

**Critical Care Medicine Rotation
Vancouver General Hospital
University of British Columbia**

Guidelines For Residents

Prepared / Revised By: Dr David D Sweet/ Dr Kali Romano

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1. Introduction

The entire multidisciplinary team at Vancouver General Hospital Intensive Care Unit welcome you to your rotation! We hope this will be one of the most enjoyable and rewarding experiences in your training. This document serves to help prepare you for your rotation with us, outlining the workflow, your role in the ICU team, and the resources available to support your personal and educational needs.

2. Scope

The ICU/BTHA environment provides a unique opportunity to interact with all specialities in the combined or “multidisciplinary” care of critically ill patients. Frequent communication is required between members of the patient’s health care team (RN, RT, dietician, pharmacist, physicians etc.) to ensure optimal care. A spirit of open communication is absolutely necessary, and will allow you to maximize your education in the ICU.

We are a tertiary care ICU with an incredibly diverse and complex patient population. We are the provincial referral centre for respiratory (VV) ECMO in addition to complex trauma, neurosurgery, burn, solid organ transplant, bone marrow transplant and plasmapheresis. There is very high acuity and an overall mortality of 17%.

Our High Acuity Unit is geographically termed BTHA as it is a shared location between trauma services, plastic surgery and critical care. It is connected to the ICU, and as a designated critical care space has an enhanced nursing ratio (typically 2:1) and can provide therapies like non-invasive ventilation (BiPAP), IHD, and vasopressors. Patients cannot be intubated, needing CRRT, inotropes, or have an acute spinal cord injury – these patients are cared for in the ICU.

We strongly encourage you to communicate any patient care issues or concerns immediately to the ICU fellow or consultant. As noted above, our patient population is complex and safety is a priority in addition to providing you a supported and safe learning environment. We expect the same level of open and frequent communication that you will have with allied health care team.

3. Intensive Care Physicians/Fellows

ICU Consultants

Dr. George Isac
Dr. Dean Chittock
Dr. Vinay Dhingra
Dr. William Henderson
Dr. Juan Ronco
Dr. Morad Hameed
Dr. David Sweet (UBC Site Coordinator)
Dr. Kali Romano (Site Education Co-ordinator)

Dr. Erik Vu (Clinical Fellowship Director)
Dr. Naisan Garraway
Dr. Hussein Kanji
Dr. Myp Sekhon (PD CCM Fellowship)
Dr. Donald Griesdale
Dr. Gordon Finlayson (Medical Director)
Dr. Sonny Thiara

ICU consultants provide coverage for a team of patients over 7 consecutive days, with changeover occurring on Monday morning. All cases are reviewed during the morning patient rounds, and again during afternoon sign-out rounds. On-call coverage alternates between Intensivists for the week.

Education Co-ordinator for Residents and MSIs

On the first day of your rotation you will be given an orientation by one of the ICU fellows on service. This will help you hit the ground running with an understanding of the workflow of rounds, managing the pager, and what happens on-call. ICU attendings complete a weekly evaluation, and these are summarized in the form of an electronic evaluation at the end of your rotation by Dr. Romano (site education coordinator). We encourage you to see feedback directly from the ICU attending at the end of each week, as it can help you identify what you are doing well and how you can get the most out of your experience! If you have any concerns, do not hesitate to reach out to Julia Cheung (ICU Admin) or Dr. Romano at any point. We welcome feedback and are here to advocate for you.

ICU Fellows

The ICU fellows are an integral part of our team. They have completed training in a base specialty namely internal medicine, anaesthesiology, surgery or emergency medicine and are now pursuing two years of subspecialty training in intensive care. The ICU fellows are responsible for the supervision of all residents and MSI within the unit on behalf of the ICU consultants. In addition, the ICU fellow's duties include: co-ordinating the use of bedspace; planning admissions and discharges; co-ordinating and organising transport; addressing nursing or bed shortages and identifying appropriateness of specific procedures. All major patient care interventions and admissions/discharges to the ICU must be co-ordinated through the ICU fellow or ICU attending. The current ICU Fellows include:

Dr. Vanessa Giesbrecht
Dr. Marnie Wilson
Dr. Ian Pitcher
Dr. Andrew Hurlburt

Dr. Eoin McFadden
Dr. Curtis Williams
Dr. Daniel Woodsworth
Dr. Jack Purcell

ICU Residents on call

Residents are schedule for in hospital overnight call at a frequency of approximately 1 in 4 or per the RDocBC Collective Agreement. The on call residents take first call for issues relating to their team patients, and collectively help with new consultations to the ICU/BTHA. All new consults are to be reviewed with either the ICU fellow or ICU Consultant on call. Plans for the night for existing patients are reviewed at “sign out rounds” between 4-5pm with either the attending or fellow from your respective team. There are also “evening rounds” with the charge RN, the timing of which is flexible depending on consults, but often will start between 21:00- 21:30 pm. Code blue emergencies are dispatched through the pagers, and on call residents are required to respond. The most senior resident is typically assigned as code team leader, and as such **ACLS is a prerequisite for this rotation.**

