CLERKSHIP GUIDE

THE UNOFFICIAL UBC MEDICAL SCHOOL SURVIVAL GUIDE TO THIRD AND FOURTH YEAR

Disclaimer: the publication is a compilation of informal advice written by students for students. Those who use the document should be warned to exercise their own judgement depending on circumstances.
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welcome to third year

This is it - the beginning of clerkship! This is an exciting yet intimidating part of our training: our transition from being pre-clinical students in lectures and CBL, to becoming young medical student interns (MSIs) assisting and learning from various services in the hospital. This is the first time that we are fully immersed in clinical environments. Most importantly, these months will likely determine the path you choose for your career in medicine.

While this is an incredibly exciting time, it can be a transition with a steep learning curve. The goal of this guide is to help orient you to the often disorienting journey that is clerkship, to help you shine on your rotations and make the transition from pre-clinical to clinical learning as smooth as possible. While our first two years of medical school teach us the medical knowledge that we’ll need for our rotations, there are some gaps to be filled. For example, how does a hospital really function? What is expected of us as clerks? How can we maximize our learning while remaining helpful to the teams that we are learning from? This guide will help answer some of those questions. Clerkship is an exciting time where we start to become the doctors we want to be, and hopefully this guide will help you achieve that!

As you’ve probably heard, third year is going to be a challenge. The hours are long and you need to find time to study for exams, while balancing the important things in your own personal life as well. Some mornings will start really early, while others can end quite late. Be prepared to spend up to 28 hours straight working on a call shift. You may also come up against difficult moments with patients or colleagues, or make mistakes that make you feel stupid. You’ll probably have days where you come home, burst into tears, and wonder why you ever thought going into medicine was a good idea.

But, that’s okay! We’ve all been there. It’s tough. But it’s also rewarding and amazing. This year is your chance to jump in and try it all while having ample support to back you up, to become the best doctor you can possibly be. So when it seems like all the odds are stacked against you and the walls are caving in, focus on all the great things you’ve seen plus the awesome work you’ve accomplished and plow right on through!

This guide was created by the Class of 2013 and has since been updated by the Classes of 2020 and 2021, in hopes of making Third Year a little less intimidating.

good luck!

Nancy Lum and Annette Ye
Executive Editors, Class of 2021
## The Basics

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How to choose and rank your track

Track selection feels like a huge choice to make in second year, especially when you might not be sure about what specialty you want to pursue yet. However, do know that people are generally very happy with the track they end up with, since each track has its own set of benefits. Here are the rotations, divided up into four main blocks.

Clerkship Rotations

Ambulatory Care Block
- Rural Family (4 weeks)
- Emergency (4 weeks)
- Ambulatory Care
  - Ophthalmology (1 week)
  - Dermatology (1 week)
  - Ambulatory Internal Medicine (2 weeks)

Women & Child Health Block
- Pediatrics (6 weeks; 3 inpatient, 3 outpatient)
- Obstetrics and Gynecology (6 weeks)

Brain & Body Block
- Psychiatry (6 weeks)
- Internal Medicine (CTU) (6 weeks)

Surgery & Perioperative Care Block
- General Surgery (4 weeks)
- Anesthesiology (2 weeks)
- Orthopedics (2 weeks)
- 2 of the Surgical Subspecialties (2 weeks each)
  - Cardiovascular
  - Neurosurgery
  - Otolaryngology
  - Plastic Surgery
  - Pediatric General Surgery
  - Radiation Oncology
  - Thoracic Surgery
  - Urology
  - Vascular Surgery

The tracks, as of the time of this guide’s creation, are as follows (based on VFMP), also available on Entrada under Preparing for Year 3:

https://entrada.med.ubc.ca/community/policiesandforms:program_information
Here are the rotations based on how busy they generally are, relative to the others. Note that this is highly dependent on your site, staff, and team.

**Lighter**
- Ambulatory Care Block (all rotations within)
- Psychiatry
- Anesthesiology
- Some surgical subspecialties (especially Radiation Oncology)

**Heavier**
- OBGYN
- Pediatrics
- General Surgery
- CTU
- Orthopedics

**Rotations without call**
- Ambulatory Care Block (all rotations within; however, some rural family practice sites will put you "on call" in the emergency room)
- Specific subspecialties (ex. radiation oncology, vascular surgery, etc.)
- Psychiatry call ends at 2300h
Considerations for Track Selection

Here are some things to consider when thinking about how you want to rank the tracks.

- **Your learning style.** Some people learn best by getting thrown into the water in a “sink or swim” style; some people prefer a more gradual, crescendo approach where you progressively build on your skills.
  - If you’re the former, A or D track might be good options for you, since Surgery & Perioperative and Brain & Body blocks tend to give you more experiences in a short period of time, which can be great if you are a quick, adaptable learner.
  - If you’re the latter, C track is an excellent option since you start with Ambulatory, where you can learn how to do your history and physical exams, practise your dictation skills, and warm up to clinical learning environments. It’s also nice to be able to learn all of this without needing to do call to start. Then, you go into your Women & Child Health Block where you graduate to more responsibilities in an inpatient setting, and then tackle the heavier blocks afterwards.

- **How differentiated you are.** A few weeks into your second block of clerkship, UBC’s elective selection process will open, which puts students into their local fourth-year electives in BC. This is important!
  - Because of this, you may want to put your specialties of interest into the first 1.5 blocks of your clerkship, so that you can ensure that the specialty is a good fit before committing to electives in that specialty.
    - This way, you also have time to start a research project, should you be interested in a specialty earlier on in the year.
  - On the other hand, if you know for certain that you want a given specialty, some people will tell you to put that rotation at the very end of your third year, so that you’ll basically be at the functional level of a fourth-year MSI and impress your staff with your clinical prowess, increasing the chances of getting a strong reference letter.

- **Your fatiguability.** If you’re the type of person to get tired quickly from a rotation with heavier hours, consider a track that allows you to space out the busy rotations. C and D track might be good options for this.
Perks of Each Track

Here are the tracks and some benefits specific to each.

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<tr>
<th>Track</th>
<th>Block Order</th>
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<tr>
<td>A</td>
<td>1 Surgery &amp; Perioperative Care Block&lt;br&gt;2 Brain &amp; Body Block&lt;br&gt;3 Ambulatory Care Block&lt;br&gt;4 Women &amp; Child Health Block</td>
<td>- You’ll get surgery out of the way first, when you’ll have the most energy after a refreshing summer vacation.&lt;br&gt;- Learn how to do consults, admit patients, and manage the ward on surgery and CTU in the first half of clerkship, which will provide you with the core skills you need for the rest of clerkship. (Note that you’re expected to learn this on the go, so if you like more time to learn these skills, you may want to consider a different track, since you might not always have explicit teaching on these things due to time-constraints, especially on surgery).</td>
</tr>
<tr>
<td>B</td>
<td>1 Women &amp; Child Health Block&lt;br&gt;2 Surgery &amp; Perioperative Care Block&lt;br&gt;3 Brain &amp; Body Block&lt;br&gt;4 Ambulatory Care Block</td>
<td>- Great for people who are interested in surgery, since you get exposed to the OR in OBGYN and get suturing practice before going into surgery, so that you can impress your preceptors with your skills.&lt;br&gt;- OBGYN and surgery will be out of the way first, when you have the most energy after summer vacation.&lt;br&gt;- Ending with Ambulatory Block after going through all of the specialties allows you to synthesize all of your knowledge in the generalist specialties of Family Practice and Emergency.</td>
</tr>
<tr>
<td>C</td>
<td>1 Ambulatory Care Block&lt;br&gt;2 Women &amp; Child Health Block&lt;br&gt;3 Surgery &amp; Perioperative Care Block&lt;br&gt;4 Brain &amp; Body Block</td>
<td>- This is known as the “lifestyle track”, since you start with Ambulatory, which is the lightest load in terms of hours, during the summer months!&lt;br&gt;- Surgery &amp; Perioperative Care is in the winter, and you have your winter vacation to break up the rotation into more manageable halves.&lt;br&gt;- Your rural family practice is in the summer, so you can enjoy the natural beauty of wherever you go, and there won’t be winter conditions that might make your trek out to your site difficult/dangerous.</td>
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| D | 1 Brain & Body Block  
|   | 2 Ambulatory Care Block  
|   | 3 Women & Child Health Block  
|   | 4 Surgery & Perioperative Care Block |
|   | Excellent choice for people who want to learn how to be a strong clerk right away, since CTU is excellent at orienting and teaching students the skills they need to do consults, admit patients, and manage the ward.  
|   | Your call is spaced out since CTU, OBGYN & Pediatrics, and surgery are relatively spread out. |
Valuable pearls from first and second year

- Your physical exam and history skills are crucial.
  - Oftentimes, your assessment will be trusted as accurate and won’t be redone by a resident or attending, so don’t be afraid of taking longer to do an accurate exam.
  - Having said that, however, make sure you always admit when you don’t know something, or if you forgot to ask or examine something.
  - It may be tempting to lie and make up details to cover up the fact that you forgot to ask an obvious question or do a crucial physical exam maneuver, but please remember that is considered professional misconduct with serious consequences for (1) your patient—they might get incorrect or inappropriate management leading to harm, and (2) yourself—there are serious academic and professional consequences. In short, be honest and resist the temptation to cut corners by “faking it”.

- Having an approach to common presentations is very helpful (high yield = approach to chest pain, shortness of breath, abdominal pain)
  - An approach is a great way to retrieve the knowledge you’ve learned in first and second year, and it’s easier to remember than trying to commit a huge list of diseases on the differential to rote memory. For example, a common approach to the differential for acute kidney injury is the “pre-renal, renal, post-renal” framework.
  - VINDICATE (or your favourite mnemonic) can be applied to pretty much anything in a pinch.
  - Some students swear by the Calgary Blackbook.
  - Sometimes it’s helpful to go by organ systems (such as in chest pain), while other problems require a more anatomical approach (like abdominal pain).
  - Ask your residents about how they approach different presentations - they’re a great resource!
  - Whatever you end up using, having a good approach that makes sense to YOU is key!

- You will write SOAP notes and do consults almost daily, so make sure you understand how to document them well (see the “Documentation” section).

- Antibiotics will be used in almost every rotation.
  - The “Spectrum” app will be your best friend. It is a very useful bedside tool that allows you to look up the recommended antibiotic regimen for a given presentation based on a health authority’s antibiogram.
  - Knowing which antibiotics are most often used for common presentations (pneumonia, UTIs, skin infections, meningitis, preoperative) along with the most common bugs that you’re targeting in those infections will be very handy.
  - Watch and re-watch the “Do Bugs Need Drugs?” Videocast!

- Professionalism is important.
- Make sure to maintain good habits: dress appropriately, treat people with respect, and show up on time. The principles are simple, but they make a big difference in asserting yourself as a reliable member of the team.
- Overall, remember that you have learned well and know your stuff. You will get through this!
What 3rd years wished they knew

● It's okay to not know things.
  ○ As long as you are trying and work hard, and you err on the side of caution, your preceptor will appreciate your efforts. The whole point of 3rd year is to learn - if you already knew everything, you wouldn’t need to be here!

● Be a team player.
  ○ While it's important to study hard and stay on top of the clinical knowledge you should be learning, it's equally if not more important to be pleasant to work with.
  ○ A common rule of thumb is: would others look forward to being on call with you? Strive to make the answer to that question a resounding “yes,” and it will go a long way.

● Study, but don’t fret too much about exams.
  ○ Pretty much everyone feels like they failed the block written exams, but virtually everyone still passes. Try your best to study as you go!

● Be clear about your stage of training.
  ○ Let the attending physicians and residents know what level you’re at and what point of the year you’re in, because they don’t always know and if they realize that you’re just starting your 3rd year, they’re more likely to go easy on you.

● It’s okay to let your residents and preceptors know if you already know what specialty you’re hoping to go into. It’s also completely okay to say you’re not sure!
  ○ A common myth is that people will ignore you or not call you to see interesting things if you tell them you want to go into a specialty different from theirs, but in general, people actually tend to be really supportive.
  ○ Often, they will try to give you patients that are more related to what you’re interested in, so it’s completely fine to be honest, as long as you are respectful of the specialty you’re in.

● Pace yourself. Clerkship is a marathon!
How to prepare for clerkship

Here are some things you can figure out to make your transition into clerkship smoother before you start.

Housekeeping

- Take some time to clean your house, organize your desk, and get everything ready for a year of studies.
- Stocking up over the summer on toilet paper, toothpaste, and whatever else you need on a daily basis means less worry about getting to a store during your rotations.
- Having quick meals in the freezer is also helpful when you just don't have the time to meal prep.
- Automate any recurring payments, such as rent or credit card bills, to absolve you of the responsibility of remembering them when you're busy on rotations.

Get a GP and/or get familiar with UBC Student Health Services

- It’s a good idea to have someone who you can reliably see for any health concerns throughout clerkship. The Physician Health Program can assist you with this process; check out their website for more information on how to get connected to a family physician. They have a confidential health line available 24/7 at 1-800-663-6729.
  - Bonus: The Physician Health Program also connects medical students with free counselling, which can be great to help you with your mental health throughout clerkship and beyond.
- It’s also useful to have a provider who can help you complete the AFMC Immunization Form, which is necessary for you to apply for fourth-year electives out of province.
- UBC Student Health Services is based at the UBC Hospital in the Koerner Pavilion, and they allow you to book appointments online which can be helpful if you live close by and don’t have a GP.

Obtain your clerkship supplies

- Required
  - Stethoscope, reflex hammer, penlight, photo ID, pens. You probably have all of these already, but make sure you bring them in your bag.
  - Choose pens you like to write with, but don’t mind losing. You will invariably lose pens to the void of the wards.
  - Convenient bag. Lots of people will bring a messenger bag so that they don’t have to lug a heavy backpack around. You’ll want to bring as little as possible to the hospital, for both security and convenience. Sometimes you will have a locker
with enough room to securely store a big backpack, but sometimes you won’t, so you’ll want to keep things simple.

- **Dress clothes.** This way, you can just grab a shirt, pants, and shoes from the closet, and go to work without thinking too hard. Comfortable shoes are key, as you’ll be on your feet for much of the day.
- **Lock.** There will often be lockers in the lounges, call rooms, or nursing stations for you to use, but you won’t be able to secure your things without a lock, obviously!

- **Recommended but not required**
  - **A cellphone with a good battery life.** If you don’t currently have one, at least ensure that you have a phone charger on you. You may not be the carrier of the pager on call, so your ability to contribute to the team is often dependent on your ability to receive messages from the resident/staff who does carry the pager. This is, of course, dependent on your phone being alive.
  - **White coat.** Many rotations will ask you to bring white coats to them in their orientation emails, but in practice few preceptors actually require you to wear them, and they leave the choice to wear them to you. They may be useful in that they give you plenty of pocket space.
  - **Books** make great bedside references, so you may want to buy these. See the resources section for recommended ones. Some people love their physical copies, but it can be more compact and handier to have a PDF on your phone. Ask your residents for their recommended resources, too.
  - **In most years,** the graduating class at UBC will have a book and supply sale as people try to get rid of things before residency. It’s a good way to get good resources for cheap.
  - **White Coat Clipboards.** These are ridiculously expensive foldable clipboards that fit into scrub pockets and white coat pockets. They are very useful and allow you to carry sheets of paper, like your consults and patient lists, without needing to fold them or allow them to crumple in your pockets. The clipboards also have reference ranges and some useful information on the attached stickers that can help you. Honestly, I don’t even really look at these; I mainly use them to store my sheets of paper and keep them organized. They’re very expensive for what they are, but they do make great gifts so you can drop a hint to your significant other/friend/family member who’s looking for a gift for you or put it on a gift wish-list! You could also theoretically try to get a big group of students to get a wholesale order going. (No conflicts of interest here!)

**Prepare for call**

- **Gather your essentials for an overnight shift.** Here is a non-exhaustive list:
  - Toothbrush
  - Toothpaste
  - Face towel
  - Hairbrush
  - Phone charger
○ Deodorant
○ Extra socks
○ Extra underwear
○ Extra sweater for cold call rooms
○ Food
○ Laptop or study materials to read if things are quiet

● Things to always keep on your person, ideally fitting in your scrub pockets, are:
  ○ Your phone*
  ○ Your ID (both your hospital ID and your legal ID, like a driver’s licence)
  ○ Money and/or a credit/debit card
  ○ Pens
  ○ A granola bar

● *One exception to having your phone with you is in OBGYN at BC Women’s Hospital - they don’t let you carry one with you. And, of course, in every rotation, keep in mind the professionalism policy on devices. It’s really unprofessional to be checking facebook while you’re supposed to be working and learning.

Figure out your reporting information and required evaluations

● Typically, before your rotation starts, you will be sent an email from a member of the administrative staff that will give you instructions on where and who to report to on your first day. You might need to text a resident one or two days in advance to get more specific reporting information.
  ○ This unfortunately can come very close to the start of your rotation – sometimes, even the day before. It’s still worth reaching out to administrative staff to double-check that they didn’t misspell your email address if it’s getting close.
  ○ The emails will also give you more instructions on any evaluations you need to complete during your rotation, such as Workplace-Based Assessments and Mid-Rotation Assessments.
    ■ These are often done on your phone, so you should probably bookmark them or keep the link handy some other way so you can leap at the opportunity to get them done quickly.

● It’s also a good idea to take a quick tour through the hospital you’ll be rotating through to help ease anxiety and avoid tardiness on the first day, since you’ll know where things are. Refer to the “Sites” sections below for details on each site.

Obtain access to the computers and electronic medical record systems (EMRs)

● Each hospital and/or health authority may use a different EMR.
● Do the modules that give you logins into the computers and EMRs so that you don’t have to bug residents for their access.
● These are typically on www.learninghub.phsa.ca, and once you’ve completed the appropriate module, an administrative staff member will email with your login information and instructions on how to set it up.

Set up your dictation ID(s)

● Each health authority you’re rotating through will require a separate set-up of your dictation ID. The number itself should remain the same from authority to authority, but it’s a good idea to ensure that your ID has been activated so that you can assist your preceptor and team by dictating consults, discharge summaries, and clinic notes right from the start of your rotation.
● MModal Fluency Flex is the Front-End Speech Recognition (FESR) software that allows you to dictate using a microphone and see the text you’re dictating appear on the screen in real-time. It is then processed like a traditional phone dictation, and it will be sent to the preceptor you specify that you’re dictating for to be signed off before it goes up onto the EMR. See the “How to Dictate” section for more information.
  ○ You can sign up for an in-person session to be trained in FESR on www.learninghub.phsa.ca, which takes 1-2 hours to complete. This is a good idea to do before clerkship starts as you may not have as much time during rotations.

Prepare for your rotation

● It’s a good idea to get familiar with the bread and butter presentations of your next rotation.
  ○ Good things to review are lectures from TICE, such as those on antibiotics, ECGs, chest X-rays, and your histories and physicals for major complaints (i.e. chest pain, shortness of breath/cough, abdominal pain, and decreased level of consciousness).
  ○ Review with friends to keep things social and to keep yourself accountable!
● Talk to people in upper years about what to expect, especially if they did the same rotation as you. The vast majority of them will be happy to pass on tips and advice.

Enjoy your summer and relax!

● Self-explanatory! Starting clerkship fresh will help you tackle it with energy.
Accommodations

- No one location is the perfect place to live in for clerkship, since rotations will be at different hospitals. If you’re at VFMP, you could be sent anywhere in the Lower Mainland.
- Some rotations allow you to rank which site you prefer to work at, and some rotations try to place you in the closest site to where you live. For others, it’s seemingly random.
- As a result, some people would be happy to live at their folks’ place which does help you save on cash if that’s an option.

Transportation at Lower Mainland

- Having a car is probably the most convenient option as likely won’t know where all your rotations will be until closer to the start of each rotation. See the section on “Is a car necessary?” You can be sent to any of these sites in the Lower Mainland:

- **Parking.** There is a Google Doc detailing some free parking options at some of the hospitals, which can be found here.
  - There is also a parking pass that you can hang in your car to make you eligible for staff parking rates, which is usually about $5.00-$6.00 for 14 hours of parking. It’s a great deal compared to the rates for the general public.
    - Read about the parking pass, and fill out the application form here.
    - For Employee ID#, put the 6-digit code beside “Badge ID” on the back of our VCH photo ID.
    - Email the completed form to lmcparking@fraserhealth.ca. (Note that the email listed on the form is incorrect.)
    - Wait 10 minutes or so for them to receive the email.
    - Call 604-930-5440 to reach LMC Parking to pay a $20 deposit for the pass over the phone with your credit card number.
    - You will be mailed your parking hanger within several business days.
- **The UPass** is possible to opt into, but you must pay the UBC student fees to be eligible. Doing so also makes it possible for you to opt into the Student Health and Dental plan as well. Make sure you try to calculate whether this is worth it for you, especially if you have insurance from other means. Student fees can be found on UBC’s website.
Life in Clerkship

What to do on day one of your rotation

- Most rotations will have an orientation, and you’ll get an e-mail giving you your preceptor’s contact information, as well as where to show up on day one.
- Make sure you introduce yourself, let people know where you are in your training, and maybe ask for a quick tour of where you’ll be working (if you don’t automatically get one with your orientation).
- This is also a good time to ask the members of your team about what your responsibilities entail. These details vary widely between rotations so it’s a great idea to clarify.
  - Where and when does the team meet each morning?
  - What does rounding on the weekends look like?
  - Will the MSIs be responsible for ward management on call, or just consults?

How a service works

Although we get a lot of lecture time devoted to learning medical knowledge, we aren’t explicitly taught how a service works in the hospital, and it can be frustrating never receiving instruction on that, since residents and staff think of this as being self-evident. Here is a crash course in this, with the caveat that this may differ slightly depending on the specialty and site.

- **Inpatients** are the patients who are admitted to hospital. This typically occurs after a patient presents to the hospital via the emergency room for some complaint.
  - Emergency
    - The emergency physician (EP) is the gatekeeper who performs the initial assessment, and based on the patient’s history, physical, and investigations, he/she may feel that a consultation from another service is required.
    - For example, if a patient presents with a bowel obstruction, the EP may consult General Surgery. If a patient presents with an acute exacerbation of congestive heart failure, the EP might consult Internal Medicine.
    - The EP pages the consulting service, requesting a consultation.
  - Consultation
    - The consultant team will answer the page and speak to the referring EP. Usually, the person answering the page is a resident or medical student in larger centres with many learners.
    - If it’s an appropriate complaint warranting a full consultation, the team will send a member down, often a medical student (you!) or resident, to do their own independent history and physical exam, and form their own
impression and plan. They may also order any additional investigations. Based on that, one of the following will occur:

- If the patient is suitable to manage on an outpatient basis, the consulted team or the EP can provide the appropriate treatment and referral to follow-up.
- If the patient requires a consultation from a different provider, the consulted team will let the EP know, and the EP typically arranges the subsequent consultation.
- If the patient requires admission, the consulting provider will admit the patient under their service, and that provider becomes the Most Responsible Physician (MRP).

○ Admission
  - After some paperwork and phone calls (which you will help to complete as a clerk), the patient will be transferred to the appropriate unit in the hospital and officially admitted.
  - This is where the course of the hospital treatment will occur, where any investigations, medications, or other treatments will be scheduled and done. These are typically done by written orders, which are written in the “Orders” section of the patient chart by the medical team, processed by the unit clerk, and often carried out by nursing staff. Sometimes, investigations or procedures need different steps to arrange, such as calling the appropriate department.
  - **Rounding** is your team’s daily visits to the patients admitted under your service to track their progress and see if any concerns happened overnight. Orders are also written during rounds.
    - The patient’s progress will be documented by daily progress notes, which you will often be responsible for writing as the medical student.
    - The team will also write orders to make any changes to the patient’s care plan including medications, consultations of other services or allied health professionals, and investigations that need to be done.
  - Once the patient is deemed fit to be managed on an outpatient basis with appropriate disposition, and they have appropriate follow-up arranged, the patient is discharged to the community.

- **Outpatients** are patients who are managed in the community.
  - Clinics form the bulk of outpatient care – you are probably familiar with these from Family Practice visits in first and second year.
How call works

- Generally speaking, your schedule for third year is Monday to Friday, 8 am to 5-6 pm.
  - The start time may be earlier for rotations like surgery, and possibly a bit later for others like psychiatry, and you may occasionally work later than 6 pm depending on what you’re doing and where you are.
- However, for some of the rotations, you will also be on call.
  - The frequency of call shifts varies by rotation and site, but the on average are 1 in 4 as per the school’s call policy.
  - As a medical student, being on call is almost always in-house, meaning that you stay at the hospital for the call shift.
  - Each hospital will have call rooms, where you can catch some sleep when things are quiet.
  - You should be dismissed post-call by 10 am; generally, younger attendings and residents are good about letting you go by this time since they were extended this same courtesy. However, sometimes certain preceptors won’t bend over backwards to get you out this early, so don’t necessarily expect this each call shift!
- What exactly is a call shift? When it comes right down to it, “on call” is basically another name for “really long shift” sprinkled with consults.
  - Weekday call
    - You will work your usual day with your usual rounding/note writing/patient care/etc, and OR slate if on surgery. But your team is also “on call”, which means they may be called or paged by another service (often the emergency department) to do consultations on patients who require your service’s assistance to manage a patient.
    - Your call shift will extend beyond your usual end time and you will continue to see consults throughout the evening and often overnight. You may also be called for issues on the ward. If things slow down a bit, you might be able to get some sleep. In the morning, you will usually meet up with your team/attending and may round on patients or (if you’re lucky!) get to just go home.
  - Weekend call
    - Typically, you will often have a different start time than your weekday starts, and you may not have the same daily activities you’d do on a normal weekday.
    - Instead, you may be helping the team with rounding on patients, which can include patients from teams other than your own.
    - If not, you may just be waiting around for consults or ward issues as they come up.
- Survival tips for call
  - Sleep when you can! You might be tempted to skip the nap and pull an all-nighter, but even 30 minutes of sleep makes an enormous difference to your mental functioning in the morning.
○ When going to see a new patient for a consult, think of an approach to their chief complaint to help guide your H&P.
○ Eat and drink when you can. You might be alarmed by how concentrated your urine gets if you don’t…! Keep plenty of easy, non-perishable snacks like granola bars in your bag handy.
○ Call rooms get pretty cold. Grab as many blankets as you need to make your night more comfortable.
○ Make sure you know when handover is in the morning. The handover time is usually a little bit later on the weekend compared to the weekdays – don’t disappoint yourself by waking up too early when you could’ve gotten more sleep!

Common tasks as a clerk

Consultations

● As a medical student, this is one of the major ways that you contribute to the workflow on call. You will often be sent as the first member of your team to meet that patient. Generally, you will be responsible for:
  ○ Reviewing their past medical history on the EMR (CareConnect is very useful here).
  ○ Conducting a relevant history and physical exam (H&P).
  ○ Interpreting the results of the investigations that have been done by the emergency physician (EP) or other services.
  ○ Formulating a differential diagnosis.
  ○ Attempting to make an investigation and management plan, including whether you think the patient should be admitted or not.
  ○ Writing the consult note on the designated Consultation sheets of the hospital, detailing your H&P, making sure to leave the impression and plan portion empty until you review with your resident or attending. Check out the “Documentation” section for more specifics.
    ■ Make sure you leave your consult note on the patient’s chart so that the EP knows the consultant has seen the patient. You could write “to review with resident/staff” on the bottom of your note to make that explicit. Make sure to sign it with your name and status as an MSI3!
    ■ Take a photocopy of your consult so you have it with you when reviewing the case with your team. It’s also useful to dictate off of later on.
  ○ Presenting the case to your senior resident and/or attending, and reviewing the case with them.
  ○ Returning to the patient to ask the patient further questions, clarify anything on the physical exam, and decide on the management plan with the resident/attending.
  ○ Record the resident/attending-approved impression and plan onto your consultation sheet. Sometimes, residents or attendings will write this themselves.
- Dictate the consult so that it goes onto the EMR.
- Afterwards, you will review the patient with either your resident or attending, and will come up with a plan together (ex. admit to ward, urgent surgery, outpatient follow-up, etc).
- **Tip:** Collect a few stickers with the patient information for your attending and resident. The former wants to be able to bill, and the latter wants to have the MRN to keep track.
  - If you’re on an inpatient service, and you’re admitting the patient, remember to add the patient to the team’s patient list, whether that’s on a shared Word document or on the hospital EMR.

### Case Presentations

- Case presentations are one of the primary ways that you communicate with residents and attendings about patients, so it’s important to master this skill quickly.
  - Even if two students have collected the same history and physical exam findings from a patient, those same two students can be perceived to be performing at very different levels based on how they present the case!
- **Think of a case presentation as a persuasive essay.**
  - **Your thesis** is your differential for this patient’s presentation.
    - Unlike in a persuasive essay, however, the thesis is only revealed at the end, when you talk about your impression and plan.
  - **Your supporting points** are your focused recount of the HPI, physical exam findings, past medical history, and results from investigations.
    - All your words in this portion of the presentation should be tailored towards supporting your thesis: what your preferred diagnoses in the differential are.
    - If it doesn’t help accomplish this, and if it doesn’t change how you would manage the patient, you probably don’t need to include it. If your preceptor wants to know about a certain detail, they can ask you after the presentation for clarification.
    - Your preferred diagnosis should not come as a surprise if you’ve framed positive and negative findings correctly.
  - Just like when writing a persuasive essay, different people prefer different structures. For instance, some will prefer you to start with the patient’s past medical history, while others prefer not to be biased by comorbidities and therefore prefer the HPI at the start. Just ask your preceptor or resident how they prefer it.
- **Miscellaneous tips:**
  - Make it concise.
  - Aim for a maximum length of 5 mins, and ideally make it under 3 mins.
  - The case presentation is different from your written consult.
  - The written consult should include all the information you’ve collected, but your presentation should contain only the most pertinent. If your preceptor needs further information, they’ll ask you after your initial presentation.
- Present confidently.
- Do not lie or make up patient details. If a preceptor asks you a clarifying question, and you don’t know the answer, resist the temptation to make something up or guess at what the answer is. Just tell them you don’t know! You will not look good if the preceptor asks the patient, and they give a different answer.

