BRITISH COLUMBIA'S CHILDREN'S HOSPITAL
PEDIATRIC INTENSIVE CARE UNIT

RESIDENT ORIENTATION MANUAL

Updated: July 2022

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Welcome to the PICU

Welcome to your Pediatric Critical Care rotation at British Columbia's Children's Hospital. We are delighted to have you on our team and look forward to working together. We hope that this manual will help your transition into our unit and guide you throughout your rotation. If you have any questions, please do not hesitate to approach us. You will work closely with the fellows and clinical associates (CA) who will often be your first resources, but all PICU team members are always happy to help.

Things to know about our program:

- Our unit is the only full-service PICU in the province of British Columbia and Yukon Territory. - We accept all patients up to their 17th birthday (anything over this requires special approval)
- We are the pediatric transport advisors for all "life or limb threatening" pediatric transports in the province (whether destined for PICU or not).
- The PICU fellow / CA is the most senior in-house at night. PICU attendings do home call.
- We have residents rotating from multiple training programs including Pediatrics, Pediatric Emergency Medicine, Neonatology, Pediatric Cardiology, Pediatric Neurology, Pediatric Surgery, Anesthesia and Emergency Medicine.
- We assess every patient for whom we are consulted and work collaboratively with families and other disciplines to achieve the best outcomes for children.
- Our PICU staff is accustomed to having a very responsive and proactive medical team that promptly acknowledges and addresses their concerns to the best of their ability and asks for input from more senior physicians whenever it is required. Never hesitate to call the PICU fellow and/or attending if required.

Pod	# beds	Patient type	Staffing	House staff
Frog/Green	8	Cardiac patients (+ med-surg overflow)	Cardiac Team 1 daytime fellow 1 daytime attending	1 daytime resident (not formally assigned, but recommended for all residents)
Fox/Purple	10	Med-surg patients	Med-surg Team 1 daytime fellow 1 daytime attending	All other residents
Sparrow/Blue	10	CLOSED	N/A	N/A

- Out of hours, all pods are under the care of one Fellow and one resident, under the oversight of one Intensivist.
- We recently implemented a new transport role which is staffed by a fellow or CA during daytime hours. This physician is responsible for taking all transport calls and may be part of a retrieval team for sick patients.
- You can find a map of our unit at the end of this document (Appendix A)

Contacts

- ICU Rotation Resident Supervisor: Dr Iain Johnstone (iain.johnstone@cw.bc.ca)
- Residents scheduling: Dr Iain Johnstone (iain.johnstone@cw.bc.ca)
- Program assistant: Jennifer Fox (Jennifer.fox@phsa.ca)
- Division head: Dr Peter Skippen
- Unit clerks: extension 2133, Communication Centre (room T4-523)

On your first day of rotation

- Aim to arrive at BCCH around 6:30 AM.
- First present to the Resident Touchdown Space (T4-547) where you can leave your personal belongings and meet the other residents.
- We use Vocera devices to communicate in the unit and there are four of these reserved for you in a storage bin in the Resident Touchdown Space. If there are more than four residents on any given day, please retrieve a Vocera from the Communications Center
- Handover starts at 6:45 sharp in the Frog pod Tactical Centre (room T4-229).

If you have concerns about your rotation at any time, please address them with Dr. Iain Johnstone via email at iain.johnstone@cw.bc.ca or via pager for more urgent matters.

We look forward to working with you!

General Expectations

- Come ready to work and on time.

- Learn about your patients and examine your patients prior to rounds.

- Prepare for your PICU rotation, read around your cases, and set yourself learning objectives for your rotation. We are working hard to give you as many formal and informal learning opportunities as possible. Being proactive in your learning will ensure that you get the most out of your rotation.

- Every patient needs a progress note daily.

- Attend scheduled teaching sessions and actively participate in discussions.

- Cellphones are not welcome on teaching sessions and rounds.

- Be respectful of the contributions of other healthcare providers and consulting services

- Respond in a timely fashion to any concerns brought to you by the nursing staff or other health care professionals.

- Let the charge nurse know about any possible or pending admissions/transfers that you hear about so that nursing and location assignment can be determined.

- Have a low threshold to notify the fellow and/or attending. **Always** notify of new transport calls, consultations, significant deteriorations and any difficult interactions with other services or health care providers. When in doubt, **call**.

- If you are leaving the unit for something, make sure you are reachable on your pager or Vocera (or cellphone).