The ICU has 4 sleep rooms in total. Two of the rooms are located off the main hallway within the unit, across from the ICU classroom. The other is located off the main hallway outside the unit room 2424 and the code to enter is 2&4 (pushed together), then 5. **There is an additional sleep room in Blackmore Pavilion: Rm 202D Door Code: 4859.**

Medical Students

Medical students will be assigned patients to assess and present at rounds by the senior residents or ICU fellow on their team. They should have a resident assigned to see the patient with them to help collaborate on a plan, and provide clinical support as needed. A resident or fellow must also review and countersign all orders initiated by medical students.

Health Care Team

Dr Gordon Finlayson	ICU Medical Director
Jackson Lam	Senior Nurse Manager
Lynette Brandsma/Nikki Kafal	
Robert Chernooka	Head Nurses
Greg/Jerrold/Ruth	ICU Pharmacists
Kate/Josephine/Mignon	ICU Clinical Dietary Specialist
Bina/Sylvana	ICU Social Workers
Karen/May/Jill/Maria/Halie/Kaley	Unit Clerks
Julia Cheung/Ana Palomino	ICU Administrative Secretaries
Jessica Donald/Tammy Wu	
Amy Foley/Catherine MacPhail	ICU RN Clinical Educators

These abovementioned are available to all residents during the day to help facilitate patient care. Please do not be afraid to approach them if you have any patient care problems. You will quickly appreciate what an excellent resource our non-physician staff are for education in the ICU. Many of them will participate in your teaching sessions both formally and during rounds.

Note that the head nurse and/or charge nurse may ask you to call the ICU fellow or ICU Consultant on call to clarify a care plan, or simply to notify of an unstable patient or unstable trajectory– in fact this happens not infrequently due to the complexity of our patients! In the spirit of collaboration, feel free to call so we can make sure the entire team has a cohesive and safe plan for patient care.

Holidays

One week of holiday time is permitted during a two month ICU rotation. Requests must be submitted at least four weeks prior to the start of the rotation. There will generally be no overlap of vacation time amongst residents and requests are handled on a first come first serve basis. Extenuating circumstances and compassionate requests are directed to the site education co-ordinator for review.

Resident Call Schedule

A final draft of the call schedule will be available approximately 15 days prior to the start of your rotation. If there are any conflicts please contact Julia Cheung the ICU student/resident program co-ordinator at Julia.cheung@vch.ca

4. Guidelines for Daily Activities in the Unit

Morning Patient Care Rounds (0830)

A truly multidisciplinary event! Each patient round is opened with a “one liner” from the physician team member looking after the patient. This is followed by a report from respiratory therapy, then nursing, and sometimes physiotherapy. A plan for the day is then outlined in a prioritized fashion by the physicians with active input from pharmacy, dietician, RN, RT and physiotherapy. There are several teaching moments during rounds that arise organically, make sure you are listening and engaged to absorb them.

Afternoon Sign-Out Rounds

Before handover, the team will make rounds to follow up on care plans implemented during the day and communicate a plan for the on-call team.

Consults/Admissions

All consults should be immediately added to the respective intake team list on Cerner so the ICU attending on-call can keep track. In addition, the ICU fellow or attending should be immediately notified of consults for triaging purposes. Admissions **must** be immediately reviewed with the ICU Fellow, clinical associate and/or with the ICU Consultant. It is **essential** that the charge nurse

also be informed as soon as possible to ensure that a bed and nursing staff can be arranged in a timely fashion.

Orders

Admission power plans for ICU and HAU are available on power chart. It is our unit policy that all orders are to be entered by ICU housestaff, and that consulting services will directly speak to the ICU team for urgent requests, or leave recommended orders highlighted in their notes for review and implementation.

Code status – please ensure that as part of every admission code status is updated on Cerner. This is particularly important if you have had an interim discussion in the context of critical care admission to update immediately to ensure your advocacy for the patient is reflected in our clinical care.

Charting

Admission/Progress notes – please indicate which team the patient will be admitted to at the top of your note ie. “ICU Green Admission/Progress Note” This helps our ICU database team immensely!

Procedure notes should be completed for all central line/dialysis line insertions, intubations, chest tube placement, arterial catheters etc.

Note that the ICU attending will do a daily audit of a single patient on your team to be sure the notes are accurate and complete. These audits are included as part of your final evaluation.

Cardiac Arrests

The code team consists of the ICU on-call physician team, an ICU RN, CCU RN, respiratory therapist, and Anesthesia resident on-call. Any intubation outside the ICU or OR warrants activation of a code blue, and any intubation that is high risk should prompt involvement of anesthesia prior to attempting. Involve the ICU senior physicians as who can help organize these logistics for you. As the latter is an airborne procedure, an N95 mask **must be worn**. If you require fit testing prior to your rotation please let Julia Cheung know and we can arrange this for you.