- NOTE: If you genuinely asked a patient a question, reported their answer to the preceptor honestly, and they say something contrary or different when you return with your preceptor to review, don’t worry. Preceptors should understand that the patient’s answers may change; they were trainees once too and went through the same thing!

- Components of a case presentation:

<table>
<thead>
<tr>
<th>Component</th>
<th>Example</th>
<th>Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying Information &amp; Chief Complaint</td>
<td>Mr. John Smith is a 45-year-old gentleman with type 2 diabetes, dyslipidemia, and hypertension presenting to the emergency department with a 3-hour history of chest pain.</td>
<td>Give a brief glimpse of who the patient is and relevant past medical history here, which can help support the preferred diagnosis you’re going to present at the end of the presentation. Give the chief complaint, which will trigger the listener into thinking about the differential.</td>
</tr>
</tbody>
</table>
History of Presenting Illness
- Sequence of events leading to presentation
- Positive findings
- Negative findings

He describes first experiencing a “squeezing” 6/10 pain to the left pectoral region radiating to his left arm 3 hours ago while trying tennis for the first time, when he is typically physically inactive. The episode is ongoing but is now at 4/10 in intensity. He has never had this pain before.

He denies palpitations, shortness of breath, and leg or ankle swelling. The chest pain is not pleuritic. No surgical or malignant history. No heart burn, epigastric discomfort, or vomiting. No history of recent trauma.

His past medical history is significant for type 2 diabetes, dyslipidemia, and hypertension. No previous surgeries. He takes metformin, atorvastatin, and hydrochlorothiazide. He says he is allergic to penicilin and gets a rash from it. He says his father and maternal grandfather both had “heart attacks” when they were in their 50s.

He has a 12-pack-year smoking history but has stopped 4 years ago. He does not drink alcohol or use recreational drugs.

Present the story’s OPQRST elements. Focus on the presence and absence of symptoms that would point you toward and away from likely and unlikely diagnoses on the differential. Don’t focus on signs and symptoms that aren’t relevant.

Your case presentation shows your listener how well you know the differential.

<table>
<thead>
<tr>
<th>You say…</th>
<th>You're thinking about…</th>
</tr>
</thead>
<tbody>
<tr>
<td>No palpitations</td>
<td>Arrhythmia</td>
</tr>
<tr>
<td>No SOB or leg/ankle swelling, no surgical or malignant history, pain is non-pleuritic</td>
<td>Pulmonary embolism, heart failure</td>
</tr>
<tr>
<td>No heart burn, epigastric discomfort, or vomiting</td>
<td>GERD, esophageal rupture</td>
</tr>
<tr>
<td>No SOB or history of recent trauma</td>
<td>Pneumothorax</td>
</tr>
</tbody>
</table>

Even if you haven’t explicitly stated the items of the right column, you’re showing the listener that you’ve thought about them.

After the HPI, go through the rest of the history quickly, including the past medical history, medication history, allergies, and any relevant family history. Focus on family history relevant to the presentation. For example, family members with previous MI are important here, and it’d be less important to talk about family history of colon cancer in this case. Your listener’s attention typically lulls around here.

Include elements of social history if they contribute to the clinical question, or if it’s relevant to disposition or other management considerations.
| Physical Exam | Vitals are stable, and he is afebrile. His BP is 130/90 in his right arm and 126/92 in his left. He is overweight at BMI 28. Normal heart sounds, JVP 2 cm above the sternal angle, radial pulses equal bilaterally. Equal air entry to the chest bilaterally. Abdomen soft and non-tender. No pulsatile mass palpable in the abdomen. | Be brief in the physical findings. This is where your audience’s attention lulls, so spend your time on the most important positive and negative findings. |
| Investigations (labs, ECG, imaging, etc.) | Today’s blood work shows normal Hb, WBC, and platelet count. Electrolytes, Cr, and BUN are normal. CK-MB on arrival was 3 ug/L (normal <5 ug/L). Troponin T was 10 ng/L (normal <14 ng/L). ECG is normal with no ST segment changes compared to an ECG done 2 years ago. Chest X-ray is also normal. | Generally, you want to include the CBC findings (Hb, WBC, platelets). Otherwise – you guessed it – make sure to include just the most relevant lab findings. Some preceptors will want you to say the exact values, so it’s often better to err on the side of caution and say the number rather than “high” or “low”. When detailing imaging, you can borrow an excerpt from the radiologist’s report! |
| Impression & Plan | So far, Mr. Smith has received 325 mg ASA and one dose of sublingual nitroglycerin which has led to total relief of his pain. Given his cardiac risk factors, including type 2 diabetes, dyslipidemia, and hypertension, in addition to his history of exertion-related chest pain, the diagnosis at the top of my differential is non-ST-elevation myocardial infarction. Because of this, I would like to admit him for a low-risk rule out, and obtain a repeat ECG and cardiac enzymes in 6 hours’ time. | Describe any management steps that have already been taken and their effects on the patient. Even if you’re not sure, you should give your own impression and plan! It can be off the mark, but it’s the best way for you to learn, to commit to a management plan and be corrected. Active learning > passive learning! Your preceptor will also be happy with your initiative. Depending on the specialty you’re rotating through, your preceptor may want you to go through several more of your preferred diagnoses rather than just one. |
Admitting a Patient

Each time you admit a patient, there are a few tasks you need to get done:

- Admission OR consult note
- Code status on the MOST form
  - You are not responsible for obtaining a patient’s code status as a medical student. While it’s good experience for you to listen in on one when you go back to the patient after reviewing with your attending, it is fully within your right to let your resident or attending know that you are not comfortable having a conversation about goals of care. This can be a tricky situation to navigate. If you are having difficulties with this, speak to a resident or another preceptor in the department that you trust.
- Preprinted orders OR manually written admission orders
- Medication reconciliation
  - There should be a Med Rec form in the chart from PharmaNet, which will show all of the patient’s dispensed medications from the last 14 months.
  - Note that even though the medication may have been dispensed, the patient may not necessarily have actually taken the medication. You must verify this when interviewing the patient, and this is called the Best Possible Medication History (BPMH). Doing this will make your resident really appreciate you!
  - Remember to ask about supplements, over-the-counter medications, and alternative or complementary medicines.
- Calling it in (usually a resident does this)

Calling a Consultant

- Call consultants in the morning, before noon, otherwise the patient will likely not be seen by them that day!
- You can either do a written order to consult another service or phone them directly to give them background verbally.
- Calling a consultant
  - Page the consultant, or call them on their cellphone.
    - Tip: you can obtain the pager number or phone number of an on-call consultant by picking up a hospital phone and dialling “0”. This will put you through to a general operator, and you can ask them to give you the number or ask them to page the consultant to your local or cellphone.
    - There should also be a way to find this information on the hospital computers. For example, Fraser Health has a “On-Call Scheduling System” where you can find out each service’s on-call consultant each day, and their contact information. Ask your team to show you how to find this.
  - Confirm that you’re calling the correct person.
    - “Hi, is this _____?”
  - Introduce yourself.
“My name is John Smith, and I’m the student on the ______ team, and we’re hoping to get your help for one of our patients. Do you have a moment?”

- Give the patient’s information.
  - Name, age, and gender
  - Location in the hospital
  - MRN

- Start with a question before giving the clinical preamble.
  - Ex. “We would like some help managing this patient’s MRSA-positive bacteremia.”
  - This will really help the listener focus on the aspects of your presentation that are relevant to this question, and they will have a much easier time focusing on your clinical preamble because of it.

- Proceed with SBAR.
  - Situation
    - “I have a 57-year-old male whose blood cultures came back in 2/2 aerobic bottles with coagulase-positive Staph aureus, now known to be MRSA.”
  - Background
    - “This is an IV drug-user with previous MRSA cellulitis, no previous bacteremia, who was admitted yesterday with sepsis from cellulitis from his left arm. There is also a new murmur in the tricuspid valve area.”
    - Focus on relevant information to the question.
  - Assessment
    - “I am worried that given the new murmur and bacteremia, that he has infective endocarditis.”
  - Recommendation/Request
    - “The sepsis is being managed, and he is continuing on vancomycin, and we’ve ordered an echocardiogram.”
    - “We’re hoping you could advise us on any other steps you’d recommend for management.”

- Write a thank-you for the consultant in the patient’s progress notes. They will read those notes, and it’s nice to be collegial!
- The consultant may write recommendations for orders, rather than just ordering them. Take some time to review those, and if you and your team agree that they should be done, go ahead and write that you’re in agreement so that the unit clerk will process them.

Using a Pager
- Pagers are archaic, but they will remain in medicine for a while whether we like them or not. Here are the basics:
○ Largest button with the green bar (▁▁▁)
  ■ This will make the pager stop beeping when receiving a page.
  ■ You can press it several times to scroll through your pages to find what number to dial to call back the person who paged you, and to see what time you received the page.
  ■ Since this can be confusing at times, and since it can be easy to accidentally delete pages, you might want to consider recording the time and number from each of your pages, as well as what the page was about, so you can keep track of them on a long call shift. It can get confusing quickly when you’re sleep-deprived.

○ Arrow button (▲)
  ■ This scrolls through the settings, which allow you to:
    ● Change the date and time on the pager.
    ● Change the alert mode to one of the following:
      ○ Audio - the annoying loud beeping, but the most audible one and therefore the one that won’t allow you to miss pages
      ○ Vibrate - can work well if you ensure that you feel it
      ○ Chirp - a much more diminutive sound than “Audio”, but much more likely to be missed
      ○ Silent - don’t use this obviously
    ● Change the alert type, or the ringtone.
    ● Set an actual alarm to wake you up.
    ● Press the button twice when reading a page to erase that one page.

○ Lightbulb button (☀)
  ■ This causes the screen to light up so that you can read the pager in the dark.
  ■ Press it twice to return to the standby screen.

○ Tip: before you head to bed, you might want to try paging yourself from your cellphone or the phone in the call room to ensure that the pager has reception and is loud enough for you to wake up if it goes off.

○ Tip: when getting a call for a consult, make sure you get the patient’s name and MRN. You should also add the patient to your team’s patient list on the EMR or a shared Word document, whichever one your team is using. Ensure that their vitals are normal. If abnormal, notify your team immediately.

● Paging someone else
  ○ Dial the number you want to page.
○ When prompted, enter the number corresponding to the local hospital phone that you want them to call you back on, or your cell-phone. Make sure you press pound (#) after the number.
○ Confirm that the page is sent by hearing the repeating beeping at the end.
○ Hang up, and wait for them to return the call.
○ **Tip:** you can obtain the pager number or phone number of an on-call consultant by picking up a hospital phone and dialling “0”. This will put you through to a general operator, and you can ask them to give you the number or ask them to page the consultant to your local or cellphone.

- There should also be a way to find this information on the hospital computers. For example, Fraser Health has an “On-Call Scheduling System” where you can find out each service’s on-call consultant each day, and their contact information. Ask your team to show you how to find this.

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**Rounds**

- This is one of the most confusing terms in medicine, so let’s try to clear it up by outlining the types of rounds.

  - **Patient rounds.** This is the team’s visit to the patient each day to check on their progress.
    - Every morning, you should:
      - Look at results of lab work and investigations
      - Look at vitals from the previous day in the bedside nursing chart
      - Skim through nursing notes – if you ask a nurse to elaborate on their notes, they’ll love you because they know you’re reading them!
      - Talk to the patient to allow them the opportunity to bring up any concerns that occurred overnight or to ask any questions about their care, and to share with them any updates and tell them about the next steps
    - It is helpful to show up 5-10 minutes early to print the patient list for yourself and the other trainees on the team, and collect the charts.
    - In the surgical world, the team typically rounds significantly earlier in the morning than other specialties (6:00 AM – 6:30 AM), so that patients are seen and orders are written before the OR slates or clinics begin, which is usually around 7:30 – 7:45 AM. This way, the trainees can meet the first patient undergoing surgery before they are put under and be present for the whole surgical slate.
    - **Pre-rounding.** As a medical student, you may be asked to “pre-round”, which essentially consists of you arriving earlier than the rest of the team to see the patient first. This way, you can form your own impression and plan for the patient, raise concerns to the team, and contribute to the workload by getting those progress notes done.
      - In surgical rotations, you may not be required to see the patients during your pre-rounding; instead, you’ll likely be responsible for doing some key tasks that will make rounding with the team expeditious once the residents come in:
● Printing patient lists for the team
● Collecting the charts
● Writing note stems
● Recording vital signs and ins and outs
● Reading the front of the chart for any concerns from nursing staff
  ○ While rounding on patients together when the rest of the trainee team arrives, listen closely to the residents as they speak to the patients about their next steps so you can write the A/P of your note and write orders efficiently, expediting rounds.

● **Team rounds.** This is a team meeting without patients present, where patients’ progress and management plans are discussed.
  ○ This is also referred to as “running the list” when done quickly.

● **Teaching rounds.** This is where a resident or attending does direct teaching with a group of trainees, where the group walks through one or several cases, which may or may not be actual patients on your list.
  ○ What is unfortunately referred to as “pimping” often occurs in this setting - basically, this is when a resident or attending quizzes trainees on medical knowledge. Usually this is done kindly in this day and age, with good intentions to teach rather than humiliate.

● **Grand rounds.** These take place in lecture theatres and are video-conferenced to multiple sites, and they take the form of a lecture where both staff and trainees attend.
  ○ These sessions often feature a guest speaker who is esteemed in their area of research.
  ○ Free food is often involved!

**Seeing Patients in Clinic**

● Clinics form the bulk of outpatient care.
  ○ These are wonderful learning opportunities for medical students, as they often give you facetime with the staff physicians, and they expose you to many patient presentations in one day.

● Most clinics run on a private EMR system.
  ○ Some common examples include Plexia and Accuro. These are often not the most user-friendly interfaces, so take some time to learn from the MOA how to access the patient files.
  ○ Ask your preceptor how they would like you to help in terms of documentation; some like you to type it into their EMR, while others will get you to write a paper note for them to dictate from.

● Before seeing the patient, make sure you read their faxed information from the referring provider (for initial visits) or notes from previous visits with your staff (for follow-up appointments) so that you know why the patient is coming in today. This will allow you to focus your discussion. Nothing is worse than you trying to talk to a patient without any idea of why the patient is there!
○ Since this pre-reading on the patient can take a bit of time, it can be helpful to get to clinic early to read up on the patients beforehand so that you don't make the clinic run late.

● Initial visits will typically require a full history and physical exam, like a consultation in the inpatient setting. Follow-ups are more like checking on the progress of a patient on the ward.
  ○ Accordingly, dictations for the initial visit will be in the form of a consultation, and those for follow-ups can be documented in a SOAP format.

● Ask your preceptor beforehand how long they would like you to spend with the patient before reporting back to him/her. Try to finish your own assessment in that time.

● You will then see the patient for whatever reason they came for, trying to stick to your preceptor’s requested length of time.

● Find your preceptor, and quickly present the case to him/her. Try to include an impression and plan. Even if it’s wrong, they will be happy with you trying, and you’ll learn more from the encounter.

● The preceptor will discuss the plan with you, and you’ll both return to see the patient together to clarify any details if necessary and to let them know what the next steps are.
  ○ Some preceptors like to have you present the case in front of the patient so that they can jump in and correct you if needed as you’re presenting. It can be nerve-wracking, but if a patient does correct you, don’t sweat it. Staff are generally understanding that the patient’s story changes when they’re asked multiple times!
  ○ Don’t be offended if your preceptor asks the patient similar questions to the ones you’ve already reported to them. It’s their responsibility to ensure the accuracy of the history, after all, and it’s not something you should take personally!

How to be a part of your team

● The easiest thing to do to be part of the team is to be pleasant. Be respectful and polite, and show interest (even if you really hate the specialty you’re doing!). It will make a big difference.

● Aside from enthusiasm and courtesy, get a sense for what needs to be done throughout the day and start getting tasks done without being asked. Your team will notice and appreciate this!
  ○ Some simple things that you might be able to do include:
    ■ Printing out a patient list for everyone in the morning
    ■ Checking your patients’ charts before rounds so you can ask about any issues that came up overnight
    ■ Writing orders/notes in the patient’s chart during rounds to save time later (although make sure you get a sense for how things run before doing this, because some residents/attendings may not want things written as you’re talking to the patient)
### Best clerkship smartphone apps and resources

<table>
<thead>
<tr>
<th>App</th>
<th>Price</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UpToDate</td>
<td>Free for app&lt;br&gt;Free subscription for medical students, but otherwise paid</td>
<td>The quintessential medical app. As a medical student, you can get free access to UpToDate via the Divisions of Family Practice.</td>
</tr>
<tr>
<td>Medscape</td>
<td>Free</td>
<td>General disease reference that has quite a bit of information for free.</td>
</tr>
<tr>
<td>BMJ Best Practice</td>
<td>Free</td>
<td>Another general disease reference.</td>
</tr>
<tr>
<td>BC Guidelines</td>
<td>Free</td>
<td>Contains all 50+ BC clinical practice guidelines in an optimized mobile format.</td>
</tr>
<tr>
<td>Spectrum</td>
<td>Free</td>
<td>Provides recommended antibiotic regimen for common clinical presentations based on the antibiogram of the health authority.</td>
</tr>
<tr>
<td>MDCalc Medical Calculator</td>
<td>Free</td>
<td>Provides a bedside tool to calculate scores that aid in clinical decision-making.</td>
</tr>
<tr>
<td>UBC Radiology</td>
<td>Free</td>
<td>Dr. Darras and the wonderful teaching faculty in UBC Radiology developed this app to help trainees increase their confidence in identifying normal anatomic structures, ordering the most appropriate imaging test and identifying common pathology.</td>
</tr>
<tr>
<td>Sublux</td>
<td>Free</td>
<td>Contains normal X-rays of various body parts for comparison to X-rays you see on rotations; also provides a step-to-step guide on how to read X-rays of those body parts.</td>
</tr>
<tr>
<td>Epocrates</td>
<td>Free</td>
<td>Good drug reference (basic version is free).</td>
</tr>
<tr>
<td>PedMed</td>
<td>Free</td>
<td>Pediatric drug information. Note that many pediatricians use the book version of the drug formulary.</td>
</tr>
<tr>
<td>QuickEM</td>
<td>Free</td>
<td>Bedside reference for medical students for both adult and pediatric emergency department complaints.</td>
</tr>
<tr>
<td>Nerve Whiz</td>
<td>Free</td>
<td>Select which muscles are weak, or point to areas of sensory loss, and the application can provide you with</td>
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</tbody>
</table>
distinguishing features and detailed information, complete with relevant pictures and diagrams.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Cost</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Chief Complaint</td>
<td>Free</td>
<td>Provides an algorithmic approach to over 50 of the most common complaints encountered in emergency medicine.</td>
</tr>
<tr>
<td>ECG Guide by QxMD</td>
<td>$4.79</td>
<td>Has an ECG reference, samples, and a quiz.</td>
</tr>
<tr>
<td>MD On Call</td>
<td>$13.99</td>
<td>Provides a useful reference to remind you of the questions to ask and the differential to consider for common questions you'll be asked on call.</td>
</tr>
<tr>
<td>Microphone (MModal)</td>
<td>Free</td>
<td>Allows you to use your phone as a microphone for Front-End Speech Recognition dictation via MModal.</td>
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</tbody>
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<tr>
<th>Specialty</th>
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<tbody>
<tr>
<td>General</td>
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<td>Toronto Notes</td>
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How to study during clerkship

- Read around your cases.
  - The information tends to stick better and have more relevance!
  - Keep a notebook with you so you can jot down things to look up later. If you’re taking images of patient charts, make sure the patient identifiers are covered.
  - UpToDate is a great place to start. Think of it as “Google for Clerkship”
- Focus on approaches and management.
  - You may need to adjust your studying to accommodate that change, since there’s less of a focus on physiology than in pre-clinical years.
- Make the most of your clinical time by seeing as much as you can and relevant questions.
  - Lots of preceptors love to teach, and they can provide really useful clinical pearls that you don’t get from textbooks. Be keen and inquisitive, and it will reward you.
  - Of course, read the room. If it’s an emergent or urgent situation, best to leave your questions until later.
- Take advantage of academic half days and teaching sessions, both formal and informal.
- Ask your residents questions!
- Find a set of review books that you like (First Aid, Blueprints, NMS, etc.) and try to read through the whole book during your rotation.
- Creating a study schedule may be helpful.
  - Each block has a list of objectives and/or topics you need to cover. Work out how much you have to read/study each day, then do your best to keep to the schedule. Schedule in some break time, too, though!
- What you’re studying during third year is the information you’re going to need on a day-to-day basis as a physician, so find a way to study that really helps you absorb the information and start to develop a way of approaching problems that is effective for you.
Pearls of advice

- Enjoy your time now! 3rd year is awesome. You get to do all the cool stuff you have been wanting to do, with the safety net of your residents and attending.
- Love your clerkship. If you want to be a geriatric neurohematohepatopathologist you may hate obstetrics, but the 6 weeks you get in obstetrics may be the only dedicated time you ever get to do it. So love it. When you are in psychiatry, work and study like you want to be a psychiatrist, when you are in surgery, work like you want to be a surgeon. This will ensure you get the most out of each rotation. This also prevents boredom or burnout because you let yourself be excited each day.
- Don't worry if you weren't the best student in pre-clerkship. You can definitely catch up.
- Don't underestimate the power of camaraderie. Some of your greatest supports can be your fellow classmates, who can understand what you're going through when many others in your life may not. Reach out to them for support when you need, and offer a helping hand when you think they may be in need. We are better together.
- Try to get as much sleep as you can. It is a marathon year.
- If you don't know something on rounds, in the OR, etc., look it up then or that night and it will be more likely to stick.
- Most people are more than willing to help you if you are polite and respectful.
- Make time for the things you love. If you're "too busy" to get to Whistler for a day on the hill, get to the gym, see your "life friends", take a night off with your significant other or do whatever else it is that makes you happy this year. How on earth do you expect to fit that in once you're in residency or once you're out in practice? Don't tell yourself you'll figure it out "later," because "later" isn't going to be any less busy!
- Try to relax and roll with the punches. You can't possibly be prepared for everything, but you can be interested and learn a lot from asking questions.
- Don't be a whiner. The world has too many of those.
- Don't assume you know everything - basically, if you don't know the answer, just say you don't know. Nothing is worse than trying to make up an answer that is clearly wrong. Not only does it waste time, it also annoys the preceptor. Remember, they asked you that question for a reason.
- The first few months are overwhelming; it's a normal feeling. You can't bite off all of medicine in days or weeks. Learn a small amount (especially approaches to problems rather than the nitty gritty) by reading around your cases and you'll accrue knowledge every day.
- Rural is amazing.
- Be open to feeling foolish every day. Learning is more important than being right.
- Check your ego at the door. Assume nothing.
- Don't stress about the order of rotations. It really does work out in the end.
- Take things one day at a time. If you're ever feeling overwhelmed, that is normal. Take a deep breath, and know this feeling is not forever. If you learn one thing from each patient, you are in good shape.
- Be on time! There is no 5 minute grace period! Be keen!
- Have a fun-filled summer after year 2!
● Don’t forget to enjoy life - you know, that thing outside of medicine.
● You will be alright.
Five things to take FULL advantage of!

1. Free food
There are lots of opportunities to snag free meals or beverages, such as during noon rounds, grand rounds, morning rounds...there is no shame when it comes to the starving medical student. CTU is chock-full of rounds with food. Some sites provide access to doctor and resident lounges that are well stocked. With a busy 3rd year, you never know when the next chance you might get to eat is...

2. Residents
They will be your greatest learning resource while at work or on call. Most are amazing and eager to teach students, and you should definitely accept any offer for education they make. Even when walking from place to place, this poses a good opportunity to review the patient you just saw, or come up with an approach for the next one coming up. Also definitely quiz them on their experiences, satisfaction with their program, and any tips and tricks they might have for exams (they did just finish them not so long ago after all...)

3. Nurses
Do not underestimate the power of the nurse, and NEVER EVER get on a nurse’s bad side. They can make your life quite difficult if they want to (luckily most don’t want to because they’re so nice). Just be collegial, treat them with respect, and ask what you don’t know. They have expertise that even doctors don’t have (ie. they insert more IVs in a day than most doctors do in a month), and are often more than happy to let you do things for your learning (ie. inserting a Foley or doing that DRE!) Also, read the nursing notes to get the full story of what went on overnight. They will love you if you read and ask about their notes, because it means you read what they took time to write!

4. Academic half-days and specialty/grand rounds
You never realize how awesome lectures are and how much you miss them until you get to third year. These are opportunities where you finally get a chance to sit down, not stress or rush everywhere, and actually learn without having to think excessively! It’s also one of the few chances you may have to reconnect with your fellow classmates who you might not see much and actually get a chance to socialize and laugh with them.
5. Any spare time

This comes as a luxury usually, but can include time you spend walking to and from your car/transit stop to work, time traveling across the hospital to another area, time while waiting to review a consult with a resident/attending, or a lull in activities while on call. Use this time to read your review book, to learn from your smartphone, to eat anything you can get your hands on, to take a quick afternoon nap, or to hedge some sleep time early on in the call shift in case all hell breaks loose at 2 AM!
Ten moments that will happen in 3rd year

Although everyone’s experiences in 3rd year will be their own and unique to everyone else’s, there are certain commonalities that every student will likely experience at some point during their rotations. At some point, these moments will occur, and hopefully this section will somewhat prepare you for it when they do. When encountered, it isn’t the end of the world, and there are always ways to adapt to such obstacles...even if sometimes it doesn’t actually look that way.

At some point…

1. You will feel stupid.
   - This is inevitable. No matter how much you think you learned in your first two years of medical school, and how many CBL patients you’ve diagnosed and saved, there will come a sobering moment when you realize, “…crap, I’m an idiot.” This isn’t to say that we aren’t good students or smart people, it’s simply a matter of fact that we’re still budding doctors in training, who lack the experience and exposure necessary to understand the complexity of the human body and all its diseases.
   - This event frequently happens during grilling sessions with attending, where not only is recalling the facts hard enough, it’s made harder by the pressure of being in the hot seat. Avoid ‘umms’ and ‘ahhs’ and truly take 10 seconds to sort through your thought processes to find an answer. If you don’t know after 15 seconds, you probably don’t know at all, or won’t recall it without some kind of hint. Just admit you “can’t recall right now” (which sounds better than “I don’t know”), and say you’re taking a best guess (try to justify why you’re guessing this way). Also cross your fingers that your doctor doesn’t love a good game of “guess what I’m thinking”, which is nigh impossible to win at, so don’t feel too bad about it.
   - Take this in stride, jot down what it is that made you feel stupid, and make it a point to go home and read up on it. Yes, the next time it comes up you’ll forget 95% of what you read about and again feel like a complete dumbass, but you’ll once again go back and reread the topic, retain a little more, and bit by bit we learn to become actual doctors. Until then, one can only hope that our stupid moments don’t come in front of an audience, be they attending doctor, classmate, or patient…

2. You will be so fatigued and drained you can’t function.

If you thought your years of pulling all-nighters to finish term papers and cram study for exams has prepared you well for the long hours of work for over half of the year, you underestimate the power of the on-call shift. There’s nothing like trying to take a patient history while you’re fighting just to try and stay awake, and at times closing your eyes while listening to heart sounds isn’t because you’re trying to focus. This means that any sleep, anywhere, should be sought. This includes on the bus/skytrain commute, the majority of post-call days (what else are they for), and yes, even during academic
half-days (assuming you’re not at the host site, it’d be a little rude to snore in front of the lecturer). When you are on call, aim for your bedtime to be as soon as there’s a lull in activity (which may be the calm before the storm), as it’s a complete roll of the dice regarding what kind of night you might have. Some residents and students do a set of “tuck-in” rounds, in which they go to the ward and check in with the nurses about any concerns with any of the patients. Ideally you can avoid having a nurse call you in the middle of the night about a patient unable to sleep because someone didn’t write a Zopiclone order on admission. It also gives you a heads-up early about any potential problems that may arise, so if you do get called later, you have an idea about the patient and issue, rather than trying to figure things out as you wipe the sleepiness from your eyes.

3. You will consider another specialty different from your original plan.

Many of us go into 3rd year (or even 1st year) dead set on our future career. Everyone knows a person in class who swears by general surgery, dermatology, plastics, etc. Whatever your commitment level is to your specialty of choice, at some point in the year you will begin to doubt yourself. Perhaps it’s during the rotation of said specialty, where you realize you don’t like 6:30am rounding followed by full OR/clinic days and patient rounds until 7pm. Or it could be after having completed another rotation you thought you’d hate or not care about, just to realize the specialty’s actually quite amazing and decide you’ve been too hasty to judge it. Regardless of when your identity crisis occurs, in the majority of circumstances it isn’t too late to change your plans. 4th year elective selection begins halfway through clerkship, so a general idea between “surgery” vs “medicine” before then is appreciated. Even afterwards, there’s opportunity to change your electives (though you will likely be waitlisted for some time). Just because you love a specialty on paper doesn’t mean you’re committed to it for good, especially not until after you’ve experienced it first-hand.

