Orientation to PCCU – READ THIS BEFORE YOU BEGIN!

DAYTIME SCHEDULE

Morning handover:

- Handover occurs at 8am on weekdays and 9am on weekends, with the exception of Wednesdays when it is at 7:30am to accommodate Grand Rounds. We meet in the PCCU classroom. We'll try to get handover done within 30 minutes.

- Handover should be intuitive – if the whole team already knows the patient, only salient overnight issues are necessary. If the attending is new, a couple of lines about the patient, and the patient's issues are necessary before discussing overnight call. The point of handover is not to give all of the information that the bedside nurse will later give on rounds.

- Be on time or you won't learn about the patients, and may not have patients assigned that day.

- 8:30-9:30 (AKA before a.m. rounds): You are responsible for seeing and examining each of your patients. All patients must be examined by YOU every day. The nurse's assessments are good, but you should not rely on them for documentation. If there are discharges that are imminent, please use this time to complete this process before rounds.

Morning rounds (9:30 to 11:30am):

- At the bedside of your patient you will give a one line introduction followed by a list of prioritized active issues. The nurses will then give a systems-based report on their current status. After nursing report you will be asked to provide a plan for management of each issue. PLEASE do not repeat what the nurses have said in their report, and instead focus on your interpretation and plan.

- A computer-on-wheels is brought on rounds and someone should be entering orders as the plan is discussed.

Noontime rounds (12:00 to 1:00pm)

- These are teaching rounds for all pediatric residents. Off-service residents are welcome to attend as well. Please ensure that the pagers is covered by either a fellow or another resident or the attending physician during this time. If the unit is busy please remind the attending before you excuse yourself.

- If you are involved in an interesting case in the unit, it is your decision whether you forego noon rounds that day in order to stay for the clinical learning opportunity and we encourage you to choose the opportunity that you feel is best for you.
-
-

Afternoon (1:00 to 5:00pm):

- This is the time where you complete the remainder of your work, including enacting the patient plans discussed on rounds. This could include consulting other services, arranging for investigations, performing procedures, ensuring orders are complete, writing notes and updating families

- You will also receive pre-op consults from PMDU for patients for whom beds will be requested post-operatively. Please complete these consults and put a copy of the consultation note in the charge nurse binder (please ask the charge nurse where this is).

Evening handover (5:00pm):

- This occurs in the PCCU, often at the main desk. Overnight housestaff will receive handover from the daytime team. Most often it is most appropriate to do a systems-based handover, and ensure to include any overnight plans or concerns. Never leave without handing over your patients.

Overnight call:

- Attending physicians MUST be called for all admissions, PCCOT activations, codes and all consults.

- Before calling the attending you should see the patient, do an assessment and make a plan. However if you are worried about the patient and feel that the attending should either come in or know about the patient sooner then please call earlier.
    - If you do a consult from emerg or as part of the trauma team and the patient is NOT admitted, please fill out a consult sheet (include time of cosult) and give the yellow copy to the PCCU attending at the first available moment.

- Call the attending physicians with any problems, significant change in status, or if you have any concerns. Please do not hesitate to call, we are here to help.

- Don't get bogged down outside of the PCCU. If you are finding that you are spending a lot of time with a patient who is not admitted to the PCCU, call the attending so that we can decide together if the external patient needs ICU.

- Never organize admissions from outside the hospital. Direct external callers to Criticall (1-800-668-4357). The nurses in PCCU will do the same if they take a call from an external pediatrician.

- If you have a buddy - you are still responsible for all of the patients in the PCCU. You should be first call, and should go to all PCCOT calls and codes. The role of your buddy is to give advice, show you the ropes in the PCCU, and also be aware of all of the patients. However, this is your learning experience, and being on call means looking after all of the patients, not just half of them.

- If you are on call with a resident who is ALSO rotating through PCCU you can divide patients for first call, but you should both follow patients and be present for admissions. When you divide the list, take patients that are out of your comfort zone (e.g. emerg/anesthesia residents should default to taking younger children and infants, while peds residents should default to taking adolescents and trauma).

- If you are a buddy – make sure that the resident you are buddying sees all consults, goes to all PCCOT calls, and is first call for any questions in the PCCU. The resident may be very junior, in which case you will have to stay closer on hand and give more advice, or they may be quite senior with a lot of critical care experience (i.e. anesthesia PGY4 residents), in which case your main role is to make sure that they understand pediatric-specific issues and the running of the pediatric hospital. This should also be your learning opportunity, though, so practice overseeing the care of all patients in the PCCU and knowing about all sick kids in the hospital.

Role on PCCOT and at Traumas:

- During the day the senior pediatrics resident carries the PCCOT pager and should attend all activations. ALL activations must be reviewed with the PCCU attending. If the senior pediatric resident is away, then the responsibility is shared among the other pediatric residents.