- If you need to be absent unexpectedly, please notify the rotation supervisor by e-mail, your program administrator and call the unit (2133) to inform the fellow/attending on duty.

- If you have any planned leave/absence remind the fellow/attending on duty the day prior.

- If you have feedback about your rotation experience (positive or negative), please share it with us in the moment – we are continually aiming to improve our learning environment.

• **IF YOU DON'T KNOW ASK! We are always happy to help.**

Schedule

Scheduled daily activities include:

- 0645 - 0715 Handover and Pre-rounds (Monday-Friday Frog pod, T4-229)
- 0715 – 0745 Cardiac Surgical Rounds and Resident Pre-Rounds (Monday-Thursday, Frog pod)
- 0800 – 0830 X-ray rounds (Fox pod, T4-329)
- 0830 – 0900 Resident teaching curriculum (Monday – Thursday)
- 0900 – 1100 Medical-Surgical bedside rounds (Fox pod)
- 1600 – 1700 Handover rounds (Frog and fox pods)
- 2100 – 2300 Night rounds (Frog and Fox pods)

Other scheduled activities (unless otherwise indicated in T4 Conference room)

- 1600 – 1800 Cardiac Surgical Conference (Mondays, Virtual)
- 1600 – 1700 Cardiac Sciences Rounds & Morbidity (Wednesdays, Virtual)
- 1600 – 1800 Joint Cardiac Mortality rounds (3rd Wednesday monthly, Virtual)
- 1030 – 1130 ICU Mortality rounds* (3rd Wednesday monthly, Virtual)
- 1000 - 1100 Cardiac Surgical Teaching (Thursday, V)
- 1100-1400 PICU Academic Half Day (Thursday, Virtual)
- 1200 - 1300 PICU Case Conference (Morbidity)* (2nd Thursday Monthly)
- 1200 – 1300 Pediatric Grand Rounds (Fridays, Virtual)
- 1200 – 1300 Resident teaching curriculum skills day and Gratitude rounds (Fridays)

Activities marked by an Asterix are mandatory unless otherwise indicated by fellow/staff on duty*

Weekend Schedule

0800-0815 Handover (Saturday-Sunday, Frog pod T4-229)

0830 - 0900 Cardiac Surgical Rounds (Friday-Sunday, Frog pod)

Morning rounds and day-shift duties:

- Arrive for handover in the Frog pod Tactical Centre, Room T4-229 for 6:45 am.
- The overnight resident and Fellow/CA will hand over all the medical-surgical patients, with the exclusion of patients who will be presented at bedside (cardiac patients, complex/acutely unwell patients).
- The patients are then assigned and divided between the residents present for the day. Keep in mind the acuity of the patient as well as the residents who are on academic day and who is on call that night. We recommend also ensuring some continuity of care, especially for patient who are complex and admitted to the unit for a longer time.
- All the residents may rotate through the cardiac pod during their ICU month(s) as this is a great learning opportunity. Speak with the fellows and attendings on service for the cardiac and med-surg teams when you wish to spend the week on the cardiac pod. We recommend ensuring some continuity of care by having the same resident spend a few days in a row in the cardiac unit.

Cardiac Rounds: 7:15-7:45

- The overnight fellow will hand over all the cardiac patients at the bedside
- The cardiac fellow of the day will summarize the patient's course and make the plan for the day
- The cardiac resident of the day will attend cardiac rounds.
- Other residents may use this time to pre-round on medical/surgical patients

X-ray rounds: 08:00-08:30

- Review of all radiologic examination in the PICU over the last 24h.

Medical-Surgical Rounds: 9:00-

- 45 - 60 minutes will be given for residents to pre-round on their assigned patients.
- We expect you to review and examine all your patients before rounds. When the Unit is busy and depending on your patient load, you may not have time to do comprehensive pre-round on all of your patients. We recommend to start with the higher acuity patients and manage your time accordingly.