4. You will mess up or forget to do something related to patient care.

It’s often difficult enough to track everything there is to know and do for just one patient, let alone the four patients you’re following. Amongst all the orders, investigations, and consults to be done, there’ll unfortunately be one or more instances where you forget to do something or make a mistake in your orders. The severity of this can vary, as can the adverse outcomes, and although hopefully both are minimal, the most important thing is to correct your error. If you’ve realized it early enough to correct it without any problems (ex. wrote the wrong medication order, but it hasn’t been processed), then simply go back to change it or add an order you forgot. If the order’s been processed, but only recently, you can always write the cancel/changed order, but make sure you let the nurse know directly as well to make sure the original directions isn’t performed. In the cases though where you’ve realized or recalled the issue too late to correct, or you’re asked by your resident or attending regarding the problem, the most important thing is to own up to it.
Admit that you made a mistake, and either you’re asking for instructions about how to rectify the problem, or that you’ve already made the first steps towards fixing it. Although you may get some flak for it, it’s far better to be honest when caught, then to be caught later on after you’ve lied. Most supervising doctors are forgiving and realize that we’re students who are still learning the ropes. Just be sure not to make the same mistake twice! In the end, the most important thing is patient safety and care, with any action or mistake we make having a direct impact on their well-being, and thus our pride and fears of getting a bad evaluation should come second to our responsibilities as care providers.

5. You will encounter jerks and bullies.

They may be attendings, residents, nurses, unit clerks, patients, or sometimes even classmates, but at some point someone will be rude, mean, judgmental, inappropriate, or all of the above to you. In all hopes, these people will be far and few between the many other encounters with very genuine and nice people. Should you encounter a jerk or bully, however, you may find yourself in a difficult position of which it seems the only way out is...nowhere in sight.

What you can do however, is approach the problem with a calm mind and evaluate, in order: yourself, the situation, then the person you’re dealing with. First look at yourself and ask if you made some error or mistake that warrants the response you’ve received. Perhaps you’re having a bad day too and your attitude and interactions are a little less friendly than usual, and as a result others are reciprocating what they hear from you. If that’s without issue, move on to looking at the situation. Is it currently a high-stress environment such as a critical time in the middle of an operation or an overly busy clinic day? Is this out of keeping with the “jerk/bully’s” usual behaviour on other days towards you, which may point more towards them having a bad day as opposed to their normal friendly self. Lastly if all of the above isn’t true, then you’re likely just dealing with a straight-up ****.

Don’t panic, as sometimes these people prey on fear and anxiety and simply press on to make things worse. Instead, stay calm, act with logic and reason, and accept the fact you’re in an unfortunate position that you’ll have to bear through until the end of it. Simply complete your duties to the best of your abilities, respond in a way that generates as little a conflict as possible, and remember to take mental notes for when you fill in One45 evaluations later. However, if it ever reaches a point where you feel attacked, unsafe, or observe actions that put patients at risk, speak up. Report Mistreatment to the “Student Mistreatment Help” site: https://mistreatmenthelp.med.ubc.ca/. You can even file anonymously. Speak to others - contact either the site rotation director, or get in touch with the Office of Student Affairs. Both options will provide guidance and support as to what you can do, and can also look further into the issue with confidentiality.

6. You will cry (or want to).

This could be for a variety of reasons. Perhaps you’ve had a rough day, are ready to drop dead with fatigue, and still have three more patients to round on in the afternoon. Maybe you just got
pimped by your attending and completely blanked on all the questions, making a total fool of yourself. Or, unfortunately, there are times you encounter a patient situation that brings forth such sadness in you that tears need to be held back, such as when a patient is dying, or often during the pediatrics rotation with very ill children.

Regardless of the occasion, it's important to realize there's a time and a place for everything, and openly crying in the moment generally isn't the best idea. Do your best to hold the tears back, take a deep breath, and focus on the tasks that need to be done in the present. There's also nothing wrong with excusing yourself for a moment to gather yourself and quickly dry any tears that might be coming forth, before going back to the work at hand.

If it's been a rough day, make sure you take some time when you get home to eat, relax in whatever way you prefer, and let out any emotions you have. Call up someone to talk to, such as family, a friend, or a classmate, to vent, rather than pent (it all up). If you felt stupid not knowing answers asked by your attending, remind yourself that you're only human and no one knows everything right off the bat. Instead, think of what tripped you up, read what you don't know, and review what you already do, so that the next time you're ready to rattle off those facts without hesitation. And if your tear worthy moment involves a patient's condition, sometimes it's ok to share a moment to cry with the patient and/or their family if you're comfortable doing so and feel that they've gotten familiar with you enough to accept your display of emotions. If not, wait until you have the chance to reflect on your feelings and can find something that comforts you when you're down (a pet is great for this), or can cheer you up (a pet is also great for this).

7. You will meet someone attractive while working.

Let's face it, all of us in the health professions are a good looking bunch. At some point or other, you'll meet a doctor, resident, nurse, unit clerk that you can't help but find attractive. Regardless of what their relationship status is, what signals you think they may be sending, or what flirting may be going on, always keep in mind the importance of professionalism and ethics. Your career and credibility is certainly not worth risking by making the wrong move, no matter how badly you want to ask that other person out. As long as you're still working directly with the person, you shouldn’t make things awkward or inappropriate by making advances. And yes, although if it’s the last day you’ll be working with someone and aren’t likely to get another chance to see or work with them again in the future, therefore it feels like a good chance to test the waters, do still keep in mind that word does get around, and gossip spreads like wildfire in the hospital setting. So if you screw it up, it might not just be between the two of you.

8. You will be tripped up by a patient.

This occurs when you take a great history from the patient in which you asked all the right questions, then summarize to your attending in a perfectly paced and succinct manner. Then when the attending comes with you to see the patient, and they ask some questions, the patient
gives completely different answers to what they told you, or brings up something that they denied earlier on.

“Oh medications, yes, I take something called warfarin.” - patient (I@$&#$* but I asked you that 10 minutes ago and you said you take no meds!) - you think to yourself, as you sheepishly look at your attending...

I call it being trolled by a patient, and then in my imagination I feel like they’ll turn to look at me as if to say “oops, sorry, u mad?” It’s even more frustrating if it happens more than once with the same patient, or with more than one patient in a day. Not only do you feel embarrassed because you look like a fool for missing key pieces of information, but you lose credibility with your staff if it happens repeatedly.

It’s best to not get too frustrated when this happens, and to keep in mind sometimes patients genuinely do forget to mention important things, or don’t mention it because to them it’s now the norm or they don’t find it an issue. Many a patient say no when you ask “do you have high blood pressure?” because they DID but now are on anti-hypertensives and have a NORMAL blood pressure.

Instead, take things in stride, and if your attending asks you later on why you failed to mention something, politely explain that you did ask but the patient gave you a different answer. Never jump the gun though and confront, or worse, argue with the patient on the spot about the issue, as it’ll just make you look even worse. Hopefully most doctors will be forgiving and understand these things happen, and just move on.

You can try to pre-emptively guard against this situation from arising by asking patients questions in a specific way, such as providing a multitude of examples to jog their memory. Rather than “do you have any medical conditions?”, try “do you have any medical conditions, such as high blood pressure, high cholesterol, diabetes, lung, liver or kidney disease, or a past history of heart attacks, stroke, blood clots, or cancers?” It’s a mouthful, but if you get in the habit of asking it in this way you can save yourself quite a few pitfalls hopefully. The same goes for when you’re presenting to an attending or resident. State that “the patient denies having hypertension, lung disease, diabetes, past histories of...” (tailor it so you list 3-4 of the key negatives, then end with “or any other medical conditions). At least this way if it still happens where the patient goes “oh yeah, I did have cancer years ago” and you feel like banging your head against a wall or crawling under the patient bed, you know you’ve already done everything you could to safeguard against this event.

9. You will want to give up.

It may come within the first month of clerkship, or you could hold out until the end of the year. Maybe you’ll feel it after a brutal call shift. You’ll question why you’re even here, why you even bother, and why everything seems so hard or if you’re just not cut out for this. Then you wonder perhaps it’s better if you quit before you actually fail, and then one thing leads to another and
before you know it you’ve worked yourself into a frenzy of anxiety and fear about the possibility of flunking med school, and just wanna give up and become a low-level employee in a fast food restaurant or a clothing store instead *GASP!*

Stop. Breathe.

Remember what got you here so far. If they made a mistake and let you into med school by accident, they would’ve figured that out by now, and if you’re as dumb as you feel you are, you would’ve flunked out already. Neither of those facts are true, so that means you deserve to be where you are and you’ll most certainly make it through. Organize your schedule to sort out your work, study, and personal time, make it a goal to learn three new facts a day at the very least, and rely on your family and social supports for some reassurance, encouragement, and relaxation. Put the thought of giving up out of your mind, since that option isn’t even on the table because it doesn’t need to be. Everyone will make it through.

10. You will feel proud of yourself and your work.

In between all the above moments of pressure, frustration, anxiety, fear, and confusion, there will come a time when you do something right. Something that makes you feel smart, pleasantly surprised, proud, and start to make you realize that perhaps you are cut out for this, and that you’re on the way to becoming a good doctor. Then that moment will happen again, and again, and continue on with increasing frequency throughout the year. Congratulations, you’re learning to be a doctor!

It’s all too easy to forget that those amazing genius doctors and residents we look up to have at the very least, two extra years (if not 20) of experience and learning on us. They most certainly didn’t know everything they do now when they were at our stage, and even despite some of their expectations (which can be unrealistic), we can’t know everything they know now. Medicine is a multi-step process, and the learning curve will be revisited over and over again, but with each repetition, the curve will be less steep and shorter in length.

When you actually end up doing something right or knowing the answer to something hard, feel proud. Remember these moments, and come back to them when you’re feeling inadequate and questioning yourself. Don’t forget that even if sometimes your effort feels unrecognized or unappreciated, you have made some kind of difference in the lives of your patients, and that this is what your future will hold. We might not be doctors quite yet, but we’re certainly on our way there with each of these moments.
Documentation

49 GENERAL TIPS
50 CONSULTS AND Dictations
56 ADMISSION ORDERS
58 PROGRESS NOTES AND ORDERS

60 DISCHARGE SUMMARY
61 PROCEDURE NOTES
62 SPECIALTY SPECIFIC
Start/end of anything written and general tips

Regardless of what you’re writing, it should always have some common components:

● Start each note with your ID, Service, and type of note, Ex: “MSI 3 Internal Medicine Progress Note”

● The date and time of writing should be on the top left side of the note or at the top of the consult. Clearly document the date and month (ie. Apr 1st, 2012 instead of 04/01/12). Each note should be time stamped in 24hr time (ie. 1600h, not 4:00).

● If you stop your note halfway to do something else, then come back to it a while later, you should indicate the time of the second half to avoid confusion regarding timing (ex. having afternoon lab results on a “morning” note). Alternatively, you can start a new note titled “addendum.”

● Anything you write should be completed with your signature, your name printed, level of training (ex. MSI3), your pager number, and if it was discussed/reviewed with an attending or resident (required for all orders). For example, a note may be ended with a signature and “Andy Chen, MSI3, 604.450.2385, d/w Dr. House”. If it was reviewed with a resident, identify their year of training (ex. “R3”) after their name.

● If you ever make a mistake in writing, cross it out with a single horizontal line, then write “error” and initial beside or above it to verify that a mistake was made. Continue on writing next to the error. If you ever need to insert extra words or phrases retrospectively, initial those too.

● Refer to yourself as “writer” (ex. “patient’s nurse told writer”). If you use names for other people, put their position in brackets (ex. “writer discussed with Jane (RN)”).

● Avoid making up abbreviations or using uncommon ones. If in doubt, write it out!

● When writing orders, number each individual order! For example, each medication being ordered should be on its own numbered line, not chained together in a continuous sentence.
Consultations and dictations

Regardless of what service you’re on, most patient cases begin with a consultation in the emergency department. You might be asked to complete a dictation after your consultation is complete. Begin every dictation with: “This is (name), (3rd/4th) year MSI, dictating on behalf of (attending’s name). This is a (dictation type, ie. consultation note) on patient (name, then spell it out), patient ID # (read it out). Please send copies to Dr.(names of attending, referring doc, any other specialist’s involved and pt’s GP)”.

A complete history of the referring complaint should be taken. Each rotation/specialty will have a preference for what to focus on, as well as unique parts to a complete history, but all of them should have the following common elements:

1. Patient Identification and Reason for Referral/Chief Complaint
2. History of Presenting Illness and Relevant Review of Systems
3. Past Medical/Surgical History
4. Medications
5. Allergies
6. Social History
7. Family History
8. Focused Physical Examination
9. Investigations and Imaging
10. Impression, Differential Diagnosis, Plan

1. Patient identification and reason for referral/chief complaint

A single sentence stating who the patient is, most pertinent medical conditions, and why they were referred to the service or why they came to the hospital.
Ex. “Mr. Ed Issine is a 54 year old Caucasian male with a 5 year history of hypertension and recently diagnosed diabetes type 2 presenting to ED with complaints of chest pain that started an hour ago lasting for 10 minutes, which was relieved with rest.”

2. History of presenting illness

This section details the events leading up to their current condition, and may include any pre-existing associated medical conditions as well as investigations. Although initially the timeframe is dictated by the patient (ex. they state their problem started that morning when they felt a dull pain in their chest), the prior history should be explored to elicit any other relevant details (ex. they’ve actually had high blood pressure for the last 5 years). Knowing what pertinent medical details should be elicited in the HPI for every specific presentation comes with experience and is certainly not expected of a new MSI. This section should also include the events that have occurred since they were brought to hospital (ex. the ED physician has seen the patient, administered nitroglycerin x 1 spray, and ordered CBC/electrolytes/troponin). For taking the history, one can use the LMNOPQRSTUV structure (or any other mnemonic preferred):
● Location: Where is the pain or complaint? May not be one specific/localized area.
● Management/medications: What’s been done about it? What’s been taken?
● New/old: Is this the first time this has occurred, or is it a chronic problem?
● Onset: When did it start? Is it still ongoing?
● Precipitating/relieving factors: What makes it better? What makes it worse?
● Quality: What’s the pain like? Is it sharp, dull, throbbing, aching, burning, etc?
● Radiating: Does the pain spread anywhere else? Do you have shooting pains?
● Severity: How bad is the pain on a scale of 1 to 10 (1=no pain, 10=excruciating)?
● Timing: Does it come and go, or is it constant? Is it better/worse at a certain time of day?
● Unusual features: Is there anything else odd or unexplained that you’ve noticed?
● Various conditions: Are there any medical conditions you have that are related?

A brief review of systems should be performed here to elicit any other symptoms that may suggest an etiology for the working diagnosis or suggest an alternate diagnosis (eg. nausea and vomiting prior to syncope or longstanding history of typical angina in a patient with epigastric pain).

3. Past medical/surgical history and review of systems

Inquire about any other medical conditions the patient has, when they were first diagnosed, what’s been/being done about them (ex. meds, future planned treatment, primary doctor following this), and if it’s causing them any problems right now. Surgeries should be dated, have a location, indication and note any complications during or afterwards.

Ensure that you ask about pertinent medical conditions directly. Frequently patients may say “no I’m pretty healthy,” until you ask them if they have high blood pressure, diabetes, or high cholesterol, which jogs their memory and they state “oh yeah, that.” Write down negatives to indicate you did actually inquire about them (ex. “no symptom history of COPD, CHF, GI issues, infections,” etc...).

4. Medications

List all medications a patient is taking, in the following order: Name, dose, route, frequency. If possible, try to find out why they take their medications, and for how long. Many patients do not know why they take their medication. For this, you can refer to a pharmanet report, which will list what medications patients have filled at a pharmacy over the last 6 months. This does not mean they’re taking them. To be thorough, you will have to go through the list with the patient and ask if they’re taking those drugs. If they don’t take certain medications, or have stopped, ask why.

Also, don’t forget to inquire about naturopathic/herbal medications, over-the-counters, and illicit medications (ask specifically “marijuana, cocaine, heroin, crack, or other illegal drugs”, as not all patients consider certain substances “illicit”).

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5. Allergies

Inquire regarding any food, drug, or other allergies, and if there are any, ask specifically how they know they’re allergic to this, and what exactly happens when the patient is exposed to this. This needs to be differentiated because often patients become mixed up between a true allergic reaction (ex. anaphylaxis, rash), a food/drug intolerance (ex. nausea, diarrhea), and a drug side effect (ex. drowsiness, malaise). Also ask what resolves the allergy, and how long it usually takes.

6. Social history

This section is concerned with the patient’s personal background, living situation, available supports, and other social factors that may play a role in their health. Keep in mind that the time available for the histories is limited, and often much of social history will need to be postponed until after admission. Only ask what you think could be relevant, but also feel free to use many of these questions as rapport building tools to get to know your patient better and show you’re interested in who they are, not just what medical condition they might have! Personal background information can include:

- Their living situation:
  - Where they live (ex. house, condo), do they own or rent, who lives with them, do they feel safe at home?

- Available supports:
  - family, friends, mentors, educators, or advocates. Do they feel like there’s someone who can help them in times of need or ill health?

- Financial:
  - Do they work? If so, what is their occupation?
  - Do they have stable finances?

- Smoking:
  - How many packs per day? For how long?
  - If they say “Not anymore/I quit” ask when: Many patients, when asked that will say “I quit last week”. Still get pk/yr smoking history.

- Alcohol use:
  - how many drinks per night/week?
  - What happens after they’ve drunk?
  - Have there been any adverse effects (ex. cirrhosis, social dysfunction, etc).
  - If necessary, a CAGE screen (cut down, annoyed others, guilty about, eye-opener use) can be used, time permitting on an appropriate candidate where alcohol abuse may be suspected.

- Other illicit drugs:
  - Which ones? How often? How are they used? How do they get them? Have they had overdoses?
7. Family history

When a hereditary condition is suspected, a family pedigree should be drawn to demonstrate first degree relatives with their corresponding ages. Otherwise, any history of the presenting condition among other family members should be explored, including if they were formally diagnosed, how they were managed and what the current/planned treatment is for those individuals? Are there any other inheritable conditions (ex. Huntington’s) or illnesses that have a familial component (ex. diabetes, hypercholesterolemia)?

It is not sufficient to ask “is there any family history of illnesses?” as many patients won’t have good spontaneous recall of family conditions. Instead, make suggestions of common illnesses such as high blood pressure or cholesterol, diabetes, heart or lung disease, cancers, liver or kidney problems, major surgeries, and any common types of disease related to the patient’s likely diagnosis.

If any positives turn up, ask regarding how old were they when they were diagnosed, what age they are now or at what age did they pass away, what kind of treatment/management was done, how effective this was, and what their current status is. This may be time consuming if one’s common sense is not used to decide what is or isn’t relevant to the patient’s current situation (ie. don’t need to explore an uncle’s history of eczema if the patient’s current complaint is pain with urination).

8. Physical examination

A focused physical exam should be performed on the organ system suspected to be the leading diagnosis, and screening exams should be performed on the other systems. Every patient case should have vitals taken/noted and depending on the length of time elapsed, may have both the vitals on triage and vitals now jotted down.

The major systems to examine and the basic questions are listed below:

- **Head and neck (H+N):** Pupils equal and reactive to light and accommodates (PERLA)? Extraocular movements intact (EOMI)? Tympanic membranes and oropharynx normal? Neck supple? No lymphadenopathy? Thyroid normal?

- **Cardiovascular (CVS):** Pulse rate, amplitude and rhythm normal in 4 limbs? JVP normal height and characteristics? Heart sounds normal in 4 areas? Any murmurs, thrills, heaves, or arrhythmias? Any peripheral edema?

- **Respiratory (RESP):** Breathing rate normal and regular? Good bilateral air entry (GBLAE)? Any crackles, rubs, or wheezes? Any pain or dullness on palpation/percussion? Any abnormal rib cage or diaphragmatic movements?

- **Gastrointestinal (GI/ABDO):** Distended or scaphoid? Intestinal sounds normal? Pain or masses on light/deep palpation of quadrants? Rebound, guarding, or ascites? Mcburney’s point tenderness (for appendicitis)? Liver span or gallbladder tenderness (Murphy’s)? Splenomegaly? Hernias?

- **Genitourinary (GU):** Costovertebral angle (CVA) tenderness? Kidney palpation normal? External genital exam or pelvic exam normal (only done if problem suspected)?
● Musculoskeletal and neurological (MSK/NS): Limb bulk, strength, tone, and reflexes normal? Dermatomal sensation and proprioception normal? Gait, coordination, and other nervous system signs normal? Any dermatological concerns (ex. rash, ulcer, vesicles, etc.) or physical injuries (ex. lacerations, bruises, dislocations) to be noted?

9. Investigations and lab work

Often patients will already have had some investigations ordered and possibly performed after the initial emergency physician assessment already. This is typically bloodwork (ex. CBC, electrolytes, BUN, Cr), and may also include a chest x-ray (CXR), ECG, urine dip, or urine tox screen. Document these results on the consult form as well.

10. Impression/differential diagnosis/plan

This is a statement summarizing all the information available thus far, and should include what one believes the most likely diagnosis is (or if it can’t be differentiated at the moment), and why this is or what this conclusion is based on.

Ex. “Mr. Ed Issine is a 54 year old Caucasian male with a 5 year history of hypertension who presented to ED with complaints of chest pain that occurred an hour ago while he was gardening, and lasted for roughly 10 minutes. He describes that it was an uncomfortable pressure on his chest that was constant, with some of the same sensation occurring down his left arm. He also had some shortness of breath and diaphoresis during that time. The pain went away after he sat down and rested for a while. An ECG and bloodwork including troponins has been ordered and is pending. Given the clinical info, the most worrying diagnosis is acute MI, and will be managed as such while other possible differential diagnoses are ruled out concurrently.”

Next, consider all possible conditions that fit the patient’s clinical picture, and describe what evidence may or may not support each differential diagnosis. What further investigations that will/should be done that could help to rule in or out specific diagnoses should also be noted here. Order the differential from most likely to least likely, but don’t be afraid to cast a wide net using a systems-based approach or VINDICATE as a brainstorming aid. Another acronym that can be used is VITAMINS ABCDEK (Vascular, Infectious/Inflammatory/Ischemic, Trauma, Autoimmune, Metabolic, Idiopathic/Iatrogenic, Neoplasm, Social causes, Alcohol, Behaviour, Congenital, Drugs/Degenerative, Endocrine, Karyotype). If you find a particular diagnosis to have multiple causes, a good tip while presenting is to say, “The cause is most likely multifactorial”

Provide a clearly delineated list of actions that are planned for the patient, which should include the immediate care plan (eg. admit vs discharge +/- follow-up in community), and may include both actual orders for investigations and medications, general medical care (eg. “will monitor hourly vitals for change in stability”), or non-medical actions (eg. “will liaise with social worker to
arrange for community housing”). If there is a foreseeable course in hospital, one can comment too on when expected date of discharge may be (eg. “patient to stay for 3-4 days until UTI-induced delirium resolves, then can be d/c’d home with follow-up with family doctor”).

Once complete, all consults should be reviewed with a resident (if available) and attending to discuss the plan and make any adjustments. In practicality, at the 3rd year level it’s unlikely for us to create the perfect care plan. It’s best to write up to the differential diagnoses, then discuss with the supervising resident/attending regarding the plan before you write it down. However, before reviewing the case with a resident or staff, you should formulate in your head a patient care plan and why, as this is when staff will likely quiz you.

Depending on the service, there may be a requirement that all consults are dictated into the system, even if the consult sheet has been written out. Consultation dictations generally follow the written format demonstrated above in the exact same fashion, but are more fluid as complete sentences are spoken.
Admission orders

Once the consult has been completed, orders will need to be written. As with the care plan, students should think ahead on the orders they believe will be needed, then discuss with the supervising staff and work through the orders together. Admission orders can be summarized as follows (using the ADCADAVID mnemonic):

A: **Admit** to Dr. ____, (specialty).

D: **Diagnosis.** The working diagnosis, or the main symptom followed by “NYD” if not yet diagnosed.

C: **Code status.** Generally “full code”, but should be discussed with every patient prior to admission.

A: **Allergies.** What drug, food, or other allergies are there, and what happens if they are exposed to this?

D: **Diet.** What can/can’t they eat, and in what timeframe? Ex. diabetic diet, NPO (nil per os), fluids only; after midnight, etc.

A: **Activity.** What they can/can’t do, and in what timeframe? Ex. AAT (activity as tolerated), bedrest, progress to weight-bearing as tolerated, etc.

V: **Vitals.** How frequently should vitals be taken? Ex. vitals regular (note that this could vary between different services, ranging from once per day, once per shift, or once per 4 hours), q30min, qshift

I: **Investigations/IV.** Any tests to be ordered, such as bloodwork, x-rays or other imaging, urinalysis, etc. IV solutions should also be ordered at a specified infusion rate for either replacement or maintenance fluids (ex. NS w/ 40mEq KCl/L at 100mL/hr).

D: **Drugs/Directions.** Drugs that need to be ordered include those that we’re using to treat the patient’s condition, drugs that the patients are taking normally, and drugs that are useful for while staying in hospital. In general, students should become familiar with the popular and frequently used medications for when patients are to be admitted. To consider possible needs for medications, one can use the “6 Ps”. Some common options are also demonstrated:

<table>
<thead>
<tr>
<th>1. pain (analgesics)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-review opiates with residents/staff! They all have their own preferences!</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. pus (antibiotics)</th>
</tr>
</thead>
<tbody>
<tr>
<td>far too many choices to list, but consider it in terms of coverage for gram+, gram-, anaerobes, and atypicals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. pillow (sleep)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quetiapine 25-50mg PO qHS PRN Zopiclone 3.75-7.5mg PO qHS PRN</td>
</tr>
</tbody>
</table>
| 4. puke (nausea)                          | Gravol 25-50mg PO/SC/IV q6h PRN  
|                                        | Metoclopramide 5-10mg PO/IV q6h PRN  
|                                        | Ondansetron 4-8mg IV q8h PRN  |
| 5. poop (constipation)                  | “Bowel care protocol” (most hospitals have their own in place)  
|                                        | Lactulose 30-45mL PO (titrate dose freq. for 2-3 BMs/day) |
| 6. personal meds                        | any medications previously being taken should be reordered or patient can take own (this still requires an order to be written out). Pharmanet reports can be helpful. Also remember to HOLD any medications you don’t want the patient to take. |

7th non-med “P” is “pee” - consider whether the patient needs a foley (avoid if possible)

Some general rules/tips:
- Don’t forget that orders are written one per line only!
- Every med order requires the name (generic), dosage, route (ie. PO, IM, etc.), and the frequency (ie. daily, BID, qHS, etc.). Also set limits to the maximum daily doses for PRN medications.
- Follow good prescribing practices! This means not using “ug” for micrograms, no unnecessary trailing 0’s, add leading 0’s before the decimal, and avoiding easily misread abbreviations such as OD or QD (write these out as “once daily”).
- Don’t forget to flag the orders on the chart (or wherever the unit wants orders to be flagged) after you write them, or they might be missed! Flagging orders means either pulling up a sliding flag in the chart that says “Doctor’s Orders”, or raising/putting up a flag or marker at the location where the chart is kept.
- For any “stat”/urgent orders, or complicated instructions, talk directly to the nurse first, then to the unit clerk, to ensure the orders are completed quickly and accurately.
- Even though it is up to the writer to contact specific services for a consult (ex. Addictions medicine), or to help the patient (ex. Physiotherapy), these still benefit from a written order (ex. “addictions med to see re: substance use”), as then the unit clerk can add the patient to that services’ rounding lists as a reminder for that team to see the patient.
- Don’t forget to fill out any additional forms that may be required! X-rays and other imaging usually requires a Radiology requisition form to be filled, certain medications may have a protocol form (ex. heparin), etc. The need for certain forms vary from hospital to hospital, so it’s best to ask the unit clerk when unsure.
Daily progress notes and orders

Daily progress notes should begin with a brief identifying info statement, followed by a note in the SOAP format (Subjective, Objective, Assessment, Plan).

- The **ID statement** helps as a quick reference for future readers as to who the patient is, the relevant past medical history pertinent to their admission, their reason for admission, and their status up to now.

Example ID statement: Mr. X is a 54 year old male with hyperlipidemia and a 20 pack year smoking history who was admitted 2 days ago for chest pain diagnosed as angina, with acute MI ruled out. A stress test was ordered yesterday and due to be completed today.

- The **Subjective** portion addresses *how the patient is doing in his/her own words*, i.e., OPQRST, CHLORIDE FPP (whatever acronym floats your boat) if new complaints are present.

Example Subjective: The patient reports that his pain has gradually reduced from a 8/10 yesterday to a 5/10 today after taking sublingual nitrates (isosorbide dinitrate 10 mg TID). No nausea issues. Ambulating well. Good appetite.

- The **Objective** portion addresses *how the patient is objectively doing*, *i.e.* vital signs, physical exam.

Example Objective: Vitals (usually found in nurses charts): Temp: 37.6, RR: 12, BP: 148/88, HR: 90, O2 Sat: 92%.

- The **Assessment** is your clinical opinion of how the patient is doing and any new diagnoses/differential diagnosis and possible etiologies made from assessing the patient.

Example Assessment: Patient is doing well. No acute concerns. Chest pain likely due to unstable angina - likely etiology coronary artery disease.

- The **Plan** is what you're going to do for the patient moving forward. Also can include possible discharge date.

Example Plan: Awaiting stress test results. Continue current nitrate regimen. Possible d/c in 2-3 days. Plan to be approved by attending.
In summary, the SOAP note documents the patient’s current status, and outlines the upcoming plan. Every patient the student is responsible for requires a daily evaluation and SOAP note to be completed in the course of rounding. Abbreviated SOAP note updates/addendums can be written as plans are reviewed with supervising staff or residents, or as certain tasks are completed.

Example Update: Reviewed patient with occupational therapist and dietitian regarding lifestyle changes for lowering BP and cholesterol. They will see the patient today.