- Immediately following handover in the PCCU classroom, there will be a PCCOT huddle for the resident holding the PCCOT pager for the day. The intent is to review the PCCOT patients and any new activations. This is a new initiative and thus may take some time before it is routine.

- On PCCOT during the night, on-call housestaff should attend activations. If there is high acuity in the unit and the more senior resident cannot leave the unit, it is OK for the junior resident to attend, but they must notify the PCCU attending immediately if the patient is unwell. As a rule, if there is high acuity in the unit make sure your attending is aware of this as they would naturally want to be there to help management the patients.

- The PCCU resident is part of the trauma team. If you attend the trauma and the patient does not clearly need to be admitted, ask the TTL if you can leave. PLEASE FILL IN A CONSULT SHEET (you can be brief) and give the yellow copy to the PCCU attending. You MUST review these consults with the PCCU attending.

- **NOTE:** The PCCU attendings do not get paged for PCCOT activations, traumas, codes or ED consults directly. Thus if you need support because the patient is actively deteriorating you MUST have the attending paged.

General for the rotation:

- Notes – everyone needs a note every day. If a patient becomes very chronic and there are no changes in their issues, you can say that in a 2-line note, but there needs to be a daily note.

- Try to do notes in order of acuity. Very sick patients should have their notes written first, because their plans will be more complex. If the day has been particularly busy and you are still writing notes at 18:00, consider asking the night time resident if they can write notes on the patients who are chronic/have few active issues. This must be decided between you and the evening resident, and you should take into consideration whether the night resident looks like they will be busy.

- Notes may be systems-based (i.e CNS: CVS: Resp: etc). We suggest this for complex patients who have issues with multiple systems. Notes may be problem-based (e.g. Fluid balance: Pain control: Ventilation/oxygenation:). We suggest this for chronic patients, patients who have only 2-4 issues, or patients who are generally ward-type patients and do not have a lot of issues. When in doubt, you cannot go wrong with systems-based notes.

- Remember the point of note-writing is to communicate patient issues and your INTERPRETATION and rationale for different treatment decisions. Thus your IMPESSION is the most important part of your note and should encompass the rational for your management plan for the day, as well as your impression of the patient condition.

- Patients must have an admission note on admission to the PCCU and a transfer or when leaving PCCU. All patients being transferred to another institution or being discharged must have a DISCHARGE DICTATION done (including patients admitted for overnight oxymetry). Attendings will do death summaries. All patients in the unit more than 1 week at the end of the rotation must have an off-service note done before you leave.

- Procedure note - if you have done a procedure, even if not successful, you must write a note. Can be short – (e.g. intubated grade 2 airway on 2nd attempt using 2.0 mac blade with 5.5 cuffed ETT taped at 15cm at the lip. CXR confirmed good position OR Arterial line access attempted 6 times on right radial artery, and 3 times of left radial artery by myself using 24 gauge cannula. Unsuccessful.). Be specific so that someone coming later to do the same procedure will know what worked and what didn't, exactly what instruments to use, and where to go.

- Procedure log book – ensure that, each time you finish a procedure, you fill in your log book. Show this log book to Dr. Sarpal at your mid-rotation evaluation and at the end of the rotation. Also, have someone who has watched you do the procedure and is qualified to perform that procedure evaluate your performance using the evaluation sheets provided. The evaluator should be someone qualified in the skill (i.e. anesthesia resident/attending can fill out log for a peds resident for

intubation/central line/art line, or a nurse could for an IV insertion/NG insertion/foley insertion, senior peds resident for an LP).

Pain and Sedation scoring

- We use sedation and analgesia scoring in the unit. You should think of them as a vital sign – the score is only relevant for the time at which it is assessed, and can change minute to minute.

- Your role will be to set targets for sedation and analgesia for each appropriate patient, and to understand the scoring so that you can make decisions with the nursing staff using the assessment tools as resources.

- Our unit uses the FLACC-revised to assess patient pain. This is a 1-10 scale. For all patients with a source of pain or on pain medications, you need to set a target goal (usually – to 3) and write a prn for when the goal is not being met (for example, give 0.1mg/kg morphine IV for FLACC >3).

- Our unit uses the State Behavioral Scale (SBS) to assess patient sedation. This is a -3 to +2 scale. -3 is completely comatose, unrouseable. -2 is rousable to pain. -1 rousable to voice or light touch, 0 awake and calm at a baseline, +1 means that the patient is awake at a baseline and agitated, but calmable, +2 is awake and agitated and cannot be settled. Ideally, we want all patients to be awake and calm, or lightly asleep (-1 to 0), though in some conditions we may want them to be more deeply sedated.