Procedures

You will have many opportunities to observe and/or perform critical care procedures during this rotation. Given the complexity of our patients it is imperative to have clinical supervision when you start with us, which is also an excellent opportunity to refine your skill. Following this you may be allowed to do procedures independently at the discretion of the ICU fellow/attending. Be mindful of limiting number of attempts and seeking help early if procedure is proving challenging. If at any time a patient is unstable, a call for additional assistance by fellow or attending is expected.

Sterile technique is essential (mask, hair cover, hand hygiene, gown, gloves) for all procedures including arterial lines. Confirmation of placement should occur through several means namely radiologically, via pressure transduction, and/or blood gases.

Removal of central venous catheters suspected or confirmed to be incorrectly placed requires the involvement of the ICU attending on-call and vascular surgery. Do **not** attempt to remove on your own.

Chest tubes – a senior ICU physician (clinical associate, fellow or attending) needs to be notified of all intended chest tube placements with the exception of during a code blue. Importantly, transplant teams should be notified in all circumstances if one of their patients require a chest tube as they will typically perform it themselves due to the high risk nature of said population.

ECMO – all procedures for patients on ECMO should be done by the ICU fellow or attending physician. There is a high risk of embolic events, and resultant circuit failure without appropriate precautions.

Transferring patients from ICU

All patients require a transfer summary and medication reconciliation to be completed prior to transfer. The accepting team will approve the orders upon review. Transfer summaries must include the indication for admission to hospital and ICU, course in the ICU, procedures and complications, and a summary of active issues with plans. Transfers to another facility must have a discharge dictation completed.

Deaths

All deaths require an “ICU discharge summary” completed. You do not need to fill out death certificate, this is the responsibility of ICU attending.

5. Education

AM Lecture Series (0700-0745) ICU Classroom

- You will be provided an AM lecture series schedule, which is also posted in the main ICU hallway. The curriculum is designed to address high yield topics for your ICU rotation, many from allied health staff. These are mandatory lectures. If you have feedback on sessions, or would like us to incorporate other topics, please direct to Julia Cheung or Dr Romano

Attending Lecture Series Tues. 1300, Thurs 0700 ICU Classroom

Combined Team Rounds Fri 0830 ICU Classroom

- Led by the fellows, typically case based learning on an interesting case of late or topic that is high yield for residents. ICU attendings also present to help facilitate discussion and provide a dynamic learning environment.

Fellows Simulation Fri 1400 (every other week)

- Led by fellows, a curriculum of high yield simulation scenarios to practice resuscitative and emergency critical care scenarios. Not evaluative, purely for learning. Ask lots of questions!

Mock Code Blue – last Tues of month 1400-1430

- Hospital wide initiative led by professional practice, mock code blues occur on the last Tuesday of the month. You will have an introduction to the process during one of your AM lectures, but it is a good chance to practice your code blue skills in a non-evaluative way. The CCOT (ICU) attending will help facilitate, and the fellows will often participate too. This evidence base practice not only improves patient care by identifying systems issues, but helps strengthen crisis resource management skills for all.

Rounds!

ICU Website

- <http://www.ubccriticalcaremedicine.ca/adult.php>
- Click “Education Resources” Tab
- Enter password: icu2022

Other Resources

Navigating medical emergencies:

- https://navme.royalcollege.ca/EN/index.shtml?utm_source=ceomessage

Internet Book of Critical Care

- <https://emcrit.org/ibcc/toc/>

6. Evaluation

At the end of your rotation, you will receive a summative evaluation which is compiled from feedback from each ICU attending you worked with. During your rotation, we encourage you to seek feedback directly at the end of the week from each attending you work with to help identify areas for improvement and maximize your experience. If there are any concerns, we will reach out during your rotation or please feel free to reach out to Dr Romano.

We also offer you the opportunity to provide us feedback at the end of your rotation. You will be emailed a rotation evaluation form that we encourage you to fill out. We are always looking to improve the experience of the residents as they are an integral part of the ICU team.

7. Wellness

The VGH ICU is a safe learning environment. If you ever feel you are being mistreated, or have witnessed mistreatment, please reach out to your ICU attending or the site education coordinator for support, or report at link below:

<https://mistreatmenthelp.med.ubc.ca/>

UBC Wellness Centre:

<https://students.ubc.ca/health/wellness-centre>

Supplement. Example Workflow

Time	Activities
0645 - 0700	Handover
0700 - 0745	AM Lecture Series
0745 – 0845	Assigning patients, assessment (examine, review imaging, labs, prepare plan)
0845 ->	Rounds
	Lunch
Post lunch – 1600	Action plans from rounds, perform procedures, help with consults, attend teaching sessions etc.
1600 – 1700	Sign-out rounds