Orders:

Any orders to be done can be written as a numbered list on the physician orders sheet, signed noting who it’s been discussed with, and then flagged as a new order. As mentioned above, flagging orders means either pulling up a sliding flag in the chart that says "Doctor's Orders", or raising/putting up a flag or marker at the location where the chart is kept. As noted, for any "stat"/urgent orders, or complicated instructions, talk directly to the nurse first, then to the unit clerk, to ensure the orders are completed quickly and accurately. Depending on the hospital or rotation, orders may require a co-signature for all orders by staff or a resident (ex. pediatrics), while other services may not care if med student orders are co-signed as long as it notes who it was discussed with (ex. Psychiatry).
Discharge dictations and summaries

When a patient is discharged, a dictation should be completed to document the course of the patient’s diagnosis and treatment in hospital, as well as to share this information with the other medical professionals involved in follow-up care. Although many similar elements of the initial consultation dictation are shared, they are rearranged into a different format as follows:

- Patient identifying information and reason for admission
- Most responsible diagnosis
- Pre-admission diagnoses (ie. past medical history)
- Post-admission diagnoses (ie. other diagnoses made in hospital in addition to the “most responsible diagnosis” that affected the course in hospital, eg. C.diff infection)
- Secondary diagnoses (ie. any other diagnoses not of immediate clinical significance, eg. fatty infiltration of the liver on abdominal U/S)
- Code status
- Operative interventions (eg. intubation, central lines)
- Names of relevant specialists (list your attending here with the name of their service, along with any other specialists that were consulted during the patient’s stay in hospital, eg. Dr. House, nephrology)
- Allergies
- Medications on discharge
- Post-discharge follow-up (ie. what’s the plan after discharge?)
- Discharge disposition (i.e. where they have been discharged to. For most patients, this will just be “home”, but it could be a nursing home, a family member’s care, etc.)
- Treatment/course in hospital (this is where you give a short narrative about what happened while the patient was in hospital)

When you are dictating, you need to state exactly what you want to have written on the final paper summary with exact punctuation. For example, you would say: “New paragraph heading. Most responsible diagnosis. Colon. New Line. COPD exacerbation. New paragraph heading. Pre-admission diagnoses. Colon. New line. In list form please. One, non-insulin dependent diabetes. Two, hypothyroidism and so on, which will come out on paper looking like this:

Most responsible diagnosis:
COPD exacerbation

Pre-Admission Diagnoses:
1) Non-insulin dependent diabetes
2) Hypothyroid

Dictating can be a bit unpleasant and difficult to get used to, so get a resident to walk you through it the first time. If you can, listen to someone else do a dictation before you attempt one
Procedure notes and orders

Following any procedure (surgical or otherwise), a note should be written to document the operation/procedure and findings, as well as a set of orders for when the patient is admitted to the wards (or new management requirements post-procedure). Both these types of documentation provide a good opportunity for students to be involved more in patient care, help out the resident, and learn more about management. Procedure notes may vary, but the general surgical OR note has the following:

- Surgeon: who the primary surgeon(s) was/were, and what specialty they were?
- Assists: who the assisting staff were (ex. residents, MSIs, GP assists)?
- Anesthesia: who the anesthetist was (look on the OR board or ask the nurses if you haven’t caught the name already during the OR)?
- Procedure: what surgery was done (hopefully you listened, but can also look on the OR slate sheet), and using what method (ex. laparoscopic, open, etc)?
- Pre-op diagnosis: what was the preliminary diagnosis pre-surgery?
- Post-op diagnosis: what’s the diagnosis after the surgery, which may not always be the same as pre-op, depending on findings.
- Findings: what was observed/first in the OR, and were there any samples taken and sent to the pathology lab (or other departments)?
- Complications: were there any unexpected events or findings during the procedure, and what was done in regards to this?
- Estimated blood loss: what’s the best guess at the amount of blood the patient lost? Look at the suction canisters to guesstimate, but remember to account for any other fluids such as saline rinses. If the amount was relatively minimal, <50mL is a reasonable EBL. If you’re writing anything greater than the 300-400mL range, definitely discuss with your resident or attending first!
- Disposition: how was the patient when he/she left the OR, and what’s the plan for them after? Stable, awake, moving? How long is it expected for the patient to be in the post-anesthetic recovery room?

Often pre-printed post-operative order sets are available to be filled in. They structuralize aspects of post-surgical care and list a number of commonly used medications (ex. heparin, analgesics, anti-nauseants) that can have its box ticked off as needed. Although they can appear complicated, they’re relatively straightforward, but certainly work with the staff or resident to go through these order sets. If orders are handwritten, consider it like doing a full set of admission orders again with ADCADAVID, in which all their pre-operative medications need to be re-written, along with any new medications they should receive.
Specialty specific aspects/components

Certain specialties have additional focused sections of a complete history that is unique to their field, and thus these components should be adjusted as appropriate.

Obstetrics

In obstetrics, there is more than one patient to be concerned with during the interview. Questions need to be asked regarding both the woman’s health and current condition, as well as that of the baby’s. Any consult or history on a pregnant patient must include key information such as the gestational age of the baby and if any complications have arisen so far? In the acute setting when a mother presents to the hospital stating they’re in labour, one can quickly determine the urgency with 4 key pieces of information:

- **Contractions:** When did they start? How strong/painful are they from 1 to 10? How far apart are the contractions? Are they becoming stronger?
- **Membranes:** Have you felt a gush of fluid/leaking/dampness in your underwear? Has your “water” broken (if it’s not her first pregnancy)? What colour was it?
- **Bleeding:** Has there been any blood or spotting on your underwear? How much is it if there is? What colour was it? Was it liquid or clots?
- **Fetal movements:** Is baby still moving the same amount as you’re use to? If it’s less, how much less or how long between movements?

On top of the normal history components, it is also important to obtain a thorough obstetrics and gynecological history for any presenting patient, which includes the following information:

**Obstetrical History**

How many weeks pregnant are you? Is this based on LMP or a dating ultrasound? Did the ultrasound show anything abnormal? How has the pregnancy been thus far? Any complications or problems, such as spotting/bleeding (how much/when), or major illness/hospitalization (what and treatment received)? What exams or screening has been done already? Blood tests? Group B Strep and other STI screen? Any concerns like high blood pressure (gestational hypertension) or blood/urine sugar (gestational diabetes)? Is this your first pregnancy (GTPAL)? How were the previous pregnancies and deliveries (method and term)? When and where were they? Any complications? Was instrumentation (ex. forceps or vacuum) or a c-section required, and why?

**Gynecological History (not all questions are appropriate! Tailor to the patient)**

When was your LMP, and what was the character of it? What’s your normal menstrual cycle like, both on and off OCP? How long is your cycle, and how regular is it? How many days is the menstruation? Would you describe your flow as heavy or light? How many pads/tampons do you need to change in a typical day of menstruation? Any cramping or pain with menstruation? Any PMS symptoms? If post-menopausal, when did your period stop, and has it been
consistently gone? Any associated symptoms such as hot flashes or irritability? Any hormone replacement therapy (HRT) being taken? Any cancers?
Are you currently sexually active? Is it a steady partner, or multiple partners? If a steady partner, how long, is the relationship doing well, and are there any concerns of infidelity regarding your partner? How many partners have you had in the last 6 months? Do you have sex with men, women, or both? Any pain during sex? Do you feel safe, or have you ever felt threatened or harmed in sexual encounters?
Are you currently using any form of birth control? If OCP, which one, when did you start taking it, how has it been, any side effects, do you ever forget to take pills, and what do you do if that happens? If IUD, which one, when was it inserted, how has it been for you, and do you still use barrier protection? If barrier protection or other method, how consistently is it done, and how do you feel about it?
Any history of STI? Which one, and what was done about it? Did any complications result from that episode or currently? Was it reported and the source traced back?
Any previous surgeries of a gynecological nature? What and when? Any complications resulting from them? How do you feel now about it?

**Psychiatry**

In general, psychiatry patients have already been medically cleared by the emergency doctor, or have a hospitalist/GP overseeing their general health while they are an inpatient. As such, many psychiatric consultations do not require a full physical exam, and instead can be summarized with the last vitals taken, then stating that they’re stable and have been medically cleared already. Instead, the physical exam should be replaced with the mental status exam (MSE), the observational equivalent of the physical exam for the mind. The MSE is summarized by the mnemonic IAMSEPTIC:

<table>
<thead>
<tr>
<th>I</th>
<th>Identifying info</th>
<th>Patient’s actual age, apparent age, ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Appearance of the patient</td>
<td>Physical appearance, including notable features (ex. facial hair, scars, etc) and body habitus. Hygiene and appearance of health. Clothing worn, style, cleanliness, appropriateness.</td>
</tr>
<tr>
<td>M</td>
<td>Mannerisms and motorisms</td>
<td>Body language and position (ex. relaxed, tensed, slouched, etc). Use of hand gestures or other body motions. Psychomotor agitation/retardation. Abnormal movement patterns (ex. posturing, chorea, tremor, etc).</td>
</tr>
<tr>
<td>S</td>
<td>Speech usage and patterns</td>
<td>Speech rate, rhythm, prosody, tone, volume, amount, range, spontaneity, coherent/non-sensical.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>Emotional affect and mood state</td>
<td>Affective state (ex. euthymic, happy, sad, angry, anxious, etc). Affect stability/lability, range, and congruency to mood. Mood as stated by patient or inferred from interview/thought content.</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>Perceptions</td>
<td>Hallucinations (ex. auditory, visual, tactile, olfactory, gustatory), illusions, depersonalization, derealization.</td>
</tr>
<tr>
<td><strong>T</strong></td>
<td>Thought content and process</td>
<td>Process organized and logical, goal-directed, circumstantial, tangential, loose associations (+ pressured speech = flight of ideas), word salad, illogical, disorganized and illogical. Content may include delusions/ideas (ex. grandiose, persecutory, paranoid, etc), obsessions, magical thinking, ideas of reference, suicidal ideation, homicidal ideation.</td>
</tr>
<tr>
<td><strong>I</strong></td>
<td>Insight, reliability, and judgement</td>
<td>Insight intact/full, moderate/partial, mild/limited, none. Reliability of patient as historian and other major events. Judgement good, moderate, poor, none.</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>Cognition and memory status</td>
<td>Cognitively intact/alert/oriented, disoriented, delirious, any dementia present, and memory function like this. General assessment of patient’s intelligence and overall status.</td>
</tr>
</tbody>
</table>

The biopsychosocial model of patient management unique to psychiatry consists of:

- **Bio**: psychiatric medications or treatments that will improve the patient condition, such as anti-depressants, anti-psychotics, anxiolytics, or electroconvulsive therapy
- **Psycho**: psychoeducation (teaching the patient and family about the diagnosed condition and management expectations), psychotherapy (ex. cognitive behavioural therapy), outpatient psychiatrist and mental health team care
- **Social**: assessing and alleviating stressors (ex. family situations), social worker assessment, housing and safety, financial management, occupational issues, drug rehabilitation, caregiver fatigue management
AMPLE history (Emergency)

There are situations in which a comprehensive history is either not practical or necessary, either limited by time or situational constraints. For example, a critical patient coming into emergency that requires urgent surgery. In place of a full history that can be taken later, an AMPLE history may be done instead. The acronym covers pertinent information for patients that require emergent care, and stands for:

| A: Allergies | To prevent administering drugs that could have adverse reactions |
| M: Medications | To prevent administering drugs that could have adverse reactions |
| P: Past med Hx | To consider drug interactions, and as collateral for PMH |
| L: Last meal | To determine general health and stability for procedures |
| E: Events | To assess risk for aspiration if patient requires intubation/surgery To understand what happened to the patient leading up to now |

This quick simple history can yield a significant amount of information, and can also be taken from partners or family members coming in with the patient with relative accuracy if the patient is unresponsive themselves. However, it is never an adequate permanent replacement for a comprehensive medical history, and this should be completed at the first available opportunity, either through collateral medical records or the patient themselves once stability has been achieved.
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Being a Med Student in the OR: Introduction

The OR can be one of the most exciting, yet daunting portions of clerkship. It is where you’re exposed to the cutting edge (pun intended) and one of the few places where your presence alone carries risks. While you are not responsible for knowing the minutiae of a procedure or the anatomy in detail (don’t tell Dr. Doroudi), you are expected to know OR etiquette and be mindful of yourself and surroundings. This can be stressful at first since there are a lot of things to keep track of, but by having a consistent approach and a bit of practice, you might just find the OR to be your happy place.

This section will help you review and orient yourself to OR etiquette and expectations while highlighting more common pitfalls. This will hopefully reduce some of the anxiety that is associated with the OR so you can focus on learning and maybe even getting in on the action. The section is organized to follow a typical day in a surgical rotation. While specialties and procedures can be different, what you need to know as a medical student is fairly universal.
Rounding and Finding the OR

Your days on a surgical rotation usually begin in pitch dark as your alarm yanks you awake at an ungodly hour. You may wonder why you’ve been sentenced to this torture. The reason is morning rounding. That’s right, everyday you earn your spot in the OR. While every team does this slightly differently, before OR starts, all patients assigned to your team need to be seen. This consists of seeing patients and writing a SOAP note. While writing notes are discussed in detail elsewhere, things particularly important in surgery are post-op day #, vitals, pain, bowel movements/flatulence, outputs (urine and any drains in place), and wound state (is it clean, dry and intact?). Once all patients have been seen, notes have been written, and orders have been signed, you make your way to the OR.

But where is the OR? Usually there are maps, signage or people (preferably wearing scrubs) that can direct you but an interesting tidbit is that ORs are often located on the second floor, for some mysterious reason (there are always combo breakers of course, looking at you BCCH). There is usually an OR front desk where staff can give you more guidance and direct you to change rooms. These rooms usually need ID access so make sure you have it with you at all times. Another thing to bring is a lock since most change rooms have free lockers for you to store your items in. Some rotations may even be nice enough to assign you a locker.

Beyond the far doors of the change room is the OR wing. But first, scrubs.
The Change Room

Remember wearing professional attire? Button up shirts, shoes of questionable comfort, pants? Forget about them, it’s pajama day every day. You will find what, for professional reasons, we will call scrubs in every OR change room. They are usually neatly folded in a stack and there for your use, so grab a pair.

Not enough can be said about the ingenious garment that is the humble scrub (or is it still scrubs?). Here’s why:

A. you can usually tell what size a set of scrubs is by looking at the trimming. Yellow trimmings indicate small for example while blue is medium, though this can be different for some hospitals. Point is, once you figure out what fits, you won’t have to go looking for a tag.
B. Pockets. Big Ones. Enough said.
C. You literally cannot wear it inside out. Both sides work and you’ll have available pockets (refer to B).
D. One of the greatest sitcoms of all time

You can wear scrubs over light shirts and underwear, or nothing if you’re bold. While scrubs are thoroughly cleaned they do get a fair share of blood, sweat, and guts, literally. Another thing to keep in mind is that modesty can be a concern for some, especially when leaning over. In these scenarios a top can be helpful. Others use silk tape to secure the V-neck.

Once you have your scrubs and have arranged your smaller tools and valuables like pens, notebooks, cellphones, etc. in your pockets it’s time to think about shoes. The choice of footwear mostly falls on you as long as they are close-toed. If you spoil your nice, suede dress shoes, that’s on you. General advice is to wear something comfortable, cleanable and expendable. You will find shoe covers for extra protection (optional) usually by the exit to the OR wing.

The final mandatory piece of the uniform, and the one most forgotten, is the cap. If you’re seen without a cap in the OR wing you’ll get told off, so don’t forget it. In terms of options, there are disposable “shower” caps which are easier to put on, and disposable “surgeon” caps which are more slick. OR staff may have custom caps with all manner of patterns, but unfortunately (or fortunately) these aren’t available for you. Caps are usually found by shoe covers.
First steps

Once you’re suited up, you’ll find yourself in the OR area’s outer corridor. The OR area itself is usually in a square or rectangular layout with a central supply core surrounded by ORs. In the outer corridor you will find doors to ORs, doors directly leading to the central core (each OR can also have a door connecting it to the central core), and entries to the Pre-Op area and the Post Anesthesia Care Unit (PACU). You will also usually find a bulletin board or screen that indicates operating room schedules with attending physicians. Each OR room can also have schedules for the day posted on or by the door. This can help you locate your target OR if your team did not tell you the OR number or you forgot. Usually, surgical teams operate in the same set of ORs so as you get settled in, looking for the right OR will become less of an issue.

In the corridor, you will also find numerous sinks which are sensor or foot-pedal operated for scrubbing. By these sinks there are scrub packs (for wet scrubbing), dermotan or manopril (for dry scrubbing) and an assortment of masks. Masks are required in the OR itself as soon as sterile fields start being put up. This starts when scrub nurses break the seal on sterile equipment and ends after closing and dressing of the surgical site is complete. No one will fault you for having a mask on when you don’t need to, so an easy rule of thumb is to always wear your mask when you are in the OR.

When it comes to the type of facemask, there are multiple types to choose from. This largely boils down to your preference. Since blood and fluids can splatter in ORs, eye protection is recommended. If you don’t wear glasses you can use masks with face shields attached. Some people find that the shield can stick to your forehead after you sweat so they bend it forward slightly. Alternatively, there are plastic sheet glasses available depending on the OR. The choice mask itself comes down to whatever feels more comfortable to you. Try different ones and take your pick. If you wear glasses, some facemasks are better at preventing fog when you shape the top to your nose. Alternatively, a surgical tape seal is foolproof.

If a procedure is under way, just enter quietly and stand by the side until you’re noticed by the surgeon or resident. Introduce yourself as the surgery medical student, and that you’ve been assigned to this OR/doctor for the day. They’ll then provide further directions about where to stand for the best view. Wherever you end up standing, always be mindful of sterile fields (more on this in section 28). You can do so by keeping at least 1 foot distance from any blue draping when not scrubbed in.

The surgeon will usually also give a brief blurb about the current patient and procedure. Be prepared to be asked questions during the surgery as you’re watching. Often, you won’t know the answer but these are good opportunities for learning.

If the room’s being set-up by the 2 to 3 nurses (1 scrub nurse and 1-2 circulating nurses), introduce yourself and put your name on the board along with your glove size. It will look something like this:
Jane Doe, MSI3    7.5N, 7W

This shows your name, level of training, and that you want Neolon size 7.5 gloves as your inner pair, and white(latex) size 7 gloves as your outer pair.

Other abbreviations include: L (liners, one size only so no need to write a size), B (browns)

There are a variety of opinions on which gloves to wear and which size should be inner or outer. These will come down to your preferences for the most part (More on glove size in Section 26).

While waiting for the rest of the team to assemble, confirm with the nurses who the next patient will be (the slate order is sometimes changed up), and read the chart for the patient history. There is usually a computer in the room too where you can pull up relevant imaging and read around the procedure if time permits.
Scrubbing in

While being in the OR and observing procedures can be very interesting, you are limited in what you can see and do by the sterile field. However, as long as you are enthusiastic and reliable, surgeons will often offer you the chance to scrub in. At the very least, scrubbing in offers you a better view of the procedure, and at best gives you the chance to assist and practice some of your skills. Jumping at the chance to scrub in is recommended, even if you’re new to it. OR staff are often very friendly and will guide you through the process (Just another reason to make friends with nurses right off the bat, they’re great teachers).

When you are called to scrub, you should make sure that one of the nurses is aware so they can grab you a gown set. At times you may be asked to grab your own gown, these are found in the supply core (Section 24). If nurses have not done this for you already, you should also pick out your gloves from the cabinet that houses them in the OR and open the packaging for the scrub nurse.

When you open glove packaging be mindful of sterile technique. The outside of the package is non-sterile so you can touch it, but whatever is inside is off limits. When you go in to hand the scrub nurse your gloves, hold each lip on the top of the package with one hand and peel them apart in a rolling motion using your knuckles for leverage. The paper envelope holding the gloves should then be exposed like a banana that has been peeled. DO NOT TOUCH the envelope. The scrub nurse will grab it from you and keep it until you are ready to don your gloves.

Scrub areas are outside each operating room, and a variety of scrub products can be found placed or mounted above the scrub sink. The faucets will either have a motion-activated sensor, or will be controlled by the U-shaped switch below the sink (you use your leg to turn this on/off). One thing to remember is that once you scrub you can no longer touch anything other than sterile objects. So before you do, make sure you have removed any rings, watches, etc (though watches should not be worn in the OR anyway) and that your mask is on and comfortable. You do not want to go through all the hard work of scrubbing, only to find out your mask is off, which would force you to start over.

In general, there are two methods of scrubbing in, each with their own pros and cons:

1) Chlorhexidine or other antiseptic ‘wet’ scrub

This method of scrubbing washes off dead skin and accumulated debris from your skin while also being antiseptic. While wet-scrubbing is more involved, it is recommended if it is your first scrub of the day, or you’ve recently been handling something messy.

Method:

First grab a scrub pack (square silver packaging usually) and open it. Inside you will find a sponge with a regular sponge side and a bristle side. Logged into the sponge will also be a
plastic nail pick. Remove the contents and discard the packaging into the nearby trash can. If you have anything under your nails, use the nail pick to clear it out, otherwise the nail pick can be discarded as well.

Next, wet your hands and the Chlorhexidine sponge and begin the lathering process. You do not want to miss any spots so you should proceed in a systematic manner. Start by using the bristles to clean your fingertips and remove anything that may be left under your nails. Then proceed to the fingers and thumb with the sponge side. Divide the surface of your fingers to 4 surfaces each (Dorsal, Ventral and Lateral x2). Each surface should be passed over by the sponge 10 times. Repeat this process for your hand, scrubbing the palm, dorsum and the sides. Once one full hand is complete repeat the process for the other hand. Then move on up to your forearm, again dividing into 4 surfaces, doing 10 passes for each surface and repeating with the other forearm. This should take you around a minute and a half to do properly once efficient. DO NOT CUT CORNERS! The few seconds you’d try to save can jeopardize a life.

Now for the trickiest part: the rinse. Your hands should be raised to be above your elbow. Under the running water, run your hand through the stream while still keeping your arm angled up (elbows down), and rub the fingers of that hand together to get the soapy bits off. Carry on rinsing down your hand, wrist, then forearm until you get to your elbow. The rationale for this is that you want water dripping away from your fingers which you want to be most clean. So keep your hands elevated until you dry them off and gown in the OR. The super villain finger tent is ideal for this.

Make sure to NOT accidentally touch the faucet with your raised hand when you’re rinsing down to the elbow, and definitely DO NOT grab paper towels after the rinse to dry off (habits die hard). If you mess up, restart. Even attendings make mistakes sometimes.

- Pros: Can get under the nails and clean the fingertips well. Exfoliation. Allows for more talk time at the scrub sink. Makes you feel like a surgeon to do it the ‘classic’ way.
- Cons: Can be harsh on the hands after multiple scrubs. As a ‘wet’ scrub, it requires the extra step of drying before suiting up in your gown and gloves.

2) Dermotan and Manorapid ‘dry’ scrub:

This method is often quicker both during the scrubbing process and gowning. It primarily relies on the Manorapid killing microbes but the handwashing step prior can also remove debris.

Method:

This is a combination method, in which you first wash your hands using Dermotan soap to remove any gross contamination and dirt. This step usually only needs to be done once at the start of the day (or simply Wet scrub), and repeated if hands become visibly soiled or you leave
the OR wing and go to other areas of the hospital. You want to cover the same area as you would with wet scrubbing, so hands, wrist and elbows.

Once your hands are cleaned, dry them off with paper towels. Do not skip the drying process here because remaining water can dilute the Manorapid solution, lowering its efficacy.

Pump 3-4 squirts of Manorapid alcohol solution from the dispenser into the cupped palm of one hand. Dip the fingers of the other hand into the handful of Manorapid, then spread the handful onto the front and back of the hand, and around each finger and the wrist (remember all of your surfaces!). Use your still unclean elbow to pump a few more squirts into your cleaning hand, and use that to rub down the forearm to past the elbow. Repeat this process for the remaining arm, using your elbow to pump the Manorapid. Then, use your elbow to squirt a few more pumps of solution and do one last rub of the hands. Again, we want our hands to be the cleanest. That last rub makes sure that any possible contamination picked up while cleaning the forearms is dealt with.

Air dry with your arms held above the waist. You may see some doctors wave their hands around to speed up the drying process. While this isn’t likely a big issue, one could argue this increases the contamination risk by generating air turbulence that could stir and pick up more dust/bacteria in the air. Moreover the longer the Manorapid is on your arms, the more time it has to work. Safer to just let your arms air dry (or do very small waves rather than big motions).

- Pros: Quicker. Less harsh on your hands than repeated washing through the day. ‘Dry’ scrub means no need for the towelling dry step before you gown-up.
- Cons: Manorapid smells quite strongly of alcohol and can make some woozy if you inhale too much. If you have any open cuts or wounds on your hands or arms...ow.

While the writing skill in this section is without a doubt exceptional and exemplary, you may find a visual guide helpful. This video on Entrada (https://entrada.med.ubc.ca/community/learningresources:static_videos_-_master_list/or_hand_wash_or_scrubbing) is a helpful resource to brush up on your scrubbing and gowning skills.
Suiting up (gown and gloves)

Once in the OR, head towards the scrub nurse to put on your surgical gown and gloves (the latter of which, you've hopefully at least offered to get; see Section 25). As courtesy, wait your turn until the surgeon and resident are gowned up before you do (unless they're still outside scrubbing in - waste no time, but it's important for them to get gowned and gloved first so that they can start on draping the patient).

Before putting on your gown, your hands will need to be dry. If you have dry scrubbed, the subtle waving motion of your hands usually lets the team know that drying is not necessary, otherwise you need to dry them using the towel that comes in your gown pack. Grab the corner of your sterile towel and use the top half of the towel to dry one hand. It is important to do this away from your body to not contaminate the towel. Then, while your drying hand is holding the top of the towel, grab the bottom with your dried hand and allow the top to fall. Use the unused half of the towel to dry the other hand. You can then discard the towel. The nurses will either have a hamper ready, take it from you, or have you drop it on the floor.

Next, the scrub nurse will open up your gown and present it to you, so stick your arms into the sleeves, but DON’T put your hands all the way out of the cuffs! Your arms should still be a little bent so that you’re able to push your hands through the cuffs later. The circulating nurse will then button your gown at the neck and tie the inside strings at the back.

Meanwhile, the scrub nurse will be stretching open your right glove for you. Stick your hand in while at the same time pushing your hand mostly through the cuff into the glove (if you have a bit too much sleeve, keep that shoulder back and extend only your arm). Don’t worry if you miss the correct glove finger holes or if the cuff is bothering you in the glove at this point, you can make the changes later (to date my perfect gloving record only happens 10% of the time still).

Now, turn that gloved hand palm-up (i.e. supinated), extend your index and middle fingers, and slightly curl them to make an upward-facing double-fingered hook. When the scrub nurse stretches the other glove open for you, they will use that hook to pull the glove even wider to make it easier to put your left hand in (again likely missing the correct finger placements).

Once both gloves are on, you can adjust your gloves with your hands to make everything fit right, and pull on your sleeves to get them out of your hands’ way (but don’t pull them past the glove’s cuff, you’re trying to form a tight clean seal there! The end of the cuff should sit somewhere on your palm). Repeat the whole process if you’re wearing more than one pair of gloves

**Note:** You can also offer to put them on yourself if things have taken too long and people look rushed. Now that your hands are covered with sterile gloves, you can put the second layer on like regular gloves if you wish.
If you’re wearing a disposable paper linen gown rather than a typical cloth gown, be careful you don’t pull too hard on your sleeves when adjusting, because you CAN tear the gown and this will result in you having to rescrub all over again (along with a somewhat annoyed nurse and an embarrassed you).

Once you’re all set and your gloves are comfy, the last step is to tie up your gown completely (this is a common step to forget to do, at least it was for me). On paper/blue gowns, there’s a cardboard tag at the front of the gown holding the front strings. Holding the tag with the writing upside down (and strings closest to you), hold onto the string on the left using your left hand and GENTLY pull the card away from it using your right hand while keeping the other string attached to the card. Give the card to someone, usually the scrub nurse, but if they are busy the circulating nurse can do it, as long as you leave a large portion of the card for them to grab on to. You then spin in the direction that wraps the tagged string around your back to close the gown around you and brings the string back to your front/side (usually counterclockwise spin to your left). Grab the tagged string as the nurse pulls the tag off, and tie (like shoelaces) to the short string you’ve been holding onto this whole time. The key to the whole process is to not let any of the strings drop because you didn’t hold onto it at the appropriate times. Once completed, you’re ready to get in position.

Choosing your gloves

**Size:** Typical sizes range from 6s to 10s, corresponding to hand size. Some ORs will have a glove sizing chart posted, but if you don’t see one you’ll have to play it by trial and error. There are also half sizes to better fit hands, so try a few times with different sizes until you find the right one for you. For reference, as a guy with average sized hands and fingers, I wear size 7.5. The key here is to find the size which fits snugly on your hands without any loose parts, but not so snug that you lose circulation in your hands (which isn’t apparent immediately, but would be an unfortunate reason to scrub out for). You want to be able to feel and maintain control of whatever you’re holding, so size matters!

**Material:** They also come in brown or whites, which generally corresponds to hand shape (browns generally have longer finger to palm ratio than whites do). If that’s not enough, they also come in different materials, such as latex, vinyl, or polychloroprene/Neolon(for those with latex allergies). Therefore you should test out different gloves when you get the chance to find what’s right for you.