- We start rounds with any patients who are acutely unwell followed by new admissions from overnight It is expected that these patients will be presented to the group by the post-call resident, but the management plan for the next 24 hours should be formulated by the resident newly assigned to the patient for the day. Once the acutely unwell patients and new admissions have been seen, the post-call resident will be excused from rounds and the team will see the remainder of the ICU patients.
- **Morning rounds** follow this sequence:
    - Resident's presentation: (see Appendix B for example)
        - ✦ This should include a summary of the patient's clinical course and list of active problems as well as any new issues/concerns overnight and new pertinent results/reports/consults (avoid giving a detailed system-based handover at this time as this will be mostly covered in the RN/RT report)

        - ✦ For new patients, this should be a complete history including past medical history, history of present illness, relevant physical examination, investigations and treatments, differential diagnosis and course since admission.
    - RT report
    - RN report
    - Other ICU staff input: Pharmacy, Dietitian, Physio, Social Work
    - Resident management plan:
        - ✦ This should start by a summary and overall plan for the day followed by a system-based plan.
        - ✦ Sedation goals, nutrition, lines/tubes and frequency of labs should all be assessed daily, optimized and documented.
    - Fellow / Intensivist review of resident plan / general discussion
    - Teaching and questions around the case by fellow/attending
    - Read back of written orders generated from rounds
        - ✦ Orders should be written by one of the residents NOT assigned to the patient
    - Safety checklist

- **After rounds:** follow up on plans made on rounds

    - Consultations to other services should be made as soon early as possible after rounds
    - Follow up on results and investigations
    - Reassess your patients

Admissions/consultations

- All consultations should be reviewed and discussed with the fellow and/or attending
- Please let the charge nurse know of any incoming admissions in a timely manner

Transfer/discharge (see documentation section)

- Decisions regarding transfer and discharge are made on morning rounds
- Prior to transferring the patient, the accepting physician always needs to be called to confirm acceptance, inform them of relevant clinical changes, review the patient and answer their questions. This should be done immediately after rounds.
- All patients transferred from the PICU should have a transfer note completed and transfer reconciliation planned. We aim for these to be started prior to rounds to ensure timely transfers. Please see CST in PICU Orientation Video https://vimeo.com/694307216 for the validated transfer workflow.
- All patients discharged home from the PICU will require completion of their discharge summary, as well as a completed discharge form which can be found in the communication center.
- Please let the charge nurse know of any changes to transfer/discharge plans or new transfers/discharges not discussed during rounds

Pain & Symptom Management in CST

- PICU to ward transfer are high risk time for patient care as gaps and medication order issues can occur
- PICU providers should follow steps below when a patient is ready for transfer and has pain and symptom management medications on their order profile:

PICU to Ward Transfer
- Pain & Symptom Management (CST)
Roles of PICU Provider

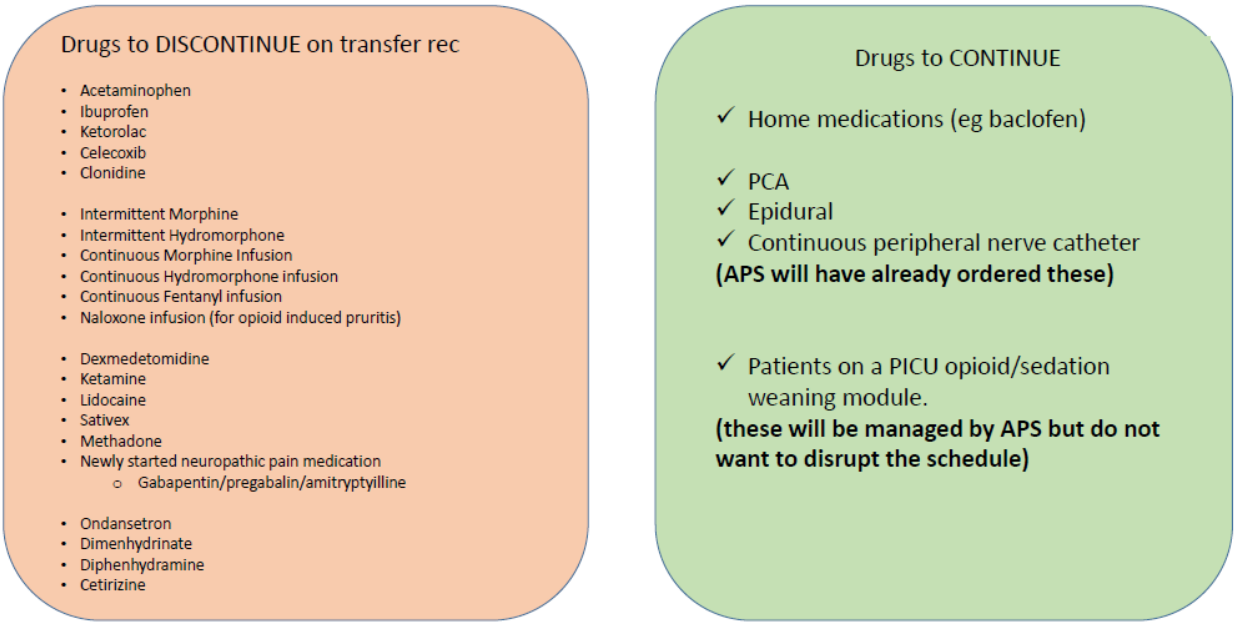
1. Identify patient who is ready for transfer to ward
2. Review active order profile to adjust all medications for pain & symptom management to be ward appropriate
3. Complete Transfer Reconciliation in PLANNED state (Plan to discontinue ALL medications for pain & symptom management EXCEPT for Cardiac Surgery patients)
4. - Notify Acute Pain Service (APS) about patients who meet criteria(s)* to be followed up in ward
   - Place Communication Order : "APS to review patient and place Power Plans in planned state PRIOR to transfer"