- For all patients receiving a form of mechanical ventilation or sedating medications, you need to set a target goal (usually -1 to 0) and write a prn for when the goal is not being met (for example, midazolam 0.1mg/kg for SBS >0).

Research

- The staff is doing research projects and is looking to enroll patients. If you admit a patient who fulfills enrollment criteria, please call/e-mail the staff to let them know:
- Dr. Fraser: e-mail douglas.fraser@lhsc.on.ca, pager 15466
    - Collecting blood samples for translational research
    - All patients with sepsis, DKA, traumatic brain injury
- Dr. Tijssen: e-mail janice.tijssen@lhsc.on.ca, pager 18852
    - Post-HUGO resident order writing study- you will be approached to participate
- Dr. Fraser: e-mail douglas.fraser@lhsc.on.ca, pager 15466
    - Randomizing all trauma patients to normal saline or lactated ringer's
    - Enroll in the ED
- Dr. Sarpal: email amrita.sarpal@lhsc.on.ca pager 15142
    - ABC Study – Age of blood in children in ICU
    - Enroll patients that need 1st transfusion in 28 days

Presentations

- All residents in each rotation will be responsible for a presentation. This forms an important part of your evaluation and if you do not participate in some form of presentation your rotation will be incomplete. It is the residents' responsibility to ensure that they sign up for either journal club or critical care teaching rounds.

- Opportunities to participate in a presentation are:
    - Journal club (2 residents to participate each block)
    - Critical Care teaching rounds

- Journal club dates can be moved in extenuating circumstances, but this must be addressed on the first week of the block with Dr. Gunz and admin assistant, Sue Zazulak. Critical care teaching rounds is usually given to the department of pediatrics and the date and time are not flexible. If there are no department-wide rounds scheduled for the block, then we will host PCCU-specific critical care rounds in the PCCU classroom. The date for these will be flexible, and it can be at either 8am or noon. The timing on these months must be decided with Sue Zazulak and the residents doing the presentation.
-
- Journal club articles must be run by Dr. Gunz before you put a lot of work into the presentation because repeat articles are not allowed, and if you choose an article that was done a few months ago, it will be rejected. Try to choose the article within the 1st week of the block

- Send journal club articles to Sue.Zazulak@lhsc.on.ca at least 5 days before your presentation. It will be sent out to the journal club attendees.

- Critical care teaching rounds should be PCCU-specific. Ideally, use a case example from a patient you have seen in the unit. If more than one person is doing critical care teaching rounds, divide it up so that the presentation is one coherent talk that flows smoothly. The level of the presentation should be to fellows and staff in critical care. Thus, it should not all be information that can be found in a text book, but should include recent evidence and a literature search. Warning that Up-to-Date is NOT a good reference for many of these presentations, as it is often not written by intensivists about a certain topic. Please feel free to approach any attending for any assistance with the presentation; they will be happy to go over the entire presentation with you prior to the day of the presentation.

Maximizing your learning:

- Fill out the Objectives form that is with your introduction package, and return it to Dr. Gunz. This will be used at the mid-way point to ensure that we are meeting your objectives, and to evaluate whether your learning is benefitting you.

- The most important skills are IV insertion and Bag-Mask Ventilation

- Do IV insertions and blood draws! There is no use in learning to do a central line if you cannot insert a peripheral line as a first option. Unless the baby has only one vein, the nurses will be very receptive to you doing blood-work or putting in cannulae. However, nurses will not offer, you need to ask.

- Volunteer for any procedure…if you don't ask, it won't go to you. We don't have that many procedures, and the old adage that "the squeaky wheel gets the grease" is true!

- The resident assigned the patient for the day, or the resident who has admitted the patient will have first opportunity for procedures. If a resident is feeling confident with the procedure and would like to teach, they may choose to let another resident do the procedure. If someone else is preparing to do a procedure and you would like to try, speak up. Decisions between residents and fellows about who does the procedure will be left up to the learners unless specifically assigned by the staff.

- There tend to be more procedures overnight that during the day (mainly because it is a 16 hour time period, versus 8 hours in the day). The same holds true for patient exposure. This is part of the reason that you will do 7 calls during each block in PCCU.

- Read around your patients. When you are waiting for an admission, read around the expected problems. If a patient has been in the unit for more than a day with a unique problem, it is expected that you can answer questions about their condition. You WILL be quizzed at the bedside.

- Go to the Learn ICU website, register, and login to access learning modules, pretest for PCCU:
  http://sccmwww.sccm.org/LMS/Login.aspx?progid=1395&dest=sccmwww.sccm.org/LMS/ProgramRegistration.aspx
  Dr. Sarpal has access to the program director dashboard at this center and does note who has logged in, who has done the pretest, and who is reading the modules.