**Single vs Double Glovin’:** There’s also the question of whether to wear 2 pairs of gloves or 1. It can be a matter of personal preference, but some surgeons will actually ask you to layer up (orthopedic surgeons, for example, may ask you to even TRIPLE-glove for arthroplasties). Most surgeons opt for two, partly because it provides for more safety in case the outer pair is cut or torn, but also for convenience since if the outer pair becomes contaminated somehow, they can pull that pair off and put on another glove without having to scrub out as their hand is still covered by the sterile inner glove. Those who opt for only 1 pair prefer it as it’s less hassle, and offers more sensitivity and control to their hands if they need it. Some choose to wear a pair of
clear plastic liners on the inside of an outer pair of surgical gloves, almost like combining benefits of single vs double gloves. There is no right or wrong to this, and comes down again to personal preference.
Taking your position

After you’re gowned and gloved, keep your sterile hands clasped at your chest or gripping the front of your gown. Make sure not to “break sterility” (see Section 28)!

Wait until the surgeon and assist/resident has prepped the surgical area and draped the patient (they may ask you to help with this; do as you’re asked). Once they’ve done so and have stepped into place at the table, they’ll usually direct you to where the best place for you to stand is. In general, only 4 fit easily around the table, and the scrub nurse needs their room as well, so at times you may find yourself further from the surgical field or viewing from a somewhat awkward position. If you have a space to do so, put your body right up against the table edge, and your hands on the drape.

Sometimes you may be asked to move or switch to the other side of the table. When this occurs, back yourself away from the surgical field with your hands crossed on your arms or held up, and shuffle around. Your front should always be facing the sterile field, unless you need to cross behind someone, in which case spin so your backs are facing each other and you can move into position on their other side. If you ever need to go around equipment to get to the other side, take the long way around, and NEVER cut in front of a scrub nurse and his/her surgical instrument table (that’s the quickest way to a reprimand from them). If you’re swapping sides across the patient with the surgeon/resident, it’s common courtesy to yield to them whenever needed.

Most importantly: If you’re ever unsure about anything, just ask! You would be much better off asking a silly question or two (which everyone has done at some point in their training, trust me), than contaminating yourself or the field and putting the patient at risk. You will almost always receive helpful information and gratitude that you’re being considerate of your actions.
Keeping it clean (sterility protocols)

There’s a lot of easy mistakes to make when it comes to breaking sterility, and it’s near inevitable that you may trip up at some point or other (I’ve certainly done it more than once...). The most important rule of thumb is “think before you touch”. Ask yourself before you touch anything new, “is this sterile?” Other principles include sterile heights, which is set at the highest point on your gown that has been below table level at some point. This means if you sat down for a part of a procedure, you aren’t allowed to stand back up over the field, as your upper body is now ‘contaminated’ by being below table level. Similarly, anything below the waist is regarded as non-sterile, so don’t ever let your hands drop down to your sides.

Itchiness, slipping glasses, or sweaty foreheads also pose a common dilemma. You’re certainly not allowed to use your shoulder to scratch that itch, push up your frames, or wipe the forehead. In these situations, you either tough it out, ask for help, or get innovative. Try fidgeting a bit to scratch against your gown, or wrinkling your nose to get some facemask friction to ease a nose itch. If neither method works, just ignore it and likely it'll go away on its own. If not, you’ll have to ask the circulating nurse to help you out by scratching, or similarly pushing up your glasses or wiping your forehead. This can be a little embarrassing, but that’s why it helps to have been in the room earlier and have introduced yourself to the nurses before the surgery. In terms of innovation, some have used various objects in the room to aid them, such as pushing your glasses up using the edge of a tv monitor or cart, as long as you don’t touch it with your gown. You may get weird looks or teased for it though, but it’s all in good fun.

Although you’re allowed to cough or sneeze as you have a facemask on, resist the urge to turn your head to do so. Step back if at all possible and cough/sneeze facing the patient. This is because the seals around the mask are far from perfect, and you can end up directing your droplets out the sides of your mask and into the sterile field if you were to turn away. If you unfortunately are sick with a dry cough at the time, it’s best to have lots of lozenges with you for the day. One or two in the mouth prior to scrubbing in will hopefully hold you over for most of the surgery.

If you ever feel faint or lightheaded during a surgery for whatever reason, there is no shame in admitting so and asking to leave the surgical field, even if it’s temporarily to take a breath. Let someone know immediately as soon as you start feeling funny. This gives you time to safely hand off anything you may be retracting, step back, and get yourself to safety in case you faint. Find the nearest chair or squat with your back against a wall until you feel better. As many a surgeon has said, they’d much rather you scrub out and sit down than passing out on their surgical field (too much paperwork if that happens). You can always scrub back in when you’re feeling better.

Lastly, should you ever accidentally break sterility, whether someone notices or not, own up to it. Step away from the table, admit you just contaminated yourself accidentally, and ask if you could go re-scrub and come back in. No surgeon or nurse will ever fault you for being responsible when it comes to patient safety (and if they do, you’re still in the right).
unsure if you broke sterility, ask. It’s a bit of extra time and effort to avoid the possible, even if slim, risk of serious complications from surgical infection. We owe it to the patient as part of the medical professional team.
Helping out (retracting, cutting, closing)

Having scrubbed in and standing in position, you may be asked by the surgeon to help out at various times. Don’t expect to be doing anything major, especially since most of the time there is an assist or a resident around. In general, students will be asked to hold retractors at various times throughout the main part of the surgery. Keep good tension on the retractor so a good surgical view is maintained, and don’t worry about pulling too hard since skin and connective tissues are pretty durable as long as the retractor is placed in the right position initially. Also do remember to change your grip or hand once in a while, otherwise your arms will fatigue quickly.

At some point in the surgery, usually during the closing process, tied sutures will require cutting. Here’s where you can be a hero! Often nurses will pre-emptively tap your hand with the handles of the scissors, so take that as your cue to take the scissors and be at the ready to cut. Otherwise the surgeon will take the scissors and pass them to you, so be at the ready either way. Suture cutting isn’t rocket science (or brain surgery, for the neurologists among you), as long as you’re aware of some guidelines:

1. Hold the scissors with your right hand, with your thumb in the left hole, index finger on the scissors' hinge, and ring finger through the right hole.
2. A good craftsman never blames his tools. There is surprisingly a lot of trust riding on the first suture cut that a surgeon sees you make. Unless you genuinely have bad scissors, it’s usually possible to cut the sutures with a single pass. The key is to apply pressure to the handles so that the blades are pushed flat against each other before actually closing the scissors. You achieve this by slightly pulling up with your thumb and pushing down with your ring finger. Try it at home, it’ll take some getting used to, but will get you that coveted clean first cut almost every time.
3. If you ask “how long” when the surgeon asks you to cut, you may get “as long as it needs to be” as an answer in return. Instead, watch for some subtle cues carefully, such as the surgeon doing a quick tap with the needle drivers or forceps on the suture line they want cut at the location they want it snipped. A good trick is to take a subtle, short pause just before you cut the first of a series of sutures, and the surgeon or resident will redirect you if you’re too long/short, or say “that’s good”. The length is determined by the suture material and its location/purpose.
   ○ In general, internal closing sutures and dissolvable buried sutures should be cut short (just above the knot), external simple interrupted skin sutures should have about 0.5cm left to the ends, and any temporary suture used to pull or manipulate structures around should be cut ABOVE where the clamps/hemostats are clipped. An exception is in abdominal surgery when they close the abdominal muscles using an 0 Monocryl or PDS suture (thick blue or purple sutures, look pretty stiff, and the resident/surgeon will be tying 8+ knots on), where you’ll be cutting these tails 1cm+ as they’re notorious for untying themselves with short tails.
4. When you need to cut a suture short just above the knot, bring the scissors right down on top of the knot, then tilt the scissors to angle the blades 45°, then snip. This ensures you don’t cut the knot, and there’s enough tension in the remaining suture length that the
knot won’t slip. This trick will generate more trust in you by your surgeon, even if they don’t compliment you on it specifically!

5. **No blind cutting.** If you can’t see the suture notched into your scissors blades as you cut, along with the tips of your blades, you shouldn’t be closing those handles. Nothing worse than accidentally cutting a structure you didn’t see (especially if it’s a vessel!). Better to readjust your hand or body to get a good view, and if you still can’t see, mention it to the surgeon and they’ll direct you as needed based on their preference (they may still say ‘that’s ok, just cut’)

6. Along with suture cutting, you may be asked to help as the surgeon/resident sutures, usually by doing something called ‘running the line’ or ‘follow me’. This simply refers to them wanting you to hold onto the suture line to hold tension in the previous loop/knot as they put in the next loop during continuous running sutures. Gently tug on the suture line so it’s taut, but not pulling excessively on the tissue itself, and once the next loop is in, let go so the suturer can pull it tight.
   ○ Grab onto the suture line again once they’ve made their pass through and are setting the needle for the next loop.

7. At some point you may be asked to demonstrate your knowledge on sutures, including types of stitches, knots, suture size and material, needle shapes and sizes, and relations to tissues. This is where some pre-reading helps (use the super colourful manual the faculty gave us to learn).

When it’s time to close the outermost skin layer, you may be offered the chance to either help with the staples or do some actual suturing yourself. Using the staple gun is relatively straightforward. The surgeon/resident will use two pairs of forceps to grasp the skin edges and bring them together. You place the staple gun centred and parallel to the skin surface just behind where the forceps are, and squeeze the trigger to close a staple everting the skin edges. DON’T let go of the trigger quite yet! Add a little bit of backwards traction and wait until the surgeon/resident re-grasps their forceps onto the next portion of the skin edges. Close another staple in the next location, and repeat as necessary until the entire incision is closed.

If you get the chance to suture, make sure you know how to do a vertical mattress and a buried stitch/running subcuticular, as these are usually the ones used for closure. Also know how to do 1 or 2-handed ties, not just instrument ties! Practice, practice, practice until the hand movements become second nature and you understand how the knot gets tied when you manipulate and rotate your hands. I practice by using floss on anything you can loop the floss around (ex. pencil), and tying repeatedly (as a bonus, you don’t need to unknot the whole line at the end of the day, since you can just toss the floss).

On the very, very rare chance you get an opportunity to hold a laparoscope camera or instrument, you will become disoriented with the 3-D space, as the hand directions get reversed on the internal side (Tip: envision the fulcrum of the instruments at the skin and muscle tissues). If you’re operating the camera, always have the center of the field focussed on the place of action in the body. Make sure your camera view is vertical and perpendicular to the horizon level, and definitely, definitely don’t shift/shake/fidget around too much, unless you want to make everyone viewing nauseous and dizzy!
Cleaning up

Once the surgery is complete, the surgeon will usually have already de-gowned in order to go sort out the operative note and dictation and prepare for the next patient. That will leave you and the assist/resident to tidy things up tableside. Look for your assist/resident to take off their outer gloves, which is done so that you have nice clean gloves to work with when applying dressings. The following steps generally involve wiping the incision site clean (you know this will be coming when someone says “a wet and a dry”), applying dressings (ex. steristrips and gauze bandage), removing all the drapes and cleaning up equipment. There’ll then be a bit of a break while the anesthesiologist brings the patient out from under anesthesia, during which time you can chat with the resident and have any questions you had answered. Keep in mind though that they’ll also be busy writing the operative note and post-op orders, so see if you can help in any way with that first before you distract them with questions. You should also bring in the patient bed if it hasn’t already been done and bring it beside the surgical table in preparation for transfer. Once the patient rouses, put a pair of non-sterile gloves on, and get ready to help roll the patient up on one side, shove the slide table under them, and drag them onto the patient bed. You’ll be told by the nurses and anesthesiologist where to stand and what to do, so follow their directions. Once the patient is safely in the bed, the patient will be brought to the post-anesthesia care unit. Depending on your resident, you may follow them to the PACU while the OR is being cleaned and reset, or you may go see the next patient on the slate to get properly prepared.
Wash, rinse, and repeat

All in all, that’s the gist of the surgical day process, and you repeat this until all the surgeries on the slate are complete. In between surgeries, you should also try to find some time to check on the patients post-op in PACU to ensure they’re doing alright and there are no worrisome signs present (ex. hypotension, tachycardia, bleeding through bandages). Any given surgery day may have anywhere from 2 to 8 patients, depending on the surgical service and the length/complexities of the surgeries. Definitely look for any opportunity you have to sit down, as your back would really appreciate it by the middle of the day. Also go grab food quickly when you can and use the washroom, since you never know for sure how long the subsequent surgery may take before you get a break. In this way, you’ll survive your surgical days. There’s plenty more to learn and pick up, but those come from experience, and you certainly won’t be expected to be rock stars and know everything beforehand. Surgery is often about picking up on non-verbal cues and anticipating next moves, which you’ll get a sense of after having been in a few surgeries. However, hopefully after reading this section, at least there’s less anxiety about the possibility of making a total fool of oneself in this unforged territory!
Wellness

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A message from Doctors of BC

Congratulations on making it to third year! You’re one step closer to finishing medical school and the best part is that you are directly involved in patient care now! It’s sure to be an exhilarating and busy year.

Before you immerse yourself in learning to care for others, take a moment to think about caring for yourself. In the bustling and hectic environment of hospital hallways, ERs, ORs and wards, you will undoubtedly encounter stressful situations. On top of medicine, you will need to consider basic needs like feeding yourself and squeezing in moments for exercise. Let’s not forget planning your commutes to your various rotations, whether it be by public transit, driving, biking, or walking. In the midst of this all, but you may be faced with many challenges that affect your health. This could include a broken bone from a fall, overwhelming stress, or an accidental needle stick injury. If you need to take extended time away from clerkship for your health, what options are available to you?

Having something like disability insurance is important here! Fortunately students are eligible for insurance coverage from Doctors of BC. Likely, you have been covered since your first year of medical school. There are some key changes to highlight:

“As of July 1, 2018 Doctors of BC is pleased to provide Student Life and Disability Insurance at no cost to you for your four years at medical school.

As a third year medical student, monthly tax-free coverage under the Doctors of BC Student Disability Insurance will increase from $1,500 to $2,500. Your Life Insurance coverage will remain at $100,000.”

Of course, details regarding insurance can sometimes be confusing. The best way to learn more is at the Doctors of BC website (https://www.doctorsofbc.ca/member-area/insurance/life-disability-accident-illness/students) or contacting one of their advisors.

Remember, now is the time to make sure you are protected so you can focus more of your energy towards your studies and engaging in high quality patient care.
Finding a place to relax

There will be moments, and perhaps too many of them, when you’re simply feeling overwhelmed and in need of a break. Inevitably, hospitals are busy places and it can be difficult to get away from the chaos for even a couple of minutes. Some suggestions:

- Stop and take a deep breath. It will be okay.
- Go for a walk. If you can find the time, go outside and breathe some fresh air!
- Sit in the outdoor courtyard or patio if the hospital you’re at has one. For example, St. Paul’s Hospital has a patio space outside the cafeteria that offers a quick outdoors escape. These can also be great spots to have a quick bite in the sun!
- Go to your call room. Sometimes the call rooms are a bit far away, so this isn’t always practical. However if you have the time, it’s a good place to step away from the noise of a busy hospital.
- Go to the upper floors of a hospital and check out the view for a couple of minutes. Looking out at English Bay (St. Paul’s), False Creek (VGH), or the Fraser River (RCH) provides a calming break during a busy day.
- Finally, take a quick washroom break or refill your water bottle. These are indeed essential trips that give you a chance to squeeze in a short walk and clear your mind.
Supports available to you

If you’re starting to feel overwhelmed by everything, try talking to someone about it to receive some support. Here are a few suggestions for who to go to when you need that extra help:

Your Classmates

Your classmates know what you’re going through and can empathize, so don’t be afraid to talk to your peers about how you’re feeling! Chances are they have had similar feelings about everything you are experiencing in 3rd year too. Talk to each other, share coping strategies, hear each other out.

Residents

If you find a resident that you get along well with, they can be an excellent source of support. They’ve already gone through medical school and made it to the next step in their training, so they may be able to offer you some wisdom, advice and motivation.

Site Directors/Program Assistants

The individuals in charge of your site and/or rotation are a good option if the source of your stress is either related to the expectations of the rotation or is affecting your performance. If you’re proactive and upfront about how you’re doing, you are more likely to receive some help to meet all the requirements. It’s far better to let people know you’re struggling as soon as you run into trouble.

Office Of Student Affairs

As always, the Office of Student Affairs is here to offer support and advice as you navigate medical school. You can speak to them confidentially about how you’re doing and they’ll be able to help you figure out the best way to manage.

Mentorship Group

Likely, you may have joined a mentorship group in your first year of medical school. If not, it isn’t too late to be a part of one. These groups range from specific interests to general interest groups. Each group is composed of a mentor as well as students from every year. One of the greatest benefits is the longitudinal relationships you form over the years with your group. Additionally, your mentor is a great person to probe and ask advice from. Of course, with students in all different years, mentorship groups are great ways for students to share advice and experiences with upper- and lower- year peers.
Portfolio

Although portfolio is indeed a mandatory curricular activity, it can be a great medium to reflect on challenging experiences. Your portfolio tutor is another person you can turn to for help. Moreover, these groups are maintained over the course of medical school. You and your peers have the chance to see each other evolve and share experiences in a safe and trusting environment.

Other External Sources Of Support

UBC offers counselling services for all students. These services can be accessed in-person at UBC campus as well as BC Children's and Women's Health Centre. There are also possible ways to access help via phone or online. More information on UBC counselling services can be found at their website (https://students.ubc.ca/health/counselling-services).

Additionally, CFMS has compiled a number of valuable resources for medical students in terms of wellness. This can be found at their website (https://www.cfms.org/what-we-do/student-affairs/wellness).
How to fit in exercise

Many medical students are physically active coming into medical school, or, after Atherosclerosis Week, decide it’s time to start trying to fit exercise into their normal week! Whether already in the habit or trying to create one, however, it is common for second-year students to wonder “Will I be able to keep this up in clerkship?”

The answer is a resounding YES!

Many students in their clerkship year find that they are able to maintain physical activity two to four days per week if it is something they make a priority. Some rotations or weeks are busier than others, so there will likely be times when you miss a gym session or two, either due to lack of time or lack of energy. But if you value developing or maintaining an exercise routine, it is certainly manageable for most.

Some activities will be affected:
- Depending on the rotation, you may find yourself in the hospital on weekends on call, so weekend-long skiing or hiking trips will be less frequent
- You will likely not make it to the 5:00pm yoga class you normally attend every Tuesday, especially as your days are unpredictable and likely won’t end at your scheduled time
- Those who are used to dead-lifting seven days a week may find that they do not have the time or energy to maintain this, especially as you tend to be on call on average 1 in 4 days, and you will be required to spend 24 hours in the hospital on those shifts
- This is not necessarily the time to join teams or workout classes that require a firm commitment to being there every single week, since your on-call schedule will differ from week to week
- If you have children or other commitments that require a lot of your time, fitting in an exercise routine may present more of a challenge, depending on your situation.

However, there are many other options!
- Hitting the gym in the mornings or evenings
- The easiest type of exercise to maintain in clerkship is the kind you can do even when your work hours are irregular: swimming, running, hiking, paddleboarding, snowshoeing, etc.
- Taking exercise classes that are flexible with attendance: drop-in yoga, dance class, etc.
- Taking online exercise classes that you can do from home on your own schedule
- Cycling or walking to the hospital, and taking the stairs when you’re on-shift are ways to fit more activity into your work day.
- Some hospitals have a gym on-site for staff and students, though lunch breaks are often only 10-20 minutes long, so fitting a workout into a lunch break can present a challenge. Best to save the gym for after work!

Overall, if you have an interest in staying physically active in clerkship, there are many ways to make it happen. We are all aware of the benefits of exercise on mental health as well, so having
some physical activity in your week can really help to balance out the mental and emotional activity you get at the hospital! The most important thing is to find a balance that works for you.
Biking to the hospitals

Vancouver General Hospital (VGH)

VGH has secure bike cages that are free, but you will need access on your ID card. Access may already be granted, so no activation is needed. If not, contact the Transportation Facilitator at (604) 875-4111, extension 54118. The cages at VGH are located directly underneath the entrance to the Pattison Pavilion, and on the first level of the 12th avenue parkade. There are also showers available at VGH in the OR change rooms and the Call Room area.

VGH also possesses the VGH Cycling Centre, which is open 24 hours a day, all year round. It contains 174 bike racks (including 12 outlets for electric bikes), eight bike lockers (quickly booked up), change rooms, storage lockers, air pumps and bike stands with tools. The VGH cycling centre is located at 866 West 10th Ave (between Willow and Laurel Streets) and has street level access. Access is membership-based. You can apply at: https://bcgreencare.ca/vgh-cycling-centre

Lastly, don't forget about bike parking in the MSAC courtyard (access with VCH ID). Showers and lockers are available in the basement. This is the best place to park and shower when heading to BC Cancer.

St. Paul’s Hospital (SPH)

St. Paul's Hospital has an 80-capacity bike cage in the underground parkade. The SPH parkade is off Burrard. You need your ID card to access the bike cage. Your ID access in SPH will be activated for you during your rotation. There are showers in the call room area (6th floor Burrard) and in the OR change rooms. There are also lockers you can place a lock on in the call room area (Burrard 6th floor).

BC Children’s Hospital/BC Women’s Hospital (BCCH/BCWH)

Outside of BCCH, there are a number of open bike racks for use. There are 6, 3 and 1 bike racks respectively at Entrance 11 (New Emergency Entrance on Oak Street), Entrance 35 (Old Emergency Entrance), Entrance 17 (Level 1 North). In addition, there are 2 secure bike cages located in the Level 1 Underground Parkade. A key is required to access bike cage #1. To get a key, please pay a one-time fee of $10.00 to the cashier in the crossroads. The cashier will issue you a key upon payment. To cancel access to the bike cage, simply return your key to the cashier in the crossroads, and you will get $5.00 back. Your photo ID will allow you access to bike cage #2. To request access, please email photoid@phsa.ca with the following information: Complete name, Position or department, Employee ID number (regular, temporary and casual staff), Serial number of your hospital photo ID found at the back of the card.
There are unisex shower and toilet/change room facilities that are open to all. These are located in rooms 1A18, 1A19, 1A24, and 1A26.

UBC Hospital (UBCH)

UBCH has secure bike cages that are free, but you will need access on your ID card. Access may already be granted, so no activation is needed. If not, contact the Transportation Facilitator at (604) 875-4111, extension 54118. At UBCH, the cage is located across from urgent care. Please note that the bike cages have limited space and may be full at times. There are showers in the Life Sciences Center and OR change room in the hospital.

Additionally, UBC has bike cages and bike lockers available through UBC Campus + Community Planning and the AMS bike kitchen. UBC offers 13 free bike cages and 200 secure bike parking spaces in bicycle lockers (paid membership). To register for the bike cages, visit thebikekitchen.ca/bike-storage and fill out the online form.

Royal Columbian Hospital (RCH)

There is a bike cage at the hospital. If you need access to the bike cage, please send a request with the numbers on the back of your VCH Photo ID card to the RCH program coordinator (Nancy Blatchford) and she will arrange access. It can take up to 7 days for the Access Control department to process your request so if you need access, please send this information asap. Lockers and showers are in the student/resident lounge.

Richmond Hospital

A secure bike cage is located on the ground floor of the Parkade. Access is programmed to your VCH ID. If you are on a surgical rotation, it is most convenient to use a visitor locker in the OR change room. There is a shower present. There are also call rooms upstairs by the wards with showers and lockers.

Lions Gate Hospital (LGH)

Outdoor bike racks are located at the 13th & 14th, 15th street entrances and North Shore Hospice Contractor Parking lot. Access to the secure bike cage is available through emailing LGH Photo ID as the bike cage has a card reader, so if you would like to use the bike cage please request it on the eForm at the same time as requesting your Photo ID activation for LGH or email LMCPID@fraserhealth.ca with your name the 6 digit number on your VCH photo ID badge prior to your start date. LGH has showers and lockers at the HOPE center where the call rooms are. You will be given access to them when you have an elective there.
General wellness tips

- Talk to your peers! They understand what you’re going through, may have experienced something similar themselves, and can be a huge source of support.
- Don’t forget about those who are not in medicine! You may have many friends, families and mentors who aren’t necessarily in the healthcare field, but that doesn’t mean they can’t also offer relevant words of wisdom. In addition, it can be incredibly refreshing to have a chat that’s completely off-topic from medicine in order to take a break.
- Make your health a priority. Be sure to get a reasonable amount of sleep on your non-call nights. Studying is important, but it won’t be overly effective if you can’t think straight because you’re tired!
- Maintaining regular and healthy eating habits is important as you work through crazy hours in the hospitals. Always take time to eat, even if it’s just a couple minutes to eat a sandwich. Most preceptors and residents are good about making sure you get breaks to eat, but don’t be afraid to ask for the time if they haven’t noticed that your stomach is growling!
- The most cost-effective way to be sure you’re eating healthy food is to pack your own meals. Sandwiches and salads are quick and easy options, but most sites give you access to a fridge and/or a microwave, so you can get a little more creative with your food choices as well. Try to put together your meal the night before to save time in the morning, or do weekly meal prep sessions. Having a granola bar or other quick snack in your pocket or backpack is a good idea for those times when you’re feeling hungry and unable to grab a proper meal. If you need to buy food, there are usually a few options at each hospital (see hospital-specific sections below for details on coffee, lunch areas, fridges/microwaves, and food options near hospitals).
- Try to make time for friends, family, and loved ones. Furthermore, engage in an activity that you enjoy and isn’t directly related to medicine. It’s important to maintain a bit of balance, even though 3rd year tends to be predominated by life on the wards. Don’t wait until you’re completely overwhelmed to ask for help. As soon as you realize you’re struggling a bit, reach out for the numerous support options available.
Sites: VFMP

96  BCCH/BCWH
101  LIONS GATE
104  MT ST JOSEPH
105  PEACE ARCH
106  ROYAL COLUMBIAN
110  RICHMOND
113  SURREY
117  ST PAUL'S
120  BURNABY
123  VANCOUVER GENERAL

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BCCH/BCWH: BC Children's & Women's Hospital

BC Children’s Hospital (BCCH) and BC Women’s Hospital (BCWH) are both located on the same site in central Vancouver (4500 Oak St). Although ultimately serving different populations, BCCH and BCWH are similar in that they provide very specialized care and are therefore ideal places to see pediatric and obstetric cases respectively.

BCCH is the primary children’s hospital in British Columbia and therefore is not only the busiest pediatric care center, but also the site most likely to provide you with the greatest breadth of pediatric exposure. It is truly the place to be to see the “zebras”, being the Western Canada referral center for many fascinating pediatric conditions. Because of its high volume, however, students are kept significantly busier and work longer hours than at other sites. BCCH offers an unparalleled experience for students interested in pediatrics but possibly an overwhelming one for students that rank pediatrics low on their CaRMS list.

The vast majority of patients that come to BCWH are peripartum. BCWH offers care to families before, during and after pregnancy in addition to providing specialized treatment for high-risk pregnancies and infertile couples. If you choose to do the obstetric portion of your Obs/Gyne rotation at BCWH (the Gyne portion is held at VGH) you WILL help deliver at least one baby on most call shifts. Call shifts are far busier than at other sites. However, if you have a strong interest in Obs/Gyne, you are strongly encouraged to complete the rotation at VGH/BCWH to experience the high volume that you may face in residency.

Getting there

Car

BCCH/BCWH is about 10 minutes from VGH. Both Cambie and Oak St will take you there in no time. Parking is available on site at a staff rate of $6.75/day. You can also park for free in the surrounding area, although much of it is "residents only" or a 2-hour limit. See the below image for a parking map (up to date as of May 2020).

There is some non-restricted parking on the block northwest of King Edward and Oak St (on 23rd avenue). There is also non-restricted parking along King Edward west of Osler, as well as north from there. You can also park along Oak St anywhere from 33rd to King Edward (on the northbound side), only if you’re absolutely sure you will only be there 9:30am-3pm. These are STRICT time restrictions and your car WILL be ticketed and towed if you leave it there. There are also some Evo-only spots along 28th.
Transit/Bus

If you decide to exercise your flashy UBC bus pass, the #17 will pick you up from the Children's Hospital entrance and drop you off at the #99 or the Broadway-City Hall Canada Line station. Although it runs all the way downtown, it is not the most reliable line so leave plenty of time (seriously, because it’s a trolley line, if a bus falls behind schedule, the buses scheduled after it cannot pick up the slack because they can’t pass one another and you’ll end up with no 17’s for a long time, and suddenly three of them appear). A second line is the #25 which runs along King Edward. The stop is a less than 10 minute walk to the hospital along King Edward at the Shell gas station, or another at Willow St. The King Edward Canada Line Station is also within walking distance, approximately 15 minutes away at King Edward at Cambie.

Shuttle

Commuting from VGH or SPH is a breeze and there is a shuttle that runs between these sites and BCCH/BCWH. The shuttles run every half hour and stop is at the entrance closest to BCCHR. The schedule can be found online at the PHSA website (http://www.phsa.ca/search?k=shuttleschedule.doc).
Storing Your Stuff

BCCH
Pay attention during orientation as you will be shown where the lockers are! If you miss the announcement, the lockers are on the 2nd floor.

BCWH
If you’re at BCWH, chances are you’ll be on-call, so your best bet is to store your belongings in your call room. There is a locker in there, feel free to bring your own lock or to just leave your stuff in there unlocked. Alternatively, you can bring it with you to the TECC nursing station and stash your stuff somewhere there.

There is also a locker room by the ORs/ by the Urgent Care Centre (UCC), where you may be able to find an unoccupied locker. The keypad code is 1532#.

Keeping Clean

BCCH
You’ll find showers in the call room area, and there are towels in the back corner if you make your way around the circle of call rooms.

BCWH
In the call room area, there is also a shower in the washrooms. It is the much nicer option between this and shower beside the UCC.