***Notify APS for:**

- All patients under 6 months old on an opioid infusion
- All patients on hydromorphone infusion
- All spine surgery patients
- ANY patient you have concerns for pain

o With an epidural or continuous regional catheter
o On Dexmedetomidine
o On Ketamine
o On a PCA or NCA
o On Methadone
o On Sativex (Cannabinoids) and requiring pain management
o On opioid/sedation weaning (or if been on opioids for more than 7 days)
o With major burns

Pain & Symptom management ordering for PICU- Ward transfers



*The process above does not apply to Cardiac Surgery patients. It is okay to plan to continue pain and symptom management medications on transfer reconciliation for this population as the rounding structure is unique. (Transfer reconciliation planning completed during rounds with receiving team) However, if cardiac surgery patients meet criteria for APS consult, please notify Cardiac Anesthesia.

Afternoon rounds and on-call duties

- **Afternoon rounds** typically start at 16:00 and are a shorter version of morning rounds
    - If you are on academic day and on call that night, kindly make every effort to arrive on time. If for any reason you arrive late, the overnight fellow will give you handover separately.
    - The resident assigned the patient for the day presents the patient for the overnight team including a summary of the patient's clinical status, active problem list and anticipated issues for the night
    - The RN/RT present the course over the day (abbreviated version)
    - The resident assigned the patient for the day makes the night plan
    - The on-call resident, fellow and attending make additional recommendations/plans as need

- **Night rounds** start between 21:00-22:00
    - These are shorter rounds reviewing patient's progress and concerns
    - On night rounds, you should review orders for the next morning's labs and patients who require CXR (unit clerks will prepare the forms for you to fill/sign)

- **Notes:** Patients do not require routine overnight notes unless there are significant events
- **Transfers**:
    - If the patient is to be transferred to a CTU, then the patient MUST be reviewed in ICU by the CTU Senior Resident before the patient can be transferred.
    - Transfer reconciliation will be reviewed and planned by the day team on rounds
    - Once the receiving team confirms acceptance of the patient, they will put in a Communication Order to state acceptance. It is important to ensure this order is in the order profile prior to patient transfer out of the unit.

Documentation

- **Progress notes**: Every patient should have a progress note written every day.
    - This note should be written by the resident assigned to the patient after rounds
    - Please use the PICU daily progress note auto text as your template. See CST in PICU orientation video for detailed steps.
    - This note should include a summary of the patient's clinical state, a list of active problem, a system-based course / physical examination and a clear plan.
    - Friday notes should be more detailed and clearly outline the weekend plan for the resident and fellow on duty.
    - Your note should be updated if there is any significant change to your patient's clinical status or plan during the day.

- **Meetings notes:** multi-disciplinary meetings or meetings with the parents should also be documented in the chart. This is most often done by the fellow and/or attending.

- **Consultations:** all consults that are seen outside of the PICU must have a written note.

- **Transfer documentation:**
    - This transfer note should include:
        - ✦ The patient's past medical history and home medications
        - ✦ Brief review of the presenting illness
        - ✦ Updated problem list with both active and resolved issues
        - ✦ Concise summary of the course in PICU by system including, but not limited to; sedation, ventilatory support, hemodynamic support and nutrition/fluids
        - ✦ Relevant investigations and results
        - ✦ Ongoing management plan, services involved and necessary follow ups

    It is always good to envision what you would need to know to care for this patient when you are writing the transfer note.
    - Plan Transfer Reconciliation
        - ✦ These will typically be done by the overnight resident, it can updated closer to time of transfer

- Please DO NOT sign Transfer Reconciliation in the PICU. It can be 'planned' multiple times to make sure it is most up to date to your anticipated needs for the patient going to the ward

- **Procedure documentation**: see procedure section

- **Transport documentation**: document all transport/advice calls on PowerForms in CST. Please make sure these calls get documented in "Provider to Provider" Encounter.

