedure and that little if any evidence of the autopsy will remain after the autopsy is done), 3) the conditions of the autopsy (i.e., is it limited to the trunk, is it limited to the head, or if there are no limitations, under the section that says “Conditions”, the word “NONE” should be written). The date must be present, as well as the signature of the family member who has legal guardianship. Their relationship to the deceased must also be present on the form. Additionally, a witness other than the physician obtaining the autopsy, such as the primary nurse, must sign the form and his/her position or title must be written on the appropriate line. Finally, the physician obtaining the autopsy must sign the autopsy consent form. Phone consent for autopsy should never be taken by the resident physician. It is the attending physician’s (or CCM fellow’s) responsibility for obtaining the request in this situation.

In order to aid the pathologist in performing a complete autopsy, an additional autopsy form delineating special risks, special instructions, and other pertinent information such as the suspected cause of death, questions the autopsy may answer, and relevant clinical history should be completely filled in by the resident physician and signed.

**Notifying the Medical Examiner**

Potential indications for autopsy by the medical examiner include: 1) the death was the result of an accident, violence, or suicide, 2) the deceased was in apparent good health and died suddenly, 3) the deceased was unattended by a physician, or, 4) the death was suspicious or occurred in an unusual manner. To answer the question of whether or not a death should be referred to the medical examiner, a phone call to their office will alleviate any uncertainties. It is now required to inform the medical examiners of all deaths in the PICU, to allow them to make the determination. The medical examiner of the county of the patient’s residence or the county where the trauma occurred is to be called in the event of death.
LifeLink

In addition, LifeLink of Georgia is to be notified of every death in the PICU, even those that we “know” cannot be donors. In the diagnosis of brain death is suspected, LifeLink should be contacted as soon as possible, so they may make a determination of potential for organ donation before the patient is pronounced dead.

Death Certificate

A death certificate must be completed for all deaths. The death certificate that is filled out by the resident/fellow/attending physician is the official copy to be filed with the State of Georgia. Do not use any abbreviations. Use black ink only. The resident/fellow/attending physician must complete sections “immediate causes” other conditions. The certificate must be signed by the resident, fellow, or attending physician and the name and title of the person who pronounced the patient dead, must be filled in section. Sign only if you are a licensed physician. Additionally, the address (Children’s Healthcare of Atlanta at Egleston, 1405 Clifton Road, NE, Atlanta, Georgia 30322) must be filled in. This death certificate cannot be altered in any way. A photocopy must be made by the nursing personnel or unit secretary, which will be included on the patient’s chart. Once again, if there are any questions, CALL YOUR ATTENDING.

Code Blue & PICU Alerts

PICU team responds to all Code Blue, specifically the team in Pod1. In the rare event that the resident is the only physician caring for an unstable patient in the PICU when a Code Blue is announced somewhere else in the hospital; their primary responsibility is to the PICU patient. Please review the resuscitation algorithms you learned in PALS, BLS, ACLS, and/or ATLS. Egleston is a level 1 trauma center and as such your participation in the trauma team is an integral part of your education. PICU team participates in trauma alerts when asked by the ER team. Your role in a code will vary. You may rotate doing compressions, help manage the airway, bagging, pushing meds, etc.

The PICU has an internal code alarm system that rings to all CCM offices, conference rooms, and throughout the PICU. The PICU Alert button, unfortunately labelled “Staff call”) is adjacent to the code button on 1 of the 2 booms in the patient room. If the button is pressed, an alarm sounds (different than a Code Blue alarm) and a clerk will announce overhead which room. No matter what Pod you are assigned to, you should respond. Often these are issues with ventilation, sudden decompensation, unplanned extubation, etc.

After an event of any magnitude, whether a code, a PICU alert, or even no announcement, a brief event note should be entered in the chart.

Other tidbits about the rotation

Your role on the team

On the CCM service, we expect you to assume a professional level of responsibility for patient care, and to be an active participant in the decision making process. You should think about your plan of action for each of your patients prior to rounds. Likewise, this level of responsibility will demand a commitment to reading about each patient’s illness. Because of the busy nature of the CCM service, there will not be enough time for all the salient
Consultants
All requests for consults should be telephoned by you to a resident, fellow, or staff physician, not by the unit secretary or support personnel. Please tell them the reason you are requesting their help, and let him know whether the request is urgent or routine. By speaking directly to the consultative service, we have found that more prompt patient care occurs, and more teaching occurs. Be sure to write the order in EPIC.