In addition to there being lockers (and towels and scrubs) in the change room by the OR, there is also a shower. Although at first glance the shower looks quite basic, just a shower head, a tile floor and a curtain, it becomes divine after a long night of deliveries...or one messy delivery!
Call Rooms

BCCH/BCWH

There are two call rooms (for each of pediatrics and obs/gyn) located on the 4th floor of the Shaughnessy building by the Department of Obstetrics and Gynaecology main office. You can access it by going up the elevators by Medical Records, which is near the cafeteria. It’s a LONG way from TECC and UCC and you’ll likely only use it as a place to store your stuff (sleep? HA!), but you may be able to find a shortcut or the most-ideal way to get there. You’ll need your badge to get in, and you will be provided a keypad code at your orientation.

The Lounge

BCCH/BCWH

There is a lounge and kitchen area where the call rooms are. There’s also a new residents lounge over by the walkway to the ambulatory building that is always stocked with snacks... but medical students don’t have access to it, so you’ll have to befriend the residents in order to get in!

The Cafeteria

The cafeteria is found on the ground floor of the hospital. It has a good variety of food and many students rely on it daily. Sandwiches, salads, burgers, pizza, a daily special among other items are what you can expect. Be sure to check the hours however so that you do not find it closed when you are on call!

Coffee!

There is a Tim Hortons, Starbucks, and a Second Cup all on site so you should never be without caffeine! While the Starbucks and Second Cup are located in BCCH, the Tim Hortons is found in BCWH. The Second Cup is open the latest.

Good Eats Close By

All of the coffee places will sell small treats in addition to sandwiches and other small meals. If you prefer to venture off site, there are restaurants, a sushi place, and Safeway at King Edward and Oak St which is only a 5-minute walk from the hospital.
The Library

The library is between the mental health building and Shaughnessy building. It is probably best accessed from the 4th floor of Shaughnessy, the same floor as where the OB/Gyn call rooms are. Walk along the hall away from the department office, and turn right at the first intersection. Keep walking straight and you’ll be at the library. You can also access it from the main Shaughnessy elevators (4th floor), or from the CAPE unit skybridge. The library has many cubicles, chairs, tables for studying. There is also a good shelf of reference materials and textbooks.

Computers

There are computers in the BCCH student lounge and in the library.

Overall Impression

Located centrally, commuting to BCCH/BCWH is no more cumbersome that traveling to VGH. Parking is cheaper too! BCCH is large and often takes some time to become familiar with, and now BCWH is spread out over essentially the entire campus (from TECC, to Shaughnessy, to UCC, to Fir). Both sites are busy, providing ample opportunity for patient interaction, learning and hands-on experience. The staff and residents at both sites are knowledgeable, friendly and excited to teach the keen student. However, they also have higher expectations and are more demanding than at other sites. Do not be discouraged if you have a staff or resident be short with you; they’re working long and difficult hours and don’t mean any harm. The best thing you can do is to keep on being keen and engaged, and make sure to ask to get involved!
LGH: Lions Gate Hospital

Lion’s Gate Hospital is a community hospital serving the unique and diverse population of North Vancouver. This comes with both advantages and disadvantages. The main disadvantage is that the breadth of exposure is limited. For specialties like pediatrics and obs/gyne, this means a less demanding schedule but more self study required. The advantage of working at LGH is the direct contact with staff physicians, as there are few residents and other learners at this site. You can expect to play a much larger role in the care of patients and surgical procedures.

Getting There

LGH is a little out of the way for most but this does not necessarily mean that you need a car. If you are driving, you can expect the trip to take about 25 minutes without traffic from VGH, however, with traffic expect a longer commute, up to 50 minutes (especially if driving across the Lions Gate Bridge during rush hour). As long as traffic is quiet, the best route is over the Lions Gate Bridge and then east along Marine Drive/Keith Road. Highway 1 is an alternative option and the travel time is very similar.

The LGH parking lot is accessible from E. 15th Street off of St. George’s Avenue. The staff rate is $5.50/day. A temporary parking pass is required to get this rate and the pass is obtainable via VCH Connect. You will receive an email prior to your rotation with this information. Parking within a four block radius of the hospital has a two hour time restriction but there is free parking about 5 blocks from the hospital (including north of 18th Ave, south of 11th Ave, and east of Ridgeway Ave).

Using the wonderful Vancouver public transit system, you will have to first find your way to North Vancouver using either the SeaBus or a bus that crosses the bridge. Once you are in North Vancouver, the #230 and #229 buses both stop at Lonsdale & 13th, which is a block west of the hospital. From VGH, an alternative is to travel to West Georgia downtown and transfer to the #240 from there, which will drop you off at the 15th street entrance to the hospital. The trip is about an hour long.

I have great admiration for any student that wakes up extra early and is prepared to get home a little late, and maybe a little wet, because he or she uses a bike for transportation. If you are one of these students, your bike will be well taken care of at LGH. The LGH Bike Cage is located on the Parking Level of the Hope Centre and is only accessed by photo ID badge. You must request access at the same time that you request photo ID access. Alternatively there are bike racks at the 13th, 14th and 15th street entrances.
**Storing Your Stuff**

Lockers are available and should be assigned to you by the person who sends you your site information (currently Michelle Snyder) if you are not automatically assigned one. The main lockers are located inside the washrooms on the 2nd floor of the HOpe centre. There are also lockers near Labour & Delivery if you’re on your Obs/Gyne rotation. Although there are lockers in the OR, there are rarely any free ones.

**Keeping Clean**

You will be able to find showers in the locker rooms in the HOpe centre. Although it may seem silly now, nothing makes you feel more human at 3am then a nice shower.

**Call Rooms**

The main call rooms for students are on the second floor of the HOpe centre. They are accessed by your ID badge and are assigned based on which rotation you are on. There are also two “Flex” call rooms which you can use regardless of the rotation. These call rooms are quite nice compared to most hospitals, and were recently built. A quick and dry way to get to your call room on those cold rainy North Van nights is through the tunnels connecting the main hospital to the HOpe centre. These can be accessed through the basement level of the main building. It can be confusing so ask a staff member or fellow student to show you the route, or take some time to map it out before you are on-call. You will need your ID card as access.

**The Lounge**

Found in the 2nd floor of HOpe centre, it has both a fridge and microwave as well as plenty of tables and couches to relax. If you are at LGH on your Obs/Gyne rotation, the labour and delivery nurses' area is also available for your use, though be mindful that this will be shared with other staff. This area also has a fridge and a microwave. In addition to the student’s lounge there is also a doctor’s lounge on the main floor of the main building. You will be given the access code during orientation or emailed in your orientation package.

**The Cafeteria**

The cafeteria is located near the main hospital entrance on the first floor. It is small and has limited hours so make sure to bring food with you when you’re on call.
Coffee!
There is a coffee shop in the lobby of the hospital which has Starbucks brand coffee. Within a few blocks of the hospital on Lonsdale, you’ll find a Starbucks, Blenz and Tim Hortons. Most importantly, there is FREE COFFEE in the doctor’s lounge on the main floor of the building, which students are welcome to use. This is a huge perk when everything is closed overnight.

Good Eats Close By
Lonsdale is your best bet to find a nice fresh meal outside of the hospital. Along this street there are plenty of options on Lonsdale including Tacombio, Sushi, Subway, Tim Hortons, Nandos and Whole Foods. These are all within a 5-10 minute walk from the hospital.

The Library & Computers
There is a library on the second floor of the HOpe centre, just left when you walk out of the elevators. It is open Monday to Friday, from 0800-1700 hours. 24-hour access is available with your photo ID. There is also a study area on the second floor by the student’s lounge with 2 computers and access to FESR and Cerner, which comes in handy when checking labs on-call.
MSJH: Mount Saint Joseph Hospital

A small community hospital located just off 12th Avenue and Kingsway. There are few learners present at the rotations you will do here so there is plenty of interaction with staff. The only mandatory rotation at this hospital is emergency medicine. The ER closes at 8 PM so shifts are very easy on your sleep schedule!

Getting There

Located just two blocks north of the No. 9 or No. 99 bus stop on Kingsway and Broadway.

Storing Your Stuff

There is no allocated area for medical students to store their belongings other than in the ward/in the department (i.e. ER) they are working.

Keeping Clean/Call Rooms/Lounge

No call rooms available as there are not overnight calls at this hospital.

The Cafeteria

A small cafeteria with limited selection of sandwiches, snacks and a daily hot entree.

Coffee!

There is a small cafeteria on the main floor of the hospital which serves coffee.

Library

None available for medical students.

Computers

None that are allocated for personal study.
PAH: Peace Arch Hospital
A small community hospital located in White Rock. Emergency medicine is the only mandatory rotation at this hospital.

Getting There
Unfortunately, if you live in Vancouver, you are going to have to drive to White Rock. It takes between 60-90 minutes to drive, depending on the traffic. The bus takes about 2 hours each way. You may be given a free parking pass for the month on the first day. You have to use the small parking lot across from the Emergency Room entrance. Be sure to give it back at the end of the rotation.

Storing Your Stuff
A staff room by the ER entrance is available to store your belongings.

Lounge
There is a fridge, kettle, and microwave in the staff room.

Keeping Clean/Call Rooms/Lounge
No overnight call is required for mandatory rotations at this hospital.

The Cafeteria
There is a Tim Hortons on the main floor. I never checked out the cafeteria.

Library
None available for medical students.

Computers
None that are allocated for personal study.
RCH: Royal Columbian Hospital

Royal Columbian Hospital, or Hotel Columbian as it is more fondly known (due to the luxurious resident/student lounge), is smaller than VGH and SPH yet larger than other community hospitals such as RGH and LGH. Most rotations are offered at this site and these rotations generally tend to be more relaxed than those held at the larger hospitals. This atmosphere is due to the residents and staff that work at RCH in addition to the patient volume. Although on some rotations such as psychiatry you will be finished ridiculously early you can expect a normal work day for most others. However, the patient load may be decreased and you may actually get some sleep on call!

Getting There

Although RCH is not located conveniently, it is fairly easily accessible by car, transit or bike. From VGH, the drive to RCH takes about 25 minutes without traffic. However, with morning or afternoon rush-hour, the trip can be as long as an hour. I would recommend heading to the hospital early and using the extra time to round on patients, eat breakfast, study or catch up on sleep! Similarly, both the library and student lounge are very comfortable places to hang out and I would often head home later in the evening when traffic was minimal. Besides, nothing shows that you are keen like staying at the hospital longer than your resident and attending! To get to RCH, you can take Kingsway, Lougheed Highway, or Highway 1. Highway 1 has the fewest lights but can also be the most congested during peak hours.

Although driving might be convenient, it can be expensive and take away from your precious study time or sleep. Fortunately, transit is a very viable alternative as the Sapperton Skytrain station on the Millennium line is across the street from RCH. On a good day, you might choose to take out your books and study or after a long day you might just take some time to zone out instead.

If you are a bike enthusiast, the Central Valley Greenway will take you all the way to New West. Once you arrive at RCH, you can park your bike in the bike cage that is located in the parkade (the entrance to which is off Keary St.). A key card is provided as part of ID at the start of the rotation, but you will have to ask specifically for a card that opens the bike cage, as not all of the cards have this feature.

Parking

When you get to RCH, you can park either in the outdoor lot adjacent to the hospital or the remote staff/student parking lot while construction is underway. There is a shuttle offered every 15 minutes from the remote lot.
Payment options include:

- $45.00/month for a student/resident parking pass in restricted parkade areas for daily drivers.* This pass can be used across various Fraser Health sites.
- $5.25/day with a FH Daily pay document and daily dispenser ticket*

*These payment options are only available through the administration office in the basement near the residents' lounge. This parking pass is obtainable with a valid VCH ID. If you plan on being out at RCH for at least a month, it is more sensible to buy a month's pass and park in the outdoor lot.

**Storing Your Stuff**

Part of the five star experience at Hotel Columbian is your own full size locker during each rotation. Lockers are located next to the residents' lounge in the basement. If you forget your lock, you can borrow one from administration.

**Keeping Clean**

Showers are also located next to the residents' lounge. Towels are provided, although at this point it is unclear how many students, if any, actually bother to take a shower. Also remember to pack (and use) a toothbrush when on call!

**Call Rooms**

The call rooms are located next to the lockers and the residents' lounge (all located next to the medical education office in the basement of RCH). They are quite nice, with comfortable beds and pleasant lighting (hence the name Hotel Columbian). You can also grab extra blankets from the hallway if you need to (that is, if you're lucky enough to get some sleep!).

**The Lounge**

The residents' lounge at RCH is the highlight of the hospital, and it will undoubtedly enhance your experience in any rotation! There are computers, phones, couches, TV, video games, a foosball table, and a nice view of the Fraser River. The best part is that three times a week, the communal fridge is stocked with goodies like bagels, cheese, cream cheese, ice cream, cinnamon buns, milk and fruit juice. And the cupboards store cereal, biscuits, peanut butter and jam. There is also a sink, microwave, kettle, another fridge for your own personal food, and a sandwich griller! The griller is well seasoned (rarely if ever wiped down) resulting in a grilled cheese with a flavour unique to RCH: The RCH Grilled Cheese Special. Delicious.
The Cafeteria
The cafeteria is also located in the basement. The food is decent and moderately healthy but the selection is minimal. Most students recommend bringing a lunch or buying something off-site: Subway, Quiznos, sushi, and pizza are all nearby. Also, don't be afraid to snack on the communal food in the residents' lounge! Another important tip is to learn when free lunch is offered. For example, during your Internal Medicine rotation, there are usually at least three if not more days a week where lunch is provided (and it's usually tasty).

Coffee!
There's a Tim Horton's in the hospital lobby, which is fantastic...except when it's being used as overflow for the emergency department. If you insist on a “barista” making your quad grande non-fat extra foam extra caramel caramel macchiato, Starbucks is north on Columbia.

Good Eats Close By
Subway, Quiznos, sushi, salads, and pizza are all nearby. There's also a good Thai restaurant and Browns down the street that your attending might take you to (or order take-out from) if you're lucky. Dinners on call were provided by most attendings! Some students also take advantage of a nearby supermarket.

The Library
The library is adjacent to the residents' lounge and has plenty of computers and study space. It also has useful textbooks that you can borrow for a couple of weeks.

Computers
In addition to the computers in the library, there are three computers in the residents' lounge.

Overall Impression
Although probably not right around the corner from your home, the commute to RCH is not a major burden. Many students even ride their bike to the hospital from downtown Vancouver regularly. Becoming familiar with the hospital is also not a challenge due to its size and simple layout. There are generally fewer students per rotation at RCH than at the larger sites resulting in more one-on-one time with your residents and attending. The student amenities, including comfortable call rooms and free food send a clear message that RCH is welcoming to, and
supportive of, its students and residents. For this reason, the atmosphere at RCH tends to be more relaxed. Residents are more at ease and staff are more willing to take the time to teach. Regardless of which rotation you complete at RCH, you will likely have a very positive experience.
RGH: Richmond General Hospital

Richmond General Hospital is a smaller community hospital. One of the major advantages of working at RGH is the direct contact with staff physicians. For specialties like surgery and psychiatry, this means being able to be directly part of the care of patients as opposed to peering over the shoulder of residents and fellows. For example, during the emergency rotation, there is only one student at a time! If you are lucky enough to be that student, you will always have priority access to wounds that need suturing, code blues and other bread and butter cases. Because of the one-on-one time with staff and the increased responsibilities at RGH, this is a great hospital to experience a specialty that you are interested in pursuing. Not only do you get a chance to learn and show off your knowledge/skills, but the possibility of a great reference letter is much better here than at other hospitals! Of course, this also means that there is no chance to hide in the shadows, so be sure to be on your game!

Getting There

Richmond Hospital is located at the intersection of Gilbert Rd and Westminster Hwy. It is accessible by public transit or by car.

When you arrive at RGH, there is generally plenty of parking available in a multi-level parkade. With a staff parking pass, which can be obtained from the site administrator, students can park for $6.50/day. Monthly parking passes are available but there is no staff rate for these passes. An alternative to parking in the hospital lot is non-restricted parking on Azure Road, approximately 5-7 minutes from the hospital.

If you decide to take public transit, simply take the Canada Line to the Richmond-Brighouse station. From there, you can either walk (10-15 min) or take a short bus ride (5 min) via the #401-One Road or #407-Gilbert directly to the hospital. Although to note, buses only come every 15-30 mins depending on the bus!

If you are cycling to RGH, there is a bike cage located on the ground floor of the multiple storey parkade. You can access the parkade using a VGH ID specially coded by the Parking and Security Office. Can’t find the office? Head down the same hallway used to access the OR locker rooms, past the lockers. If you can’t find it, no worries, just ask at the info desk!

Storing Your Stuff

Lockers can be found adjacent to the call rooms in the Blue Rotunda. You will receive an orientation from the administrator on the first day of your rotation on where lockers are. Students on surgical rotations can use lockers located in the OR, those on their ER rotation will be provided with a locker in emergency and those doing their psychiatry rotation have access to lockers on 2W. Regardless of which locker you occupy, remember to bring your own lock!
Keeping Clean
Depending on what rotation you are on, you may be splashed with bodily fluids (e.g. ob/gyn). There is no excuse for you to forgo showering however as there are plenty of showers available. They can be found by the call rooms in the Rotunda (beside the gym) or on 4N.

Call Rooms
There are 3 call rooms in the Rotunda and 3 more on 4N. To access the rooms, all that you need is your VCH ID badge. Students generally prefer the rooms located on 4N. It is fairly easy to get a room as it is really only the surgery and Obs/Gyne medical students who use them.

The Lounge
If you have the luxury of getting a break, there is a doctor’s lounge located beside the library and a separate lounge in emerg for ER docs, nurses and students. Computers and a printer are available for your use in the doctor's lounge. Both spaces have access to their own microwave and fridge.

The Cafeteria
The cafeteria is located on the second floor. Serving hours for hot meals are fairly limited but there are sandwiches and snacks available all day. The hours of operation are between 7:00am to 6:30pm, 7 days a week.

Coffee!
Coffee and snacks can be found in the cafeteria on the second floor or at the Starbucks located in the main lobby. Starbucks is open from 7:00am to 6:00pm on weekdays and from 10:00am to 6:00pm on weekends.

Good Eats Close By
Richmond Centre, a short distance by foot (~10 min walk) from the hospital has a wide variety of options in its food court in addition to a grocery store and a few bakeries. There are also a variety of restaurants along Westminster Hwy located within walking distance from the hospital.
The Library

The library can be found on the main floor. If you need to access the library after hours, head around the back through the corridor where the doctor’s lounge is located (with ID badge for access).

Computers

Computers are available in the library but require a login, which will be arranged for you by the site administrator. The computers in the doctor’s lounge do not require a login. There is also wifi (eduroam) available in most parts of the building.

Overall Impression

Being a smaller hospital, RGH is not only easier to navigate than the larger hospitals but is also easier to get to know the other healthcare providers that work with you. The commute is reasonable and shouldn’t detract from your experience at RGH. Because of its size, however, the patient volume is reduced and you may not see as many cases or complicated ones as you might at VGH or SPH. This is especially true for Obs/Gyne where deliveries occur much less frequently than at BCWH. In addition, RGH is not a trauma center which limits your experience in both surgical specialties and emergency. However, the hands-on experience that you will get at RGH is unparalleled by the experiences at larger hospitals and you will find the time that you spend there very rewarding.
SMH: Surrey Memorial Hospital

Surrey Memorial Hospital is a busy tertiary care center that is part of the Fraser Health Authority service area. It sees a wide variety of pathologies, and its average patient population is younger than other hospital sites. Coupled with the fact that SMH has the 2nd highest number of deliveries in the province (after BC Women’s), this means that it is a great site to experience both pediatrics and obs/gyne. This is especially true for students who wish to see the bread and butter of these two specialties, or who are more family practice inclined, and don’t feel experiencing rare diseases is an essential part of their learning. Surrey Memorial Hospital is an available site option for: obstetrics and gynecology - pediatrics - psychiatry – emergency - anesthesia - orthopedics - surgical subspecialties - ambulatory internal medicine. The educational program is divided between multiple inpatient and outpatient sites including Surrey Memorial Hospital, Jim Pattison Outpatient Care Centre (JPOC) and the City Centre Towers.

Getting There

SMH is located in central Surrey at the intersection of King George Boulevard and 96th avenue. In terms of driving to the hospital, it is best accessed from most of Greater Vancouver (except Richmond and New Westminster) by following the Trans-Canada highway over the Port Mann Bridge, taking exit 48 at 152nd Street, and proceeding south before making a right at 96th Avenue.

It is also easily accessible by public transit (e.g. Expo line) as it is only a 10-minute walk south from King George Skytrain Station. From the right side of the drop off parking you can access the Fraser Health Foundation shuttle (Central Surrey Health Shuttle), which takes you to the JPOC and then SMH. This runs on the hour and every half hour. Alternatively, one could catch a public bus from the skytrain to the hospital. The shuttle and bus actually take longer than the walk. Some preceptors have outpatient clinics that you will be invited to attend. These are often located in the City Centre Towers across from the hospital (~2 min walk from hospital) or the Jim Pattison Outpatient Centre abbreviated to JPOC (pronounced jay-pawk) (~10 min walk from hospital) which may require additional planning in advance.

Parking

Parking options include:

- $45.00/month for a student/resident parking pass in restricted parkade areas for daily drivers.* This pass can be used across various Fraser Health sites including JPOC.
- $5.25/day with a FH Daily pay document and daily dispenser ticket*
- Free residential parking around the area, some for ‘residents’ only, others with a 2 hour max, for very broke (or cheap/thrifty) drivers

*These payment options are only available through the Medical Education office on site.
An interactive map of SMH can be found here:
https://www.fraserhealth.ca/legacy/onlinemaps/smh%20map/index.html

Storing Your Stuff

Lockers are available in the UBC Call Room suite washrooms on the 3rd floor of the Critical Care Tower. If the locker does not have a lock on then it may be used by any student or resident. The Medical Education office can provide you with a lock if needed. Beyond this area, the only other place to store stuff would be your car, or under the nursing station tables of the ward you’re on (nurses may not always like this, so definitely ask beforehand!)

Keeping Clean

There are brand new showers by the call rooms. There are towels by the showers. There is a laundry bin by the towels. Always make sure to pack (and use) a toothbrush when on call.

Call Rooms

As noted above, call rooms are on the 3rd floor of the Critical Care Tower (green line). There are designated call rooms for medical students. These call rooms are arguably the comfiest among the major hospitals in the Lower Mainland. Each room comes furnished with a memory foam mattress, desk, lamp and cupboard. There is a thermostat to regulate the room temperature in each room but the rooms can get chilly during the winter in which case you can help yourself to blankets and pillows kept on a communal cart in the hallway. Make sure to sign your name on the sign-in sheets outside your call room as soon as you have selected a room. This will ensure nobody else mistakenly takes your room for the date(s) listed.

The Lounge

Like everything else, the student/resident lounge is also located by the call rooms on the 3rd floor of the Critical Care Tower (green line). This lounge is brand new, very cozy, and has comfy couches, a small dining table, microwave, fridge, eating utensils, and hot chocolate/coffee in the cupboards. There is also a new 40+ inch wall-mounted flat screen tv, computers, and phones for dictating. Much of one’s downtime when on call can be spent here eating, watching tv, and using the computer at the same time. There is also some workout equipment (e.g. stationary bicycle, free weights) within the lounge which can be used to blow off some steam. As SMH only has a few medical students and residents around, most of the time the lounge will be free for just the on-call student to enjoy (unless you’re on an ob/gyne rotation which rarely has any down time during call).
The Cafeteria
The cafeteria is located in the corner of Area B (orange line). Standard hospital fare, but at relatively reasonable prices. The cafeteria, like many others in hospitals, are always closed earlier than you’d think would make sense or be reasonable, but there’s always the vending machines around. The cafeteria actually has some prepackaged microwavable meals, such as tv dinners and burritos, along with a good selection of snacks, drinks, and ice cream in their vending machines. This helps when it’s late night on call to still find something decent to microwave in the lounge and eat!

Coffee!
There are numerous caffeination joints at this hospital! A coffee shop can be found near the main entrance (96th avenue, blue zone). Second Cup is open 24 hours near the Critical Care Tower Lobby (green zone). There is also a limited menu Tim Hortons situated next to the cafeteria but the line ups can get really long so avoid peak hours. Of course there is also the coffee machine in the lounge. Offsite coffee is available at the Tim Horton’s across the street (at the corner of King George Boulevard and 96th Avenue). Starbucks also exists at an equal distance on 96th avenue, opposite from the main entrance (blue zone).

Good Eats Close By
The nearest restaurants are all housed in the double City Centre towers across from the hospital. Here you can find Quesada and Subway. A little further away there is also a Dairy Queen Brasserie further down King George Boulevard (which has burgers and hot food, albeit at a marked up price vs. other locations). Other restaurants include a Knight and Day and Swiss Chalet heading towards the skytrain station, and even closer, the China Village Wonton House.

The Library & Computers
The library is located where else but by the call rooms on 3rd floor of the Critical Care Tower (green line), rounding out the central hub of anything and everything that the med student could need in one place. This is a reasonably sized library with 4-5 computers, an all-you-can-use printer, and a smattering of various books and references, some of which can be loaned out. Other than these computers, the only other choices are the computers on the wards or the ones in the lounge. Though small, the library does provide a quiet study space as few people use it. An alternative study space is the video conference room down the hall near the Med-Ed office, which has comfier chairs and better air conditioning.
Overall Impression

Surrey Memorial Hospital is by no means a humongous hospital, but it has expanded considerably over recent years. Its manageable size is precisely this fact that makes it a likeable site to be at. Everything in the hospital is within 5-10 minutes walking distance, which is a huge boon when it comes time to rush to the delivery suites in the middle of the night during pediatrics call or the OR for an emergency procedure. It also means within the first day of walking around, you won’t ever be lost again. Also, as there are essentially only 2 floors that are relevant in any given area of the hospital, it means one doesn’t have to wait forever for elevators that never come or which are jam packed with people. The call rooms and lounge are brand new, very comfy and hands down one of the best to be found in the Lower Mainland. It is very much accessible by public transit, and also has very cheap monthly parking available, making any form of commuting simple enough, even if some find it a bit far.

The pediatrics experience is very commendable here, and the ward and staff are both very welcoming and nice. Emergency also offers a busy, but balanced experience here, although one may be taken aback by the sheer number of patients lying in beds placed in the hallway. Psychiatry offers a phenomenal experience with a variety of patient populations (e.g. adult, pediatric, reproductive, geriatric) and sub-specialty experience (e.g. consult and liaison, in-patient, out-patient, and emergency psychiatry). Anesthesia is a fair experience which covers the essential learning outcomes. Obstetrics and gynecology is one of the most demanding rotations offered at this site given the sheer volume of patients and I would highly recommend this site for anyone interested in this focus area. The ambulatory internal rotation at JPOC provides a breadth of exposure to topics in medicine with a bigger focus on Infectious Disease. Overall, if you desire a change of pace from the large, overwhelming size of the central tertiary hospitals, do not be deterred by distance as SMH presents a great opportunity to be somewhere new, enjoy a great care facility and find some genuine mentors in your area of interest!
SPH: St. Paul's Hospital

St. Paul’s Hospital is a large primary care hospital serving the unique downtown Vancouver population. Because of its size and patient volume, not only will you be busy but depending on your rotation, you will be exposed to a wide variety of important cases from trauma to heart failure to meningitis. However, as a result of its diverse population, these cases are also often complicated by comorbidities such as alcohol use disorder or substance use disorders. As such, infections and other diseases that often result from IVDU, poor hygiene or alcohol abuse must also be addressed. In addition, involving social work in the care of SPH patients is usually necessary. On most rotations, you will be part of a large team including other medical students, residents and possibly fellows. As a result, your opportunity to interact directly with staff may be reduced depending on the structure of your rotation. Mandatory rotations available at SPH include Internal Medicine, Orthopaedics, Anaesthesia and possibly Psychiatry.

Getting There

St. Paul’s Hospital is located on the West side of Burrard Street, between Davie and Comox. If you are driving, allow for traffic, especially in the morning and afternoon rush hours. The hospital’s underground parking lot is $5.75 per day (14h) with your VCH ID, but it fills up early, by around 6:30-7:00 am. It is possible to get parking at nearby lots, like the Sheraton Wall Center, but you'll be spending $14.00 to leave your car for the day.

Many transit routes either run past or nearby, such as the #2, 22, 32, 44 and N22. The #4 can also be found on Grandville about 4 blocks away. The Burrard Skytrain Station is also about 1km South and 1km West you can find the Canada Line at Yaletown.

If you are travelling between either UBC, VGH or BCCH, the InterHospital Shuttle provides great service. This dedicated shuttle runs 5 days a week, leaving SPH every 30 minutes from 7:05 to 4:35 en route to BCCA, VGH, GF Strong and Children's. In the other direction, arrivals at SPH are every 30 minutes from 7:33 to 8:03. (Schedule found at https://surgery.med.ubc.ca/files/2015/03/ShuttleSchedule.pdf.) However, the shuttle can be busy, and there may not always be room for more passengers, so allow for extra time.

If you live in or close to downtown Vancouver, cycling to SPH might be the most efficient method of transportation. Bike lanes on Hornby and Burrard make SPH an easy destination. A bike cage is found in the parkade off Burrard, accessible via a Providence ID which can be obtained from Security on the 4th floor of the Burrard building. There are many open bike racks on street level as well.
Storing Your Stuff

Lockers for students are available in the call room area (Burrard 6). These lockers are not assigned and you are free to take any unclaimed locker. In order to claim a locker during your rotation, fill out the tags (located on the bulletin board near the door) and place it on the locker. Students rotating through Internal Medicine also have access to lockers on the 7th floor of the Providence building, and those rotating through Emergency Medicine are provided lockers beside the ED on a first-come, first-served basis. If you are on Surgery, it can be useful to keep a few extra scrubs in your locker to change into when you arrive in the morning as you will not be given a locker in the OR change room.