- **Co Signature**: All notes (except for Progress Notes and Transfer Notes) will need to be co-signed by PICU staff physician on shift with you.

- **Electronic handover documentation**: should be completed for your patients at the end of every shift. Please ask the fellows where to find this document.

Transport Calls

The PICU attendings are the Provincial Transport Advisors for any pediatric patients with life or limb threatening conditions transported within the province of BC (whether destined to PICU or otherwise).

We recognize that transport calls constitute a great learning opportunity and many of you will be involved in transporting pediatric patients in the future. Please let the transport fellow/CA or fellow on service know that you wish to participate in the incoming transport calls. Typically, you will take these jointly with the fellow or CA so that they can assist you with selecting the right transport team and disposition.

Calls regarding newborn infants other than cardiac patients should be referred to the Neonatologists.

Please be aware that transport arrangements will not be made for any patient for admission to BC Children's Hospital unless that patient has been discussed with and accepted by a Consultant at BCCH. The only exception to this rule is Trauma patients, where BCCH is the closest Trauma Center.

Morbidity and Mortality rounds

Morbidity and mortality rounds are an integral part of ICU practice. Your involvement in mortality rounds is mandatory, and you are strongly encouraged to attend morbidity rounds (ICU Case Conference).

Mortality rounds occur monthly on a Wednesday morning. Residents will be assigned patients to review and present for these rounds. Each resident will be paired with a fellow who will review the slides and be available for questions and clarifications. Please ensure you send your slides to the fellow in a timely manner.

Procedures

The volume of procedures in PICU is generally much lower than in adult critical care settings. This unfortunately leads to limited opportunities to gain experience in practical procedures such as intubations, central line and arterial line insertions. We are cognizant of this issue and the needs of our learners. Therefore, Junior PICU fellows, followed by senior residents from all programs, will be prioritized for available procedures at the discretion of the attending physician. However, recognizing this limited opportunity, residents who wish to increase their procedural experience should avail themselves of simulation opportunities and may consider additional rotational experience (pediatric anesthesia an emergency medicine).

Central line insertion guidelines

- Ultrasound guided central line insertion is standard of care in the PICU for all femoral and jugular central lines (as well as for arterial lines)
- There is a procedural checklist to be completed prior to the procedure. The form can be found on the line cart.
- Please use the PICU Procedure Note – Auto text as your template to document the central line insertion. See CST in PICU Orientation Video for details.

Endotracheal intubations

- The intubation checklist should be completed prior to any intubation.
- All intubations performed in the PICU by trainees should be performed by video-laryngoscopy - Two separate documents should be completed after the intubation. (1 electronic, 1 paper)

    - Please use the PICU Procedure Note – Auto text as your template to document the central line insertion. See CST in PICU Orientation Video for details.
    - The NEAR-4-kids form is the second document to complete after intubation for all patients.

Evaluation

- Evaluation is an on-going process throughout the rotation and include
    - Informal evaluation at the bedside
    - Weekly evaluation: residents should approach the Med-Surg (or cardiac) ICU consultant to request feedback The attending physicians are expecting to be asked (reminded) and

this will provide ongoing, timely feedback for each of the residents. You may also approach the fellows/CAs for feedback as they work closely with residents and do provide feedback to the rotation supervisor.
    - Mid-rotation evaluation: residents will receive feedback either directly by the attending on service and/or via One45 (depending on your program of training)
    - End of rotation evaluation: formal evaluation compiled by the resident supervisor from all attendings, fellows/CAs and distributed via One45

- You will be individually contacted by email once your evaluation is complete to arrange for a one-on-one meeting the PICU Rotation Resident Supervisor.

- Residents will have the opportunity to evaluate their time in the PICU at the end of their rotation and we encourage you to do so. We always appreciate constructive feedback and ideas on areas to improve.

- If you encounter any issues or concerns during your rotation, please let us know immediately so that we can address your concerns in the moment.

PICU management and guidelines

Infection control

The following practices are mandatory in our unit:

- Hand sanitization before and after touching a patient or patient care area
- Additional precautions for intubation and suctioning (gown, gloves, mask, face shield/goggles)
- Aseptic technique (sterile gown and gloves, hat, mask with face shield or goggles) for procedural interventions (central line, chest tube, lumbar puncture)
- Patient-specific isolation precautions can easily be found on the door of each patient's room.