- There is a red binder in the PCCU called the Resident Resource Binder. When you are in the unit, make use of the resources in the binder. The patient issues can be overwhelming, and this gives you an organized way to approach all of the learning that you need to do for PCCU. There is a 12-week curriculum for peds residents that will keep you on track with the knowledge that you should have attained in your training.

- By the end of your PCCU rotations in 3rd year, you should have at least done all of the readings from Nelson's. There is a suggested reading list for emergency medicine and anesthesia residents. This information can all be found on the pediatrics residents' Google Drive.

- Ask lots of questions. If you do not know an answer, say that you do not know so that we can tailor teaching for you, but make sure that you know it for next time.

Feedback:

- We are open to getting it. Specific recommendations or ideas work best because it gives us a better idea of what needs to be improved.

- If you have any issues with individual allied health staff, you may speak with either Dr. Gunz (resident rotation coordinator) or Dr. Singh (division chief), or with Karyn Caldwell, who is the unit nursing manager. If you have any issues with individual attending physicians, please speak with either Dr. Tijssen or Dr. Singh so that the matter can be addressed promptly and not impact on other residents.

- Midterm evaluations will be to let you know whether you are on the right track and so that you can give us feedback about the rotation to date.

- If you would like to give us feedback at any time, come by Dr. Gunz's office, or e-mail (anna.gunz@lhsc.on.ca) and she would be happy to chat.

- Final evaluations will include a face-to-face meeting. This will be booked for within 2 weeks of the rotation. If you are unable to make this appointment, call or e-mail Sue Zazulak to change it.

Resident teaching expectations:

Afternoon teaching will be conducted when it is possible. While this is often done by the attending, you should plan to be responsible to teach the other residents <u>two</u> topics, in a very informal manner (at the white board, no power-point presentations). It will be the residents' responsibility to initiate the teaching session with whichever attending is on for the day. The attending should be there to be a resource and ensure that the topic is covered accurately and completely. The topics that must be covered are:

1. Acid-base physiology (including how to read a blood gas, anion gap and NAG metabolic acidosis, compensation mechanisms, causes of increased lactate)
2. Fluid and electrolyte disturbances (including daily fluid intake, signs of fluid overload and underload, disorders of sodium handling [SIADH, DI, CSW], hyper and hypo-kalemia, hypocalcemia)
3. Shock and vasoactive drugs (including definition of shock, types and causes of shock, compensated and uncompensated shock, adrenergic agents, dopamine, vasopressin, phosphodiesterase inhibitors)

The other options for topics are:

1. Airway management (including paediatric airway anatomy and differences from adults, what makes a difficult airway, bag-mask ventilation, airway adjuncts [oro-

or naso-pharyngeal airways], choice of ETT, cuffed vs uncuffed ETT, choice of laryngoscope)

2. Sepsis (including definition of sepsis, definition of SIRS, presentation, pathophysiologic abnormalities [vasomotor instability, coagulopathy, microvascular shunt], initial empiric management [surviving sepsis guidelines], complications)
3. Principles of Mechanical Ventilation (including indications for mechanical ventilation [invasive and non-invasive], modes of ventilation [pressure versus volume control, CMV versus IMV], the controls that need set, which parameters affect oxygenation and which affect ventilation)
4. DKA (including presentation, electrolyte disturbances, metabolic disturbances, risks for cerebral edema and patients at higher risk, presentation of cerebral edema, management of DKA, monitoring in DKA)
5. Status Asthmaticus (including pathophysiology, clinical presentation, x-ray findings, management [include beta-adrenergic agents, anticholinergic agents, steroids, magnesium, methylxanthines], indications for intubation/ventilation, initial ventilator settings
6. Status epilepticus (including definition, refractory status epilepticus definition, non-convulsive status epilepticus, risks for NCSE in PCCU, neonatal seizures, causes of seizures, investigations, management [stabilization, medications], complications)
7. Traumatic brain injury and elevated intracranial pressure (including types of intracranial hemorrhage, Munroe-Kellie Doctrine, ICP definition and normal, Cerebral perfusion pressure and targets by age, initial stabilization and management of elevated ICP and/or decreased CPP [basic techniques and less evidence-based options like cooling, barbiturate coma and craniectomy]

Pediatric residents have been given a Learning Passport (attached to this email) where they can log which items they have read about and which they have been taught about. The objectives of training that are listed are based on the Royal College Objectives. Clearly it is not comprehensive and you should review the entire list of objectives. Please use this passport to ensure you cover these topics over your 3 blocks in the PCCU. If your attending asks you what you would like to be taught, you can use this list to help guide you.

Please give us feedback on the utility of these learning passports.