Labs
The chemistry and hematology laboratory will perform any component of the chemistry panel, as well as a hemoglobin/hematocrit. Other tests cannot ordinarily be done routinely in the early morning hours unless ordered on a STAT basis. Be selective in your choice of components, especially in the early morning hours, since the entire chemistry panel is not usually necessary and is more expensive.

With the introduction of the I-Stat to the PICU, we have the ability to obtain blood gases and certain electrolytes (Na, K, Ca, glucose) very rapidly at the bedside (iStat). Please keep in mind that the patient incurs a charge with every I-Stat that is ordered, thus judicious use is warranted.

The radiology department will shoot morning chest films, as well as occasional abdominal films, if the order is placed as a 0600 request. You must to specify the reason the x-ray film is being ordered. You must indicate a reason for the x-ray. Not “R/O ...”. All requests of routine AM x-rays should be entered in the chart during afternoon or evening rounds. We are not wanting the radiologists to be on a scavenger hunt; please give them a good background on the patient.

If CT or MRI of these procedures is needed outside of the usual work hours, then the procedure and its necessity must be discussed with the radiologist on call. We have portable CT to use in select cases.

The Children’s Response Transport Team will generally accompany PICU patients that need to be transported to the radiology department. On occasion, the patient’s condition and/or staffing may necessitate a resident or fellow from the CCM service accompanying patients leaving the PICU area. This will require you to cover for one another while you are off-site. A drug box with intubation equipment is available for transport, along with a special transport stretcher and cardiac monitor. Mishaps are prone to happen in transport and in off-site locations. It is always wise to prepare for the worst.

Administration of vasoactive medications
The administration of certain pharmacologic agents can cause serious problems and potential harm to patients. For this reason, we request the following guidelines be used when administering vasoactive drugs. Vasoactive drugs should be administered through a deep venous line, generally one located in the central circulation. This is particularly important for agents which cause intense vasoconstriction. Dopamine, epinephrine, norepinephrine, and phenylephrine if they extravasate from a peripheral vein can cause loss of limb. The central administration of such agents also guarantees their delivery to the central circulation. Of course, a hypotensive patient should receive the necessary vasoactive agent(s) by a peripheral route during an emergency, pending the placement of a central venous catheter. Calcium chloride and calcium gluconate should be administered into a central vein whenever possible. Protocols are available for their peripheral administration.

Respiratory care
All initial respiratory orders are to be entered in EPIC. The respiratory care professionals (RCP) are quite knowledgeable and an integral part of developing a care plan. You are expected to review the results of blood
gases with the RCP and together determine the soundest ventilator or oxygen change needed.

Criteria for intubation and extubation should be discussed on a case-by-case basis with the PICU fellow and/or intensivist. During intubation, muscle relaxants are only to be used if a fellow, attending, or anesthesiologist is present. Intubation is done by resident only in the presence of the attending. An order for extubation must be written before the procedure.

**Bed control**

The PICU census varies from day-to-day, and season-to-season. Isolation bed spaces are at a premium, and patient’s need for them should be evaluated on a daily basis. If you receive a call from an outside physician requesting to transfer a patient here, please refer them to the attending intensivist or CCM Fellow on call. Staffing decisions are made by the charge nurse and the on-call attending. This applies to the in-house transfer as well.

**Resident education**

**OpenPediatrics –MANDATORY!**

You are registered at the beginning of the rotation to an on-line course, OpenPediatrics. You are required to the modules.

**Tuesday teaching conference PICU Classroom**, noon-2 Nov-Aug, 1:30-3:30 Aug-Oct

Primarily geared to the fellows, it is often quite interesting for the residents.

**Pediatric core curriculum** (Peds residents, mandatory 1st Thursday of rotation)

You will not be available to admit, discharge, or handle cross-cover patients during this session.

**Egleston Grand Rounds**

We will attend if the topic is pertinent to ICU care and PICU acuity allows. All Grand Rounds are available to view online via CHOA after the event.

**Emergency Medicine Core Curriculum**

On Tuesday mornings, the EM Residents are excused from morning rounds to attend their department’s lecture series. They need to complete their responsibilities, sign out to the fellow or other residents on the team before leaving, prompt return to the unit to resume their responsibilities are required.

**Ventilator Rounds**

Every 2 weeks. Dates & times will be relayed to you. Either an attending or a respiratory therapist will go teach about vent modes, equipment, or therapies.

**Radiology Rounds**

Weekly on Wednesday afternoons in the PICU at the PACS in Pod 2. Please have any radiographs that you want reviewed or discussed loaded so facilitate radiologist review. This is a great opportunity.
**Evaluations**
Weekly feedback and evaluation should be requested with the fellow and/or attending on service at the end of the week. Based on the review, you will be able to optimize your performance and correct any perceived deficiencies. This will also give you an opportunity to provide feedback to us to help us improve upon your educational experience.