Intravenous fluids

Most of our patients have elevated secretion of ADH in response to stress and/or illness. For this reason, our initial maintenance fluid for all patients is 0.9% NS (with dextrose) and we typically run IV fluids at 75% of maintenance rate (with some exceptions including cardiac patients). Infants in their first month of life should receive D10W/NS if fasting and older children D5W/NS. Routine maintenance fluids will be adjusted according to the patient's electrolytes and disease process.

Surgical handover

All patients admitted to the ICU from the OR will be handed over in a standardized format

- RN, RT, Resident, Fellow +/-Consultant should all be present to hear the handover together.

- Handover starts by identification of the team members followed by sequential presentation by anesthesia, surgeon and OR nurse followed by questions by the receiving team.
- The patient remains under the care of the anesthetist at the bedside until handover is complete and you are invited to assume care of the patient.
- These OR handovers can be found on the team site under “Standard Care”

Safe prescribing guidelines

The PICU adheres to the hospital wide safe prescribing guidelines.

Empiric antibiotic therapy guidelines and ID rounds

BCCH empiric antibiotic therapy guidelines are reviewed annually by a specific committee in reference to laboratory isolates in BCCH for the previous year. Each ICU patient on antibiotics is reviewed weekly during ID rounds with the infectious disease team, PICU pharmacist and PICU fellow/attending.

Pain, sedation, withdrawal and delirium

Pain and sedation issues are common in the PICU. We attempt to standardize our practice through use of the Multidimensional Assessment of Pain Scale (MAPS) and the State Behavioral Scale (SBS), and a pain and sedation algorithm.
In addition to these pain and sedation algorithm, we also routinely use algorithms for early identification of withdrawal (WAT score), delirium (CAPD-R) and risk of pressure sores (Braden Q).

All of these scoring tools are available at the beside and on the ICU Team Site (see below).

VAP protocol

Every intubate patient should follow the HOBITTT protocol to minimize ventilator associated pneumonias.
HOB: *Head of bead* greater than 30 degrees
I: No saline *Instillation* in the endotracheal tube
T: Positioning the ventilator *Tubing*
T: Regular mouthcare (*teeth*)
T: Appropriate NG tube placement in stomach (*tummy*)

Fasting guidelines for anesthetic and/or procedure

The BCCH Fasting guidelines can be found in full on the ICU Team site. In brief, clear fluids 1 hour, breast milk 4 hours, formula 6 hours.

Blood products guidelines

Hospital transfusion guidelines are available online. Always discuss with the ICU fellow and/or attending. before ordering ANY blood product.

Current evidence suggests that liberal transfusion strategies (maintaining hemoglobin > 90) are more harmful than conservative strategies (maintaining hemoglobin >70). Transfusion requirements must be individualized for each patient and not based solely on a number. We recommend that you refer to the consensus guideline for pRBCs transfusion in critically ill children (TAXI) for further information (in your reading list). Any blood product order should be discussed with a fellow/attending prior to administration.

Resources

PICU residents reading list: important pediatric critical care articles (sent with orientation manual)

Open pediatrics we strongly encourage* you to complete the following modules:
(you can open an account free of charge and it is an excellent resource)

Pre PCCM curriculum	PCCM 1st year fellowship curriculum
Module 1: Respiratory distress (skip lesson 3) Module 2: Airway management (skip lessons 4, 811) Module 3: Introduction to mechanical ventilation Module 4: Non invasive ventilation Skip module 5 (asthma, not following CPS) Skip module 6 (shock, refer to Surviving Sepsis 2020 guidelines) Skip module 7 (DKA, refer to BCCH protocol) Module 8: Neurocritical care Module 9: lesson 1 on ECG and lesson 3 on defibrillation (skip 2 and 4) Module 10: procedures (optional)	Skip modules 1 (Fatigue), 2 (Infection prevention), 3 (Radiology) Module 4: Monitoring Module 5: Cardiology: lessons 1, 2, 3, 4 Module 6: Mechanical ventilation (skip lesson 6) Skip Modules 7 (HFOV), 8 (Neurocritical care), 9 (Physiology) Module 10 nutrition Module 11 trauma

**For Pediatric Residents these modules are mandatory; the pre-PCCM curriculum for the junior residents and the PCCM 1st year fellowship curriculum for the senior residents. If you are a senior pediatric resident who has not yet completed the pre-PCCM curriculum you may choose any 7 modules. Kindly send a picture of the completed module to Dr Iain Johnstone - iain.johnstone@cw.bc.ca*