Keeping Clean/Call Rooms/Lounge

In contrast to the rest of SPH, the call rooms and student lounges are new and very comfortable. After walking in the main entrance to the Burrard building, go left and take the first elevator on your right to the 6th floor. There are two resident lounges which can be accessed with your ID card, one on the left and one one the right on Burrard 6. Medical students are typically assigned to call rooms on the left side. Call rooms, showers, a microwave, computers, a television and a lounge area are found on each side.

The Cafeteria

The cafeteria has a decent salad bar but otherwise serves basic fare such as burgers, pizza, sandwiches and a daily special. It is not well reviewed by most students. Thankfully, with so many outside options immediately available, it can be easily avoided.

Coffee!

Coffee is also sold just inside the main entrance of SPH and in the cafeteria. It is the last door down the hall on the right and can be accessed by your ID card. The residents lounges on Burrard 6 also have Keurig Machines which require you to bring your own K-cups. Outside of the hospital, decent coffee can be found at Beyond Café (which is located on the ground floor of the Century Plaza Hotel), at the Starbucks in the Sheraton Wall Center (across Burrard), or at Elysian across the street (underneath the Burrard Hotel). There’s also another Starbucks at Davie and Thurlow.

Good Eats Close By

You are in Downtown Vancouver so good food is never far away! A good idea is to head West on Davie street. There, you can choose from Kadoya (sushi), Thai Basil, Banana Leaf
(Southeast Asian), Vera’s Burgers, Subway (24hrs), Mucho Burrito (East on Davie) and others. A huge life saver when you’re on call is Breka’s Bakery & Cafe at Davie and Hornby, which is open 24/7 and can provide you with something to eat on those unpredictable shifts. Tucked away behind the Sheraton Hotel are Toyko Joe’s and Balila. If bringing a lunch, the call room has a fridge and microwave that are available for students to use.

The Library
This is located on floor 1 of the Providence Building. Just follow the signs.

Computers
Computers are available in the call-room area of Burrard 6 and in the library on Providence 1.

Overall Impression
SPH is a large hospital composed of two main buildings: Burrard and Providence. The two buildings are connected on floors 1-3 by an indoor corridor and on the fourth floor by an outdoor walkway. The layout not only confuses patients but also students! With time, however, you will learn to find your way around. The elevators can be slow in the Burrard Building so it is sometimes advised to take the stairs if you are in a hurry. Despite its downtown location, commuting to SPH can be difficult as a result of traffic, lack of parking or crowded transit. The staff physicians are knowledgeable and a pleasure to work with as long as you can keep pace with the demanding patient load. Because of both its physicians and patient population, SPH is a prime site to learn through real cases as opposed to through books and I would encourage you to spend some time there!
Burnaby Hospital

Burnaby Hospital (BH) is a large community hospital located close to Metrotown and is situated in the Fraser Health Authority region. It mainly serves the community of Burnaby which primarily has a population of families and the elderly. In terms of services available for students, it has a rather busy 24/7 Emergency service that lacks a trauma bay. It also has a small obstetrics/gynecology ward and a maternity clinic served by both obstetricians as well as family doctors. Inpatient and outpatient psychiatry and surgical subspecialties such as orthopedics, urology are also available for students. Given the smaller size of BH relative to other sites nearby, it is a great place of learning due to the fact that students are more involved in the line of care and have more autonomy. Often, residents and other medical students aren’t placed with you and it is common to be working with an attending on a 1:1 basis. You will definitely have a chance to connect with your attendings which can be great for letters. Most rotations at BH will have a manageable workload with a steady stream of cases coming in. Given that often you are working alone as a medical student in your team, it is paramount to take ownership of your learning to really benefit from the independence you receive at BH.

Getting There

BH is located on Kincaid street off of Boundary road nested in a residential area, which at first can be difficult to find. The main entrance is located ~20 meters east of Kincaid street and Macdonald ave at the end of a hairpin loop. The South entrance is located on Kincaid street but ~50 meters west of Macdonald Ave. The parking lot is located immediately east of the main entrance and is rather small, so make sure to park here early before 8am if coming in for a morning shift. Prior to parking, you will have to purchase a pink parking pass at the administrative office located on the 3rd floor of the West Wing (Blue Zone) beside the gift shop and volunteer desk. It costs 45$ per month. Alternatively, there is free residential parking located on Boundary road around Kincaid street, and is a 10 minute walk to BH from here. Spots also fill up quickly in the morning, so come early. Another free residential parking spot exists on Fir street at the south end of Macdonald Ave, and is a 10 minute walking distance to the main entrance of BH. Paid street parking immediately adjacent to BH exists all around, but has a max limit of 2 hours and is strictly enforced.

The nearest skytrain stations are Gilmore station and Joyce-Collingwood. If coming on the Millenium line from Gilmore station, you can take the 129 to BH. If approaching from Expo line via Joyce-Collingwood, you can take the 28 to BH. There are no shuttles connecting BH to other hospitals available.
Storing Your Stuff
There are student lockers located in the mens and womens change room on Floor 0 (Green Zone) just behind the MRI room. Scrubs are also located here. Make sure to bring your own lock as these lockers are not assigned. Students are NOT permitted to use the lockers located in staff change rooms on Floor 4 (Red Zone). Alternatively, you can store your belongings in the staff rooms or nursing stations on the ward you’re on, but be mindful of it’s security as it is not enforced. Call rooms are not secure for belongings since many staff members of the hospital know the access code; hospitalists and G.P’s on call often sleep there.

Keeping Clean/Call Rooms/ The Lounge/ Library/ Computers
The call rooms for students are located on the 6th floor of the West Wing (Blue Zone). To access this level, make your way to the 3rd floor first. Walk to the West Wing past the cafeteria towards the south entrance and use the elevators located to the left of the lottery booth to get to the 6th floor. Rooms 636, 637 and 638 are available for both students and residents. You must claim the call room for the day by signing up on a sheet listed on the doors. When coming into your call-shift in the morning, make sure to first come to these call rooms and sign up yourself on the door, as they can be claimed by other MSIs or hospital staff if vacant! These call rooms a bit old and have broken heating as of February 2020. Make sure to bring extra blankets from your ward if you are at BH during the winter. Often, the call rooms may not be cleaned right away by building staff, so bringing extra blankets also becomes handy in this way. There are no fridges or microwaves inside the call room. Use the appliances located in your respective ward staff room or cafeteria instead.

There is no formal lounge for students or residents. Rooms 611 and 612 can be used for studying and meetings, but first must be booked prior to usage. The library is also a good spot to study and lounge in, and has two computers for student use. It is located on the 1st floor (Red zone) in a hallway left past the elevators from the main entrance and is available 24/7. All access codes can be obtained by asking the administrative staff. There is also a small gym available for staff and student use on the 7th floor next to the cardio center! Treadmills, ellipticals and rowing machines exist here.

The Cafeteria/Good Eats Close By
Food is VERY scarce around BH, so make sure to pack lots for your call shifts. The nearest restaurant available for takeout is a 15 minute walk away, and is only open until 6pm! All other nearby food options require a car to access. If time permits, you may be able to go pick-up food from nearby good places such as Penang Delight for Malaysian and Kimu Sushi. Note that this requires a considerable amount of time and is usually not feasible as you have to walk out to your car, drive to pick up food, drive back and walk back to the hospital. The cafeteria offers
daily specials such as stir-fry and burrito bowls. It also has a basic salad/sandwich bar, and they are open for breakfast, lunch and dinner. There is also a Tim Hortons in the cafeteria. The cafeteria is not bad if strictly eating from a functional perspective. I recommend packing lunch and dinner along with snacks at the minimum when on call at BH. Water is available from dispensers close to nursing stations.

Coffee!

While hot food is so hard to come by, Coffee is a necessity in our lives so BH has blessed us by placing a Tim Hortons adjacent to the cafeteria. Go get your double doubles!

Overall Impression

BH is a community hospital nested in a residential area of Burnaby. It offers a rather robust and engaging clinical experience given the lack of trainees situated at this hospital and the steady volume of patients. It is fantastic for 1:1 learning with an attending and allows you to perform clinical duties with greater autonomy and breadth. It does require you to take more ownership of your learning and at times it can be difficult given the lack of residents who at times can be of great resource.

Navigating the hospital takes a bit of learning as the hospital is situated on a hill. The 1st floor only exists in Red and Green zones as they are situated on the bottom part of the hill. The 3rd floor is the main connecting floor linking all 4 zones (Blue, Red, Green, Yellow). Floors 5 and above are situated in Red and Blue/Yellow Zones which are located on the top of the hill. Not all elevators allow you to access each floor and thus some time will be needed to get yourself accustomed to navigating the hospital!

Obstetrics and Gynecology here is great as a clerk since you get dual exposure to both ObGyns and family doctors who both run the ward and maternity clinics. Emergency is fantastic for seeing a wide variety of acute cases given both the elderly and family populations present in the catchment area. Psychiatry is also very involved and engaging as students have a greater number of cases they handle through their rotation relative to other sites. The same can be stated for the surgical subspecialties. Overall, it is a great hospital situated fairly close to the city that offers a suburban community clinical experience that is more immersive relative to big hospitals nearby like RCH or VGH. Just make sure to bring lots of food for your rotation and it will be a great time!
VGH: Vancouver General Hospital

Vancouver General Hospital is one of two tertiary care hospitals in the VFMP program. Because of its size and patient population, not only does it offer all rotations (except pediatrics) but it also offers the possibility of seeing a wide variety of important cases. You can expect to work with larger teams at VGH resulting in less chance of one-on-one time with your resident or attending. Popular rotations at VGH include emerg, due to the exposure to trauma cases, and the surgical sub-specialties. General surgery at VGH has been given poor reviews in the past largely because of the competition for OR experience with other medical students, residents and fellows. That being said, however, your experience in clerkship is what you make of it. Through their enthusiasm and perseverance, those students that are very interested in surgery are often able to create exceptional experiences at VGH for themselves. The consensus on Internal Medicine is mixed and will vary depending on the team you are assigned. You can expect to work hard at VGH carrying a large number of patients and working most of the night on call shifts. However, you will also likely see many “bread and butter” cases ultimately improving your knowledge of, and skills in, internal medicine.

Getting There

VGH is located centrally and unless you are not from the VFMP program, or slept through all of first and second year, you should know where it is! There are multiple methods of commuting to VGH.

Although getting to VGH by car is not a challenge, parking in close proximity to the VGH is expensive. Flashing your ID badge at the parkade at 12th avenue and Laurel street will grant you access on arrival and ensure you pay no more than $8.50 when you exit. Although there is also free parking between 15th and 20th these spots are quickly filled making it difficult to get one unless you arrive before 0730. I would not recommend parking in the resident only or two hour area for the day as students have known to be ticketed and towed.

Second only to arriving by ambulance or helicopter, transit is a fantastic method of commuting. Several bus routes run by VGH. Many students rely on the #9, #99, or #17. In addition to the bus, the Broadway/City Hall stop on the Canada Line is located at Broadway and Cambie street, a 5-10 minute walk from VGH.

If you prefer to pedal your way around, a bike cage is available in the Diamond Parkade. In order to access the bike cage and the adjoining locker rooms, you will need your VGH ID card activated by security. You can also store your bike at the Medical Student Alumni Center (located on the corner of Ash Street and West 12th Avenue) which is a 3 minute walk from VGH.
Storing Your Stuff

Storage options depend on your rotation. For longer rotations such as general surgery and internal medicine, lockers are generally provided (although they may be shared). For smaller rotations, you may be assigned a locker by the department administrator. Be sure to check your reporting instructions and orientation documents to find out about the storage that you will be provided. If there is no information, a friendly email to the department administrator or program assistant is warranted. If you do not receive a locker, you will have to carry your things around with you. On surgical rotations, you’re safe to leave your clothes on a hook in the locker room and change into scrubs. Just be sure to take your valuables with you. The Medical Student Alumni Center is located very close to VGH is a good option to store heavy books or bicycle helmets.

Keeping Clean

The call rooms on the second floor of the Centennial Pavilion have a shower available. Towels are also provided. On a busy call shift, do your colleagues, your patients and yourself a favour and use it!

Call Rooms

The call rooms are located on the second floor of the Centennial Pavilion. When you start your rotation and if there is in-house call, the program administrator should provide you with the code for the service’s MSI call room. The rooms lack luxury to say the least but you likely will not be using them anyway!

The Lounge

Not busy? Ask your attending or resident what you can do. Still not busy and need a place to relax (or recover)? There are a few options here. Located near the call rooms there is a “doctor’s lounge” with a refrigerator and other amenities. In addition to this space there is also an OR lounge (used by students primarily when on a surgical rotation) which also has a refrigerator and microwaves. The OR lounge is located on the same floor as the cafeteria and the OR (surprise, surprise). It can also be accessed from the OR itself. Getting to the lounge is easy but rather complicated to describe in text. When you embark on a surgical rotation, it’s best is to ask a resident or another student how to get there. If you’re on your Surgery rotation, there are also giant fridges as well as microwaves in the OR lounge. Microwaves can also be found in the cafeteria, or in the service elevator stairwell on most wards.
The Cafeteria

The cafeteria at VGH is commendable for the fact that it is convenient for on-the-go students. Nonetheless, it is somewhat expensive for the food you may get. Most food items sold at the cafeteria are decent, as they are safe and edible. It is advisable, though, to forgo the pizza as it’s over-priced, rather unsatisfying, and may cause you some digestive discomfort. So, use the cafeteria when you must, but be sure to check out Broadway Street for some delectable cuisines. If you have a longer break (>30 minutes), there’s a nice food court within City Square shopping mall, which is located on the corner of Ash and 12. It is about a 5-7 minute walk from VGH.

There are also many nice restaurants on Broadway which are not much more expensive than the cafeteria at VGH but have much better quality.

Coffee!

For the caffeine fanatics, coffee is available at several locations in and around VGH. You can get your fix from: the cafeteria (not bad, but not great), Café Ami on the first floor between Centennial Pavilion and JP Tower (has good coffee, munchies and sandwiches), Starbucks and Zookaz at Diamond, Tim Horton’s (Broadway) which is open 24/7.

Good Eats Close By

Take your pick along Broadway. Some notable food places include:

- In Diamond Centre (main floor)
  - Starbucks
  - O Sushi
  - Zookaz Kaffe
  - The Salad Loop
- Banana Leaf
- Tim Horton’s/Wendy’s (24/7)
- Subway
- Donair Spot
- At Oak and 16th Max’s Bakery will provide you with amazing sandwiches and other baked goods
- Cactus Club
- Food court in City Square shopping mall
- Multiple great sushi places nearby
The Library

Probably one located somewhere in VGH, but you’re better off going to the library at Diamond. You can also study at the MSAC. There are computers and desks available upstairs and downstairs and not many people use it during the school year. During the day most people are in class or on rotation, and at night it is completely empty. Times to avoid the MSAC (when you are looking for a quiet space) are in the afternoon/evenings because events are held at this time year round.

Computers

To check on ward stuff/patients' labs, you can use almost any computer at the nursing stations in the JP Tower. To check your email or other non-work related things, using a computer in Diamond is probably the most guilt-free option. There are other computers around VGH, if you see no one around, go for it, but keep in mind that people need to work. Avoid using nursing station computers for non-ward/patient related things during busy times (i.e., morning rounds, afternoon rounds). There are also some nice computers in the downstairs lounge at the MSAC.

Overall Impression

VGH is a large hospital but navigating the building is usually not a challenge and for each rotation you will be stationed in a specific location. The health care team at VGH including physicians, residents, nursing staff and others are friendly and a pleasure to work with so long as you show that you are a dedicated, keen and respectful student. Being one of the busiest sites in VFMP, I recommend that you spend at least one rotation there for the variety of exposures and to learn how to excel under significant pressure.
Sites: SMP

128 KELOWNA GENERAL
130 VERNON JUBILEE
KGH: Kelowna General Hospital

Getting There
If you drive, you can park in the KGH lot for $6 a day. However, parking is very limited if you don’t get there early. There is also a gravel lot on Burnett St where you can park for $1 for the day. It is approximately a 10 minute walk to the hospital from there. There is a fair amount of housing within walking distance. Ask your friends who live close by if you can park at their place!
If you bike, there are bike racks in front of the main entrance and one in front of the CAC. There is a bike cage in the staff parking lot at the back.

Storing Your Stuff
There is a dedicated student and resident area on the 4th floor of the Centennial building - you need your ID badge to go up the elevator and get in, don’t forget it!! Staff don’t have access to this area. Numerous lockers in the men and women's change rooms. Bring your own lock.

Keeping Clean
Showers can be found in the change rooms on the 4th floor of the Centennial building (same room as the lockers).

Call Rooms
4th floor Centennial Building - it's like a big circle around the changerooms, call rooms are around the outside.

The Lounge
Awesome lounge on the, you guessed it, 4th floor Centennial Building. There is a snack box, fridge, microwave, dishwasher, foosball table and screen with the OR slate. Numerous couches where you can enjoy lunches with your classmates or residents. Two computers with a printer available.
The Cafeteria
The cafeteria is on the main floor of the hospital. Serves your basics like soups, sandwiches, a daily special and a salad bar.

Coffee!
Both coffee shops in KGH are non-profit, run by volunteers. The Perking Lot is located on the main floor of the Centennial building. Great variety of coffees, specialty coffees, teas and baking items. They also have a few sandwiches, sushi and cold drink options. The Royal Bistro Deli and Cafe is located on the main floor of the Royal building. It is a 50 seat cafe that offers hot deli meals like soups, sandwiches and more! If you want to get some fresh air, you can walk 5 minutes down to the Waterfront Cafe and enjoy a coffee right beside Okanagan lake.

Good Eats Close By
Waterfront Cafe, a 5 minute walk, offers brunch, lunch and dinner options. Pandosy village is about a 5 minute drive or 20 minute walk South and is the closest place for other food options. There is a Starbucks, Bean Scene, Original Joe’s, Mucho Burrito, Zabb Thai, Momo’s Sushi, to name a few! Downtown Kelowna is a 5-10 minute drive North of the hospital. There you can find any fast food chain you crave and a wide variety of other options!

The Library
The library is in the Clinical Academic Campus (CAC) and has lots of computers, study desks and small group study rooms.
VJH: Vernon Jubilee Hospital

Getting There
Vernon is a small city and it is possible to live close enough to the hospital to walk every morning. Finding a place with summer availability can be hard, so start looking as soon as you can.

Transportation
Yearly parking passes are gifted to ICC students by VJH Physicians’ Association. There is also street parking a short distance from the hospital. The transit schedule is less than ideal, but there are some routes that pass by the hospital. All other routes take you downtown (the hospital is a 10 minute walk from downtown.)
If you prefer to ride your bike, there is no bike cage, but there are some bike racks in front of the ER.

Storing Your Stuff
Students are provided with dedicated lockers in the UBC Faculty of Medicine area on the 5th floor of Polson tower. There are also student/resident lockers in the OR change room.

Keeping Clean
Showers are available next to the 5th floor call rooms in Polson Tower and in the OR change rooms.

Call Rooms
There are four student dedicated call rooms in the FoM area of the 5th floor of Polson Tower. While there are other call rooms at the back of ER, on the fourth floor (maternity/children's ward), and in the ICU, students are expected to use the dedicated call rooms.

The Lounge
There is a dedicated medical student lounge on the 5th floor of Polson Tower. There is also a physician lounge next to the ORs on the 3rd floor of Polson Tower. The medical student lounge has a computer and printer, a TV, a couch, a table, and a fridge/freezer. The physician’s lounge
has three computers, a TV, couches, a fridge/freezer, a microwave, and tables. There are also free cookies every other day!

The Cafeteria
The cafeteria is located in the basement of the old tower. It is open for breakfast and lunch on weekdays and closes shortly after 1:00pm. The prices are very reasonable and the quality of the food is pretty good. There is also a cafe on the main floor of the old tower that is open from 06:00 to 19:00 every day (I think it closes an hour earlier on the weekend). It has food, drinks, and snacks, but tends to be pricier than the cafeteria. The best cafe is Amplified, on the ground floor of the Polson Tower. It has espresso-based drinks, treats, salads, and wraps. It is the most expensive food/coffee option at VJH. Amplified is open 0630-2000 daily.

Coffee!
The nearest chain coffee shop is Starbucks at the bottom of the hospital hill about 500m from the hospital. The best cafes in town are Amplified (at VJH), Ratio (Downtown), and Triumph (Downtown).

Good Eats Close By
There are many chain restaurants at the bottom of the hospital hill (Wraps, Subway, Earls). If you're looking to get away from chains, your best bet is along the main strip of downtown, about 4-5 blocks further north from the chain restaurants. There, you can find a good mix of Indian, Asian, Greek, Mediterranean food.

The Library
The library is in the basement of the old tower, near the cafeteria. It has a good collection of books, including all of the recommended/required books for clerkship.

Computers
There are 5 computers in the library. Although access to the computers in the library is very good, cell phone reception in the library is not great at all.
Sites: IMP

133 CAMPBELL RIVER
134 COWICHAN DISTRICT
135 LADY MINTO
136 COMOX VALLEY
137 VICTORIA GENERAL
138 WEST COAST GENERAL
Campbell River Hospital

Getting There
Campbell River Hospital is located in the center of the town but this does not necessarily mean that you will be living close by. For a place to stay, there are a few postings on Med housing and there are some inns near the hospital. Because your commute to the hospital may be outside of walking distance, a car is strongly recommended. Although parking at the hospital is not free, there is plenty of free parking on the street nearby.

Storing Your Stuff
Although lockers are available in the hospital, there may not be any for students to use so be prepared to go without one.

Call Rooms/Lounge
There is no student lounge or student call rooms but students are free to use the staff lounge which has a few computers, books, a microwave, and a coffee machine.

Food!
There is a cafeteria in the hospital with limited options and a small coffee shop outside the hospital. There are also some grocery stores, a bakery, a 7/11, and some restaurants within a 10 minute walk from CRH.
Cowichan District Hospital

Getting There
Cowichan District Hospital is located just outside the centre of the town of Duncan and both driving and cycling are good options for transportation. There is a bike cage around the back of the building which you can access with your swipe card. Parking is free but limited so arrive early to be sure you get a spot! It is also possible to live close enough to the hospital to walk there - there are some really lovely walking trails in the area.

Student Area
The student area is just inside the ER entrance to the hospital. There is a VC-capable classroom and library/computer room/study space. There are dedicated student lockers and one dedicated call room with a shower, which is first-come first-served so sign up early on the door. The kitchen space has a dedicated fridge, microwave, toaster and kettle - and a TV! Be aware that scrubs are not stocked in the student area so you need to head to the physician’s lounge for those - when you come into the hospital via the ER entrance, head straight down the hallway and you'll dead-end at the door into the lounge area. This is also the OR lounge, so you can keep/eat your lunch here on OR days.

Food!
There is a cafeteria in the hospital which has limited options, but the food is cheap and pretty good. The hours tend to vary so be sure to check if it’s open! There is also a 7/11, small local grocery store and cafe a 5-10 minute walk away. Duncan town centre is a little too far away to walk there and back during a typical lunch break but has a variety of options if you have access to a car.
LMH: Lady Minto Hospital

Getting There
Lady Minto Hospital is a 2 minute drive or 10 minute walk from the town centre. To find a place to stay that is close by, students recommend posting an ad on the Salt Spring Exchange (their version of Craigslist).

Living There
There is no cafeteria but the town is close enough to find food and coffee. In the hospital, there is a small lounge with a basic kitchen. There are also showers at the nurses’ station and outside the OR.
CVH: Comox Valley Hospital

Getting There
St. Joseph’s General Hospital is a 10 minute walk from downtown Comox. A car is useful, but a bike will do if you stay in Comox. If you drive, parking is $30 per month and you can use a VIHA parking pass. The transit system is not recommended as it isn’t very regular.

Living There
There’s no student lounge but the staff lounge has a microwave and fridges. The surgical and maternity wards have showers and lockers. The call rooms are located at the maternity wards.

Food!
The nearest coffee shop and restaurant is downtown, a 10 minute walk from the hospital.
VGH: Victoria General Hospital

Getting There
Victoria General Hospital is located along the Trans-Canada Highway approximately 20-25 minutes west of UVic. Because of the distance, a car is highly recommended for transportation. However, cycling (35 minutes from UVic) and transit (≈1hr) work if you have the time. Parking at UVic is easy if you obtain a weekly pass as this allows you to park anywhere including the doctor’s spots.

Storing Your Stuff
Lockers are available for student storage but third years are encouraged to share lockers.

Call Rooms
Call rooms can be found in the IMP area adjacent to the ER/physiotherapy area on the ground level.

The Lounge
There is a student lounge with amenities including a computer, fridge, microwave, sink and couch. The couch is convertible to a sleeping cot.

Food!
There’s a cafeteria in the hospital with good lunch options but Tim Horton’s has better hours. There are also a few coffee shops and restaurants along Island Highway which can be accessed by travelling south along Helmcken Road.
WCGH: West Coast General Hospital (Port Alberni)

Getting There
West Coast General Hospital is a 5 minute drive from downtown Port Alberni and about a 5-7 minute drive from the doctors' clinics. Parking is free and having a car is strongly recommended because it will allow you to get to the hospital quickly when called. While cycling is a good alternative to driving, transit is not due to its questionable reliability.

Storing Your Stuff
There are no lockers for students, so be sure to pack light. Of course, if you forget something, home is never far away! If you are in the OR, you can usually use a relief locker in the change rooms (no lock).

Call Rooms
There is a call room located adjacent to the doctor's lounge.

The Lounge/Library
The doctor's lounge is available for use by medical students, and it has a fridge, microwave, couches, a TV, and computers. There is a library located next to the doctor's lounge.

Food!
There is a cafeteria in the hospital but the town of Port Alberni is very close and has a much wider variety of options. There is a McDonald's, KFC, Subway, Domino's, and more within a 2-minute drive.
NMP’s online clerkship guide
Available at: https://sites.google.com/view/nmp-clerkship/home?authuser=0

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Rotations

142  FAMILY MEDICINE
154  INTERNAL MEDICINE
171  PEDIATRICS
182  SURGERY
213  EMERGENCY
220  ANESTHESIA
225  OBSTETRICS AND GYNECOLOGY
231  OPHTHALMOLOGY
238  DERMATOLOGY
243  PSYCHIATRY
Rural Family Medicine

The Big Picture: Introduction

3rd year rural family medicine is a 4-week rotation in a rural community in BC! Your experience will be highly dependent on the community and scope of practice. In addition to typical office-based family practice clinics, it may include inpatient care, long-term care, emergency medicine, surgical assist, minor procedures, or even visits to fly-in communities. Many students describe this as a highlight of their year, whether they plan to go into family practice or not. It is a chance to explore a different community in BC (or even Inuvik, in the Northwest Territories!): depending on the community, many students enjoy abundant outdoor activities (hiking, biking, camping, etc.), checking out the local hangouts (cafes, restaurants, maybe even a nostalgic old-timey movie theatre?), visiting a u-pick farm for fresh fruits... the list goes on! It is also an opportunity to experience a different way of practicing medicine, and family practice often looks very different from what you may have experienced in your pre-clerkship urban placements. While the rotation is often highly rewarding, it also comes with an unusual set of challenges. Most students are away from home and their usual support systems for a month. In addition to the usual medical considerations, you and your preceptor may be thinking about questions like “Is this patient stable enough to stay, or should I initiate the process for a 4-hour long transfer now?” The rural family medicine rotation has something for everyone to learn, no matter what you plan to go into. Even an urban specialist will serve as a resource for their rural colleagues and treat patients referred from rural locations, so it’s important to have a sense of what healthcare looks like in a rural setting and what resources may or may not be available - and if rural family practice is what you’re aiming for, then this is your time to shine!

The Itinerary: Student Schedules

Your schedule will differ slightly from your classmates, depending on where you go for rural family medicine and what services they have there. Some locations have a clinic only, some have a hospital and clinic in town and in some locations, you may need to go to a hospital in a nearby town. Each location has certain services they provide, ranging from emergency to surgical assist to oncology clinic. You’ll be able to learn more about each location and what they provide from the Excel Spreadsheet, compiled by the Family Medicine Interest Group, that is passed down from the upper years when you’re ranking your locations in the lottery. Once you receive the email from the UBC admin confirming your rural family medicine location, make sure to email the admin in charge of that location as soon as possible as it takes time for them to organize a schedule for you. Sometimes it may not be the admin that makes the schedule, but the preceptor themselves, so make sure to grab their contact info just in case!

Depending on where you are for your rural rotation, your schedule may consist of hospital work, clinic, or a mix of both. Typically, you work 5 days a week with normal office hours (8am - 5 pm).
If you are at a site that has both a hospital and clinic, you’ll alternate between the two depending on what your preceptor’s schedule looks like. Additionally, in some sites you will have to round on inpatients in the morning before clinic, even if you are not due to work in the hospital that day. If you are at a site that has a hospital, then expect to have some overnight call shifts, usually 1-2 times a week (including weekends).

Don’t stress about the formality of following the schedule to a T! If you are interested in something particular, don’t be afraid to ask your preceptor! They are often very flexible and have your best interests at heart. For example, if you demonstrate an interest in doing more hospital work than clinic, your preceptor may arrange for you to do more hospital shifts with another colleague of theirs. However, because some sites may have more than one preceptor, you could potentially be scheduled to work with different people on different days, so be prepared to be flexible as well!

Also, don’t forget to let your preceptor know ahead of time when you have Academic Half Days (usually on Thursday mornings). Although most preceptors already know, it is good to give them a heads up in case they have something unique planned for you that day!