Formal evaluations are done by the entire Division of Critical Care, including input from the nursing staff, respiratory care professionals, CCM fellows, and all the attendings with which you have had contact. Please keep in mind that given the combination of the CCM schedules and the resident schedule, your time with any single fellow or attending may be brief. We will try our best to assess your performance, but sometimes each of us has only been on a day or 2 with you.

**Who’s who?**

**Social Workers**
Egleston Children’s Hospital has a Social Work department which employs licensed clinical social workers, all of whom cover a specific medical service. The PICU social worker is Victor Gerhardstein and Yvette Robinson. The social workers cover all CCM patients and facilitate contact with the appropriate social worker for the other services. They are available for family assessments, counseling, and support, as well as help with specific needs such as transportation, meal tickets, lodging and locating community resources. Because of the seriousness of the ICU setting and high stress level, most families are routinely seen. However, if there are any questions or special concerns, please contact them directly.

**Child Life**
Children’s Healthcare of Atlanta at Egleston has a Child Life department which employs licensed child life specialists, all of whom cover a specific medical service. Our Child Life specialist covers all patients in the PICU. She is skilled in distraction techniques, sibling interventions, and meeting patient’s psychosocial needs.

**Nurses**
They are your friends. They will know their patients inside and out and can be a tremendous resource for you. Listen and learn from them! The bedside RNs are oriented extensively to PICU. She/he will be as helpful as possible in providing information about your patients and taking care of the children here in the PICU. A percentage of the nurses are also trained in advanced competencies to care for patients on ECMO, high frequency ventilation, CVVH, peritoneal dialysis, pacers, etc.

**Respiratory care (RRTs)**
Respiratory Care Practitioners (RCP or RRT) are also oriented extensively to the PICU. They have expertise in all aspects of respiratory care of children, including ECMO, high frequency, Halothane, Helium, Nitric Oxide, etc. Use them as a resource. They love to explain ventilators, inexcubulators, and other tools in their toy box.

**Team Leader/Charge Nurse**
TL & CN responsible for bed control and making sure we have enough staff to care for our patients. She/he attends rounds with the team, whenever possible, to remain as up-to-date as possible on the patient’s plans of care, and to provide appropriate input. The Team Leader responds to all codes. The Resource nurse is a PICU RN, usually without a specific patient assignment. S/he is working with the charge nurse to ensure extra help is delivered to the bedside RNs.
Support Staff

The PICU unit secretaries are responsible for ordering supplies, answering phones, and assist families when needed. The PICU support tech is responsible for stocking, cleaning, and obtaining supplies.

Leadership Staff

Deb Laporte, the Director of Critical Care Services, is responsible for nursing, respiratory, secretarial, and environmental services personnel, the PICU budget, supplies and equipment and is a resource for interdepartmental concerns. She has a nursing and management education and background.

Regan Mann, PICU Manager Clinical Operations. She is responsible for all issues pertaining to the run of the PICU and staffing.

The PICU also employs Staff Level IV Leaders who provide day-to-day oversight of the department. Their office is located adjacent to the main department. They are great technical resources and can assist with conflict resolution with any staff members.

The PICU educators, Charlene Cunningham and Lisa Remshik, are responsible for all staff education. She is a great resource for articles and questions.

The PICU Case Coordinator, Angela Muir, is responsible for utilization management and discharge planning. She is a great resource for payor issues.

Order sets

Consider adding these to your favorites; especially the ones labelled PICU. They will save you an immense amount of time. The “PICU Daily Rounding Orders” set is a great one to have open on rounds.
Where is the...?

**Coffee**
Coffee is free, as it should be. A lounge is located in Pod 1 by room 4113. Badge through the door. Although there is a cipher lock on the door, it opens anyway. There is a second machine in the alcove in Pod 3 across from room 4130.

**Ice machines/ water**
Located in the clean equipment rooms in each Pod. The door code is 311. There is also one in the lounge.

**Lounge**
A lounge is located in Pod 1 by room 4113. Badge through the door. Although there is a cipher lock on the door, it opens anyway. There is a refrigerator, coffee machine, ice machine, 2 vibrating recliners, and a TV in there. Every weekend morning there is breakfast brought by the PICU attending on call.

**Bathrooms**
Everywhere – Pod 1 has 3, Pod 2 has 1, Pod 3 has 1.

**Place for me to stash my stuff**
There are cabinets in MD work room #1 for your personal belongings. Refrain from sitting inside the work room. Being visible in the unit is a must.

**Cafeteria**
1st floor, Tower 1