PICU relevant journal articles and text book links

If you are logged in generically to an ICU computer, go to **Libraries** > **Documents** > **PICU ResidentFellow files** > **Orientation articles.** You will find a wealth of reading material (under revision)

PICU Residents Website

Go to https://pediatrics.med.ubc.ca/pediatric-training-in-critical-care/ and find resources under the "Resident's Resources" tab. This Orientation Manual and Reading List can be found on the website. We will continue to add material and important updates

ICU Team site: for PICU protocols and guidelines

To access: open internet (google chrome) which should bring you by default to the **POD** page (PHSA on Demand). From the top horizontal line of tabs, select **Team sites**, then select **Sites I have access to**, then **Critical Care Program** which will bring you to the **ICU Team site**.

Important contents:

Bedside Manual	PICU clinical resources
Where you can find (among other things) -OR (cardiac, non-cardiac) to ICU handover -Pain Agitation Withdrawal Delirium (PAWD) -Intubation and procedural checklists	Physician resources - TBI protocol, Brain death guidelines - Transfusion guidelines - Empiric antibiotics guidelines Resident orientation resources

Procedural videos: NEJM

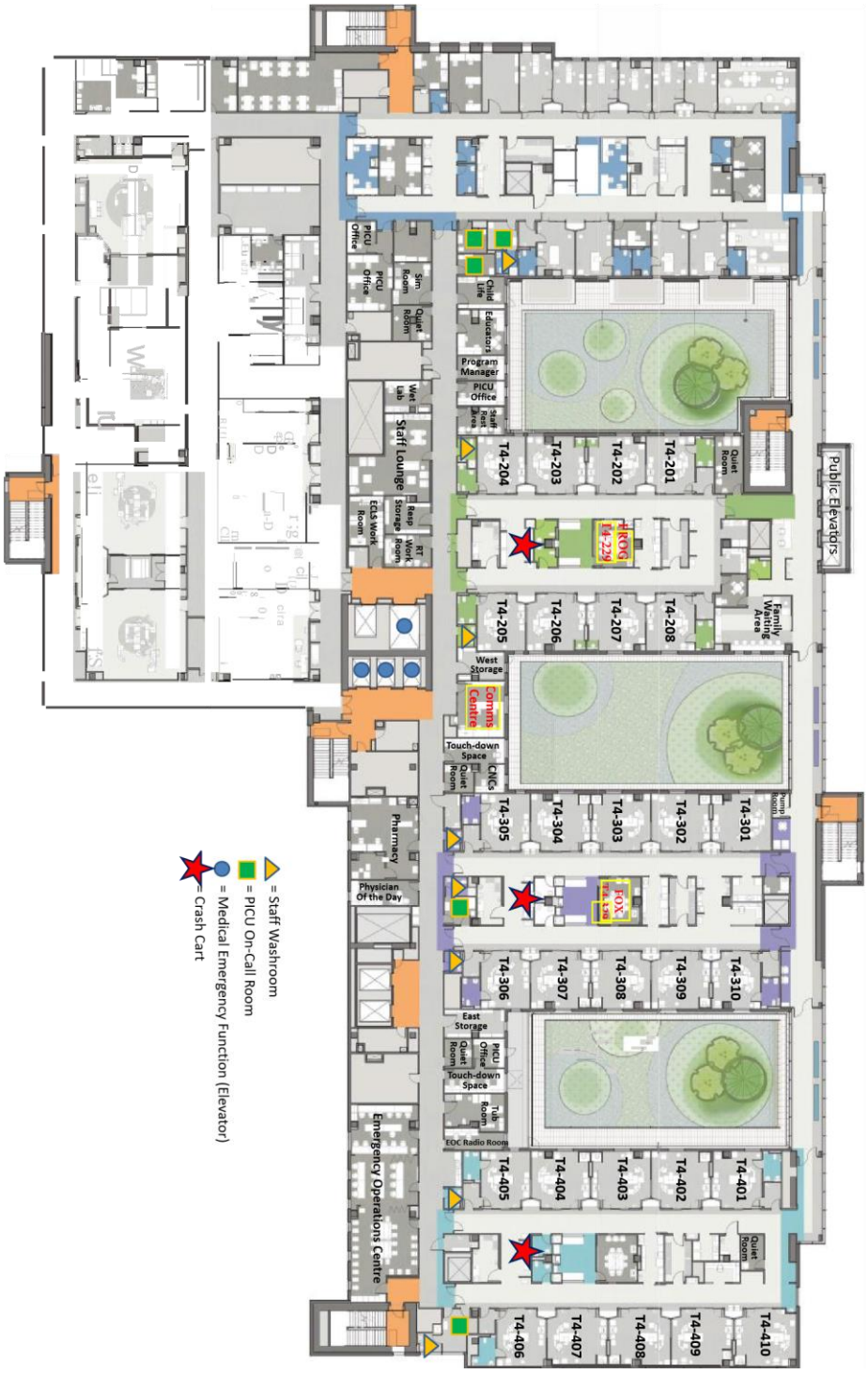
Extensive procedural video library, including: IV, central line, chest tube, intubation, arterial line

Recommended reading material

- Roger's Textbook of Pediatric Intensive Care
- Critical Heart Disease in Infants and Children
- Pediatric Advanced Life Support Provider Manual (PALS), Advanced Cardiac Life Support

Appendix A: MAP

TECK Acute Care Building, Level 4, ICU


PICU
Public Elevators
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T4-406
T4-407
T4-408
T4-409
T4-410
ROG
FOX
Quiet Room
Family Waiting Area
West Storage
Comms Centre
Touch-down Space
Quiet Room
CNCs
Pump Room
Pharmacy
Physician Of the Day
East Storage
Quiet Room
PICU Office
Touch-down Space
Tub Room
EOC Radio Room
Emergency Operations Centre
Quiet Room
Staff Lounge
Wet Lab
Resp Storage
Resp Work Room
ECLS Work Room
Sim Room
Quiet Room
PICU Office
PICU Office
Child Life
Educators
Program Manager
PICU Office
Staff Work Area
= Staff Washroom
= PICU On-Call Room
= Medical Emergency Function (Elevator)
= Crash Cart

Appendix B: Examples of patient presentation

In a known patient:
"Lisa is a 9 month -old girl, day 3 in the ICU, initially on CPAP then intubated on Day 2 for RSV bronchiolitis. Overnight she required 20cc/kg of saline for one episode of MAP of 40 and responded well. The current issue is around copious thick secretions requiring increased suctioning overnight".

In a new patient:
"Lisa is a previously healthy, ex-33 week, 9 month0-old girl who presented last night to Surrey ER with a 2 day history of increased work of breathing. Prior to presentation in Surrey she had been noted to be tachypneic with a new onset of cough. She attends day care where many children have been home with "colds". She had been feeding well until yesterday and was also noted to have a decreased number of wet diapers in the 24h prior to presentation. Due to worsening of the cough and fever of 38.5, parents brought her in to Surrey ER at 10pm last night. In Surrey, she was noted to have a RR of 65, sats of 80% on room air and a HR of 180. Blood pressure was not done and her temp was 39.5. She had decreased breath sounds bilaterally with diffuse crackles. Her pulses were strong although she appeared mottled. She was described as alert, but fussy. Sats marginally improved to 93% on 10L face mask O2 with no further improvement after a trial of nebulized epinephrine. An IV was inserted and 20ml/kg of NS was given. Blood cultures were drawn and one dose of IV Cefotaxime was administered. Her CBC showed an elevated WBC of 30 with predominance of lymphocytes. Her electrolytes were normal and no gas was done. A chest x-ray in Surrey showed diffuse lung markings consistent with a viral process. The working diagnosis was bronchiolitis with a concern of a superimposed bacterial infection/possible sepsis. The transport team was called for transfer of care due to anticipated need for ventilatory support. On arrival in the ICU her vitals were unchanged. A salbutamol neb was given with little effect. She was initiated on CPAP of 8 with a decrease in her respiratory rate to 45 and an improvement in her sats to 95% on 50% oxygen. 20ml/kg NS bolus was repeated with improved urine output and skin color. Cefotaxime was continued pending culture results. An NPW was sent and the result is pending. Our working diagnosis was bronchiolitis with respiratory failure and dehydration. Our plan was to maintain hydration, continue antibiotics until 48-hour cultures are available and provide PEEP support. Given that Ventolin and epi made no difference to her clinical status, they were not continued. Overnight she has been stable on the same CPAP settings although continues to have thick, copious secretions. She has not tolerated time off CPAP with sats falling into the 80s with increased work of breathing immediately upon coming off. Otherwise, there is nothing of concern in her past medical history and although she was a 33 week prem, she never required vent support at birth or at any other time since birth. She is fully immunized and on no home medications".