The Map: Getting To And Around Your Rural Community

Students are assigned sites by lottery, however you are able to submit a ranking of all sites available at the time of your rotation. Available sites will vary from block to block. Students from all sites are eligible to go to any placement, regardless of whether it is in the region that their home site is in or not (e.g. an NMP student could go to a placement on Vancouver Island). The Family Medicine Interest Group collects student reviews and information about each site; check with them for the most up-to-date details about the family practice experience in each community!
Rural sites, as of 2019-2020 (there are more than 75!):

Transportation
This can be more challenging than your other rotations since you’ll need to get to a different community! Some sites may require a car, either to get to and from the community or to get to different sites (clinic, hospital, etc.) within the community - transit is often minimal or non-existent! Many students bring bikes and/or cars to their rural rotations. If you are driving, consider whether winter tires are required (even if they aren’t needed in your community, many provincial highways require winter tires from October to April). Plan ahead - you may even need to fly to your site! Check the spreadsheet handed down from upper years collected by the Family Medicine Interest Group for the details applicable to your site. Also ask your preceptor or site administrator for suggestions.

Accommodation
Ask your site administrator or preceptor and previous students about accommodations for your community. Some sites have free or low-cost accommodation for medical students (check early, as these can fill up well in advance, especially if they’re shared with other healthcare providers). Some preceptors have places that they rent out, or the community may have connections with people who regularly do short-term rentals for visiting medical students. In other communities you may need to find your own accommodation; this can be tricky and some students end up using sites like Airbnb to find a place.
How do I pay for all of this?

The rural rotation can be associated with significant costs of travel and accommodations away from your home site. UBC students are lucky to be supported by REAP, the Rural Education Action Plan. They reimburse students for one round-trip to your community and accommodation up to $1000. Keep your receipts! This does not apply to Inuvik, as it is not in BC, but this site has other funding opportunities.

The Overnight: Call Shifts

You’re on your rural family medicine rotation and likely the only medical student there. It's going to be your very first overnight shift in an entirely new place. It's time to get excited! As you may notice with the theme of being on your rural family medicine rotation, you’ll be given lots of independence! This section will hopefully give you a better idea on what to expect during your overnight shift, what to do during your shift and what are some pearls. Note, as each rural site is vastly different from each other, your experience of an overnight shift may be different from what is written here (but that’s perfectly ok!).

The rural family medicine overnight call shift can mean either home-call or on-site call. This section will talk more about home-call. Feel free to read the other rotations for on-site call experiences. Overnight call generally will mean you’ll be in the emergency department. There will be a front desk (either admin or nurses) that triage patients. Generally, less urgent cases (such as CTAS<3) will be handled by nurses that can provide treatment or the patients will be asked to return during the day/attend the clinic.

Let’s say there are a couple of patients coming in overnight that do need you to come in! You will be called and given a short description of the patient. For example, you should ask almost always if the patient is stable (ABCs and vitals), what their CHIEF complaint is that brought them in, age, sex, pertinent symptoms and signs, and any other relevant information you can collect in in a few minutes. Go ahead and see the patient!

Of course, your preceptors will always have your back! As medical students, you are required to always review cases with your preceptor. This can mean directly reviewing with them if they’re on site, a phone call, or they may decide to come into the hospital to review if they weren’t already there. When you’re finished your history and physical, review with your preceptor. Try your best to give a concise and accurate description to your preceptor. This is important because at some sites, your preceptor may not physically come in during call. And don’t fret, this can take practice!

This is your chance to DO things. Of course, within your comfort level. Please tell your preceptor if you’re interested in any procedures, patients or anything really! Your preceptors will feel more confident in giving you independence if you are confident in trying. Generally, there is no harm in asking to try something and then asking for help when you need it. Some examples of tasks you would do include suturing, casting, injections, CPR and more!
A few more pearls for the rural family medicine overnight shift:
* Remember you’re in a rural site with limited resources. Think about what may NOT be immediately available overnight. Ex. radiology, lab or other departments may not be ready. If you think you need them, call them in advance to have them come in.
* If you feel overwhelmed with the amount of patients coming in overnight, do not be afraid to call your preceptors. They will understand!

The Gear: What To Bring & Carry
In general, when preparing for your rural rotation, consider packing things you may use in a rural site. You will likely have the opportunity to do lots of outdoor activities so having season specific gear would be useful. For instance, in the winter, remember to pack clothes so you can dress in layers, snow paints, snow shoes, toques, gloves etc. You may have the chance to do activities such as skiing, snowshoeing or ice fishing. If you are heading to your site in the summertime, consider good comfortable hiking shoes. A backpack that you can carry around with essential supplies (hat, sunscreen, sunglasses, food, water bottle etc.) is a must. When packing, other than the must haves, consider the season in which you are traveling and the site you are going to---being prepared with essential gear will really make a difference in how much you can get out of your experience!

In the clinic, professional dress is expected but generally flexible. Sometimes your preceptor may be dressed casual and business casual may be fine. Consider what things you took during your first and second year family medicine visits. Remember to bring essentials such as stethoscope, penlight, clipboard/ paper, pens, your iphone with useful point of care apps (i.e. up-to-date, medscape, MDCalc, BC Guidelines etc.) and food for the day! Tuning fork and reflex hammer are bonuses to have nearby but are usually available in the clinic. Your white coat is always good to have at the beginning and depending on the preceptor, you may or may not need to wear it.

In the ER, you will be dressed in scrubs which are available on site; familiarize yourself with the change rooms and locker availability (having your own lock helps!). Again, in the ER, make sure you have your stethoscope and trusty point of care tools (from your iphone) on hand. Having a small notebook to keep track of your patients, track to-do items, or write down clinical pearls is very helpful. You may also consider having a small pocket sized reference such as Pocket Medicine with you for quick referral. Remember to wear comfortable shoes, you will do a lot of walking! Shifts can be at night or during the day, so try and be well rested and feed before you start.

You may be involved in working within the OR or with anesthesia. Again, in these cases, scrubs and appropriate PPE will always be available on site. If you do not know what to wear or where to find it, don’t be shy to ask one of the nurses or your preceptor!
Staying In The Know: The Best Ways To Keep Track Of Patients And Other Info

You will usually write into the electronic health record after an interaction. Using a SOAP note format for each clinical interaction is generally the primary way of charting. Be patient if you are not familiar with how to use your local EHR, it will come with practice. You can follow up on all your patients through the EHR. Having a small notebook for keeping track of what you have seen for logging and studying purposes is helpful—just Remember to ensure confidentiality by not using patient identifiers.

In the ER, having a one liner for each patient with their chief complaint, differential diagnosis and checklist of to do items prior to disposition planning (i.e. discharge, admission, transfer) can be useful.

Keeping track of your patients by other methods such as excel sheets or on a word document for your own personal records can be invaluable when it comes time to apply for CARMS. Reflecting on your interactions with patients and/ or matching your patient experiences to CanMEDS is something to consider doing.

Becoming An Expert: Recommended Reading

Unfortunately, family medicine is such a broad field that it is difficult to cover with a single textbook. Plus, you will find that your rural family medicine rotations vary by the size and hospital situation of your rural community; some students may receive a significant amount of emergency medicine exposure, uncomplicated obstetrics, anesthesia and even some surgery while others may be primarily in the office. You will need to tailor your reading to the exposures you get; ask other students who have been to that site before what you might see. Depending on the services offered at your site, you may want to read up on specialty topics the night before. Below are some resources on bread-and-butter family medicine topics:

- **Case Files Family Medicine**: The book presents a case, asks a few questions about it, then expands on high-yield points within that topic before ending with a few comprehension questions. It is easy to do 2-3 cases per day while you’re on rotation and this should help you look like a rockstar! It should be noted that some of the information is US-specific so you should refer to Canadian/BC resources for things like screening guidelines and medical ethics.
- **Edmonton OSCE Manual**: excellent resource to develop an approach to problems presenting in the primary care and hospital settings. It generally has everything you need for each encounter except for potentially counselling.
- **SHARC-FM Cards**: This is given by the faculty and is probably your best bet to study for the exam. It has quick and dirty need-to-know facts and approaches to most things you
will be tested on. Most of the learning objectives outlined on Entrada will be covered by these cards.

- **American Academy of Family Practice Articles**: if you don’t know how to approach a difficult problem (i.e. fatigue, weakness, back pain, etc.), the AAFP articles present a very thorough and ddx-oriented approach. Although the quality depends on the article, they will go through your initial assessment, differential diagnosis, investigations and management plan for almost everything you encounter in family medicine.

- **Pocket Medicine**: great, handy source for quick fact checking and generating a differential while you’re waiting to review your patients with your preceptor. Not as good for studying but more as a quick reference guide.

- **Handy Resources**: MDCalc, Spectrum, BC guidelines, USPSTF prevention task force, Thrombosis Canada, UBC Medicine Formulary, etc.

- **Others**:
  - Calgary Cards: these are kind of fun and quick to work through! [https://cards.ucalgary.ca/](https://cards.ucalgary.ca/)
  - Uptodate: access to this is the difference between medical students and patients.

### What The Heck Was That?: How To Study During The Rotation

Studying for this rotation is a bit tougher compared to other rotations since family medicine encompasses a bit of everything. Depending on when you do your rural family rotation (i.e. near the end of clerkship), you may feel like you don’t have to review as much as you may have seen those medical conditions already and gained experience in previous rotations. However, it is still important to regularly review illnesses and concepts you have seen during this rotation.

Because family medicine is so broad, there are many different resources you can use to study. Everyone has different preferences. People use resources like Toronto Notes, Up-to-date, OnlineMedEd, and Academic Half Day (AHD) slides. Everyone has a different way of studying: some people study via reading while others use Anki or flashcards. Use whatever works for you and stick to that resource!

In terms of studying what you see during your rotation, rather than trying to study all 20 of those diseases that you saw that day, pick one or two topics that stood out to you and review those. You’ll find you will retain that knowledge more easily since you will have seen it in actual patients and you won’t burn out as quickly from studying so much! After you read those topics for that day, if you still have any questions, then feel free to ask your preceptor the next day. It shows that you took initiative in trying to understand the topics at hand before going to your preceptor to learn more! Of course, don’t be discouraged if you’ve forgotten stuff on a condition you’ve seen previously. No one expects you to remember EVERYTHING about that condition after you’ve only seen it once! Medicine is all about repetition, repetition, repetition!
Getting Pimped: What The Doctors Tend To Ask

It’s inevitable your preceptors will be curious about your knowledge. This is a great opportunity to learn and to shine!

I’ll say this first, you will almost never know the answer to all the questions your preceptors ask you. At the same time, they are not trying to trick you (most of the time)! Common things they will ask you will usually involve cases you’ve seen or are about to see. For example, if you saw someone with lower back pain, they may ask you about the red flags. (Think about the TUNA FISH acronym for the answer)! Or if you’re about to see someone with symptoms and signs that fall closely with acute pancreatitis, they may ask you what your differential is before you see the patient. (Think about the acronym I GET SMASHED). Other topics could include screening guidelines for DM, HTN, dyslipidemia, cancers, differentials and approaches to anemia, hyponatremia, arrhythmias, or even management for diabetes mellitus, joint pain or abdominal pain. You may also get asked the weird and wonderful.

Don’t be discouraged if you’re not able to answer questions correctly. There's no great way to prepare for pimping questions because every rural doc has their own special interests that they might ask you about as well as general family medicine topics (some might not pimp you at all). The pearl in getting asked questions is to be proactive and say you will read more about it! You will find that you will remember these topics better and be able to answer them the next time someone else asks you. If you’re able to answer their questions - awesome job! Keep up the good work! And don’t fret, your preceptor is likely assessing you not only on your knowledge, but also how you chart, interact with the team/patients and provide good care!

Hands On: Procedures You Get To Do In This Rotation

Compared to the family medicine office visits you get in first and second year of medical school, you will definitely get a lot more hands-on procedures during this rural family rotation. A lot of the time, these rural family doctors are the only healthcare providers closeby, which means they must be able to perform a range of different procedures. Again, depending on where you are, the procedures can vary depending on the type of services your preceptor provides in the community. In addition to doing the typical procedures in the urban/clinic setting such as flu shots and pap smears, there’s also opportunities to do other things! If that site has ER/inpatient care, you may get to do suturing, casting, ECGs, point-of-care ultrasound and cardioversion. Other preceptors may do IUD insertions, joint injections/aspirations, and Ob/Gyn deliveries.

Don’t be afraid to ask to do a procedure! Preceptors are more than happy to teach you. There’s a saying in the medical field: “see one, do one, teach one” and this especially applies to
procedures. If there’s a procedure that you haven’t done before, ask a preceptor to show you how it’s done and see if they’re comfortable with letting you do that procedure for other patients. Don’t worry if you don’t get it the first time, there are many opportunities to do procedures. If you are uncomfortable with doing a procedure (whether it be due to your skill level, inadequate PPE or for other reasons), don’t be scared to let your preceptor know! They are very accommodating and sometimes they are so used to doing something a certain way, they forget that medical students are learners and doing it for the first time.

Also, if you are in a site where there is a hospital, ask the nurses whether they’re comfortable letting you do procedures that nurses typically do, like starting IVs. There’s not much opportunity in clerkship to learn starting IVs (only during the 2 weeks of anesthesia) and it is an important skill to know! Most nurses are nice and are also eager to teach students.

The Checklist: Must-sees And Must-dos That You Will Likely Get During This Rotation

Rural family medicine is an excellent opportunity to get exposed to the full scope of medicine as many specialists are difficult to access in those remote areas. The following are a list of common issues seen in the office and are also available on Entrada:

- **MUST SEE’s**
  - **Back Pain**: identification of back pain red flags (i.e. malignancy, infection, trauma/fracture, cauda equina, AAA) as well as investigation and management of more benign causes (e.g. osteoarthritis, spondyloarthropathy, sciatica, uncomplicated disc herniation etc.).
  - **Chronic Pain**: stepwise management of pain (i.e. acetaminophen → NSAIDs → weak opioids → strong opioids) and judicious use of opioids in non-cancer pain.
  - **Cough**: generate a differential diagnosis for cough, including but not limited to infection, CHF, PE, drugs, etc.
  - **Diabetes**: outpatient management of diabetes including Canadian screening guidelines, diagnosis using labs, appropriate investigations upon diagnosis and initial management.
  - **Dyslipidemia**: outpatient management of dyslipidemia including screening guidelines, knowledge of when to initiate treatment, treatment target for cholesterol, counselling of patients.
  - **Dysuria/UTI**: develop a differential diagnosis for dysuria/LUTS including cystitis, urethritis, pyelonephritis, radiation, cancer, etc. Differentiate between uncomplicated and complicated UTI as well as how it affects your management.
  - **Ear/URTI**: determine the management of URTI/ear infections with appropriate indications for antibiotics.
  - **Falls in the Elderly**: have an approach to the frail elderly, evaluating for delirium, dementia and depression, as well as ADLs and iADLs. Understand the role of
services including social worker, OT/PT and home care in management of the frail elderly patient. Evaluate fractures, osteoporosis, cognitive dysfunction, hearing/vision changes in elderly patients who fall. Understand that falls in the elderly are associated with significantly increased risk of death.

- **Fatigue:** develop an approach and maintain a wide differential for fatigue including sleep disorders (OSA, narcolepsy, CNS hypersomnolence, shift work, etc.), anemia, endocrine, lyte disturbances. cardiovascular, respiratory, etc.
- **Hearing Disorders (including tinnitus):** develop an approach to hearing loss (conductive vs. sensorineural) and vertigo (central vs. peripheral).
- **Ischemic Heart Disease:** understand the diagnosis of UA/NSTEMI/STEMI and initial management strategies, as well as indications for transfer to larger centres. Understand the investigations for stable angina and appropriate cardiovascular risk factor management.
- **Medication Review**
- **Palliative Care:** understand and explain the role of palliative care for patients with life-limiting illnesses. Identify pharmacological and non-pharmacological therapies used to control pain, secretions, nausea/vomiting, breathlessness and sedation.
- **Smoking Cessation:** understand the value of brief intervention, stages of change and medications (e.g. nicotine, varenicline, bupropion) used to support smoking cessation.
- **Weakness:** develop an approach to weakness including differentiating true motor weakness from fatigue.

- **Must Do’s**
  - **Well-baby/child check-ups:** head-to-toe examination of a newborn and child
  - **Adult Female Preventative Care:** appropriate screening of female patients for breast, cervical and colon cancer as well as osteoporosis, hypertension, diabetes and dyslipidemia.
  - **Adult Male Preventative Care:** appropriate screening of male patients for colon cancer as well as osteoporosis, hypertension, diabetes and dyslipidemia. Determine whether PSA and prostate cancer screening is indicated.
  - **Injection:** IM/SQ injections using sterile, safe technique and proper disposal of needles.
  - **Suturing:** generally will be doing simple interrupted sutures, but can also do vertical mattress or running subcutaneous sutures if the situation arises. You may also have the chance to practice different types of blocks including a ring block, tendon block, facial nerve blocks, etc.

**Leveling Up: How To Prepare For The Exam**

This exam generally has a higher average than the other exams. It may be the easiest of the 4 exams for you, the hardest or in between. This section will hopefully help you be prepared regardless.
The exam will closely follow the learning objectives on Entrada. Preparing for the exam is very similar to the recommended reading section. Do the SHARC-FM cards as they tend to follow the exam questions closely (and the mini-cases released by University of Calgary), do some case files, read AAFP articles and pocket medicine. If there are Canadian guidelines for any topics such as hypertension or diabetes, read up on them! There aren’t any formal lectures during the rural family medicine rotation so you will have to generally study on your own. You will find on Entrada a document outlining the topics that will be covered for the exam.

You will encounter many of the topics you need to study for the exam by seeing patients. Many students and preceptors may agree that the best way to study is to see a patient and then read around that case. This will give you a mental image of a patient you can associate the information with!

There’s a wide range of topics under the family medicine umbrella so do your best to cover as much as you can. This exam is NOT out to trick you! Know your basics and you will do fine!

**The Final Boss: End Of Rotation Exams**

There is only one exam for the rural family medicine rotation, consisting of multiple choice questions in an electronic quiz format. The exam will also include material from the emergency rotation, dermatology, ophthalmology and ambulatory medicine rotation. The exam takes place at the end of the ambulatory care block. The proportion of family medicine questions on this exam will reflect the number of weeks you spend during the block. For example, emergency medicine and rural family medicine are both 4 weeks and will have the highest proportion of questions on the exam. For the rural family medicine specific portion of the exam, it is important to study based on the learning objectives outlined on Entrada. Since family medicine is an extremely broad field, narrowing your studying to the objectives given and resources suggested will be very helpful.

Useful resources for helping answer the objective include the Learn FM Clinical Cards. Each card is a concise 1-2 page reference on a specific medical topic (i.e. abdominal pain) that can be used as a study tool. Along with the Learn FM Clinical Cards, there is also Learn FM Microcase that tests your knowledge through practice multiple choice questions and explanations of the answers.

**The List: 10 Things To Know**

<table>
<thead>
<tr>
<th>5 Common Things You Will See</th>
<th>5 Physical Examinations You Will Do Lots</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hypertension: Read the Hypertension</td>
<td>1. Baby Well Visits: Lots of babies and</td>
</tr>
<tr>
<td>Canada guidelines. Know what defines hypertension in different groups. Be comfortable with the CV exam and in particular taking manual blood pressures!</td>
<td>toddlers. Know immunization schedules, milestones, physical exam procedures, etc. (Rourke records are useful checklists to have)</td>
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<tr>
<td><strong>2. Diabetes:</strong> Read the Diabetes Canada guidelines! Be particularly aware of pharmacological and non-pharmacological management.</td>
<td><strong>2. Women’s Health:</strong> Be comfortable with breast examinations, pelvic exams and pap smears. Familiarize yourself with prenatal and antenatal visits</td>
</tr>
<tr>
<td><strong>3. Influenza, Pharyngitis and Other Common Upper Respiratory Tract Infections:</strong> Infectious complaints ranging from viral/bacterial pharyngitis to influenza to pneumonia are an everyday occurrence in the clinic! Be comfortable distinguishing between them.</td>
<td><strong>3. Musculoskeletal Assessments:</strong> A major chief complaint in the clinic is MSK/Ortho related issues. Understand your anatomy and know the look, feel, move and special tests for each area of the body!</td>
</tr>
<tr>
<td><strong>4. Preventative Care:</strong> Know common screening guidelines (i.e. breast cancer, colon cancer, prostate cancer, diabetes, hypertension)</td>
<td><strong>4. Dermatological Characterizations:</strong> Common occurrence to see rashes and have no idea what they are. Being able to characterize the rash is a great first step!</td>
</tr>
<tr>
<td><strong>5. Smoking Cessation:</strong> Understand motivational interviewing and the ins-outs of smoking cessation counselling</td>
<td><strong>5. Respiratory/HEENT exams:</strong> Be thorough as these exams will help to tease out the difference between common infections (i.e. URTI vs. LRTI).</td>
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**The Summary: Closing Thoughts And Advice**

Your 4 weeks in a rural community will be one of the most exciting and rewarding rotations of your clerkship year! Everyone will have a different experience depending on where you go but the overwhelming majority of students have an excellent time both in the hospital, clinic and hopefully during your weekend getaways into BC’s (or Nunavut’s) backcountry. We hope you enjoy every moment of it and take in all the amazing learning experiences you can, whether its managing a multisystem trauma in a resource-poor setting, taking a helicopter ride to the remote communities or simply adjusting antihypertensives for the 20th time!
Internal Medicine

The Big Picture: Introduction

Internal Medicine is one of the ‘Big 3’ rotations and comprises 8 weeks of hospital based clinical service. Activities within these 8 weeks include inpatient care, outpatient consult clinics, and overnight call shifts. Call shifts occur on a 1 in 5 schedule during which students will complete new patient consults. Students at the major hospital sites (VGH, SPH, RCH) will be working on care teams consisting of 2-3 medical clerks, 1-2 IMG residents, 1-2 IM junior residents (R1), and a senior IM resident (R2 or R3). The entire team is supervised by an attending doctor.

Although renowned to be difficult and tiring, IM is potentially one of the most rewarding rotations of clerkship. As described by one attending, “students will never have as much responsibility for direct patient care placed upon them as they will receive during the internal medicine rotation.” This is due to the fact that the student may act as the primary care coordinator, with the supervising members of the team relying on your observations. This responsibility is essential in developing thorough observational and critical thinking skills and should be embraced to gain the most benefit and enjoyment!

The Clinics: Outpatient Weeks

Students at all urban sites will spend 2 of their 8 weeks on the internal medicine outpatient service in order to increase their breadth of experience. This generally involves working in a clinic setting alongside an IM sub-specialist, such as cardiology, gastroenterology, rheumatology, endocrinology, nephrology, hematology, or various other fields. There will also be placements with general internists, who either have areas of special interest such as eating disorders, hypertension, pre-surgical health evaluation, etc., or those who manage complex patients referred by family physicians for ongoing care.

Students will be responsible for seeing both new patients and follow-ups, gathering data, presenting the information to the general internist they’re working with, and collaborating to develop a management strategy for the patient. There is also an expectation for students to complete dictations for patients they see in clinic, and have these reviewed by their attending. Along with clinic experience, there will also be individualized teaching sessions relevant to outpatient consultation services presented by the supervising internist.

During the outpatient weeks, students will not partake in most of the inpatient service duties. Depending on schedules, there are some opportunities to attend noon rounds, but there is no expectation for outpatient students to be at morning report/rounds, or to carry any assigned inpatients. As only 1 student from each team will be on the outpatient service at a time, the remaining members of the team will take over for the management of the missing student’s patients. With the exception of weekends (Friday inclusive), outpatient service students are
exempt from overnight call. This provides a valuable opportunity for students to have extra study time to consolidate their knowledge. These 2 weeks are essentially a “call-free vacation” opportunity when students should either be reading ahead to increase their knowledge, seeing the time as a break in the middle of internal, or using it as some much needed cramming time 2 weeks before the exams. Use it wisely!

**The Itinerary: Student Schedules**

The schedule varies from site to site, but students will work Monday to Friday plus call shifts. A typical inpatient care day will begin with morning rounds at 8am, which consist of a brief review of the status of yesterday’s patients and the formulation of care plans for the day. St. Paul’s Hospital students start their mornings with case-based teaching rounds presented by IM residents and led by the chief resident, and may or may not meet with their team during the morning depending on the senior resident.

Students will then see their assigned patients (typically 2-3 at any point in time), check on lab results and other completed investigations from the prior day, and write a comprehensive progress note in the charts. If any further investigations (ex. chest x-ray, ECG, additional bloodwork, etc) is required in a timely fashion, this can be ordered as well after discussion with the senior resident. Following the morning activities, many teams will meet again before noon for discussion rounds to report on the current condition of patients, receive teaching and instructions regarding the next step of the patient care plan, and what should be expected or will require follow-up on during the afternoon. You will see anywhere from 2-5 patients based on how many members are on your team as well as your comfort and experience. Always prioritize quality over quantity, and only take on as many patients as you feel comfortable with as your team will expect you to round thoroughly on each of your patients. Efficiency will come with time.

Lunch time usually consists of noon time interspecialty rounds. Students are expected to attend these rounds, which are delivered by a variety of doctors in different fields on selected topics. These sessions provide a great opportunity for students to take a break from the morning rush, gain new knowledge, and luckily, eat the free lunch that is often provided at these rounds!

The afternoon varies and may consist of academic half days (Thursdays), formal or informal teaching sessions by the chief medical resident (CMR), team residents/attending, or other hospital staff, and of course, more rounds! This last iteration provides an opportunity to wrap up on patient care outcomes for the day (if results from that morning’s investigations have returned) and to ensure that any outstanding issues or concerns can be addressed and passed onto the on-call team. Depending on the attending, afternoon rounding may involve actually visiting each patient, where bedside teaching will be provided, or simply teaching delivered during patient discussion at the table. Regardless of format, students are expected to write a brief progress note update on their patients, order any new desired investigations, and complete any
outstanding discharge summaries. This means the day can end anywhere between 4pm to 7pm, depending on what needs to be done and how long afternoon rounds take.

The following is simply an idea of some information you might want to consider on your daily rounding. Make sure to familiarize yourself with what your preceptor and senior resident expect as they may want the information presented in a certain format for consistency! A standard approach to writing your record is a SOAP record where the assessment and plan should be in the format of an issues list similar to the one included in your consultation record.

1) Preparation
   - Start your day by spending a few minutes to plan how long you will spend with each patient to ensure you are proceeding in a timely fashion.
   - Begin your note with an ID statement
   - You should get in the habit of looking through the same things daily so that you don’t miss any important information. These include reviewing nursing charts, physician charts, and the EMR.
     - Nursing charts include important information such as the vitals which you should include in all of your notes. Also, the MAR can include frequency of PRN pain meds, DVT prophylaxis, or PRN agitation meds. Other important information includes blood glucose, sliding scale use, and fluid balance.
     - Physician charts can include important notes from other specialists, overnight orders which may indicate changes in patient status, and allied health progress notes which can include functional barriers to discharge.
     - The EMR shows routine/special labs, as well as cultures and sensitivities which may have been pending the day prior, imaging studies, and other relevant studies.

It is important to note that each diagnosis requires specific information to be checked and included in your progress note. This specialized knowledge will come with time as your team helps you identify gaps in your learning to read up on and implement into your approach for subsequent encounters.

   - For example, if a patient has CHF you should examine volume status daily by measuring the JVP, and assessing for peripheral edema, ascites, dry mucous membranes etc. This may inform whether the diuretic dose needs to be changed. In addition, you should check daily weights (more reliable than ins and outs) and ensure medications are optimized (for example are they on triple therapy? Should an ARNi be considered?).

2) Seeing your patient
   - Focus on the chief complaint and assess for symptom improvement. Ensure you address other concerns and perform a relevant physical examination.
   - Standard questions to ask include bowel movements, urinary issues, food and fluid intake, and ambulation (if ambulating well consider discontinuing DVT prophylaxis).
- Always keep the patient updated on what the team is working on, so they are not left in the dark. This includes informing them on results of investigations, upcoming tests, consulting services involved, and medication changes. If there is sensitive information such as a poor prognosis, make sure you check with your team before you share this with the patient as your senior resident or attending may want to deliver this on their own or while supervising you.

3) Documentation
- The bulk of your time should be spent coming up with a **differential and plan** for each of your issues where appropriate. It is appropriate and encouraged to use resources to help you create a prioritized differential for more rare issues. However, this should only be done if it does not come at the expense of spending less time with other patients. This is why it is important to schedule your day so that you know how much time you have to utilize resources to help refine your differential and treatment plan.
- Practice committing to diagnoses and treatment plans. Most preceptors and senior residents would prefer that you commit to a diagnosis and plan even if it is incorrect as the process of justifying your approach is one of the most important skills you will develop during your rotation.

4) Discharge
- If applicable, patients ready for discharge should be seen first so that all appropriate discharge documentation can be completed to facilitate a smooth discharge process.
- Try to complete discharge prescriptions and review these with your friendly neighbourhood pharmacy colleagues; they are a wealth of information and are generally eager to help!
- Discharge documentation varies by hospital so it is important to familiarize yourself with what needs to be completed early on.
- It is important to be a forward-thinker and prepare for possible barriers to discharge including, but not limited to clearance by allied health care professionals, pending investigations, or plans for follow up in the community. This is where you as a learner can make a significant impact on patient outcomes as you may be able to coordinate these various aspects of discharge and help get patients home to their loved ones on a timely basis.
- Discharge dictations have a consistent format that you will be given prior to your rotations to follow. It is always better to use a template than leave out pertinent details.

Pro tips:
- Advocate for your patients! For example, you should be calling the echo department and relaying important information about your patient’s clinical status if their investigations are delayed and your patient’s care is stalled.
- If you finish your tasks for the morning, offer to help other team members instead of scrolling through Instagram. Unexpected difficulties may arise which can completely change the schedule you may have outlined in the morning.
- Always volunteer to help complete discharge dictations especially if they need to be done on an urgent basis as your team may be preoccupied with other tasks.

The Overnight: Call Shifts

So you are on call for today. What does that mean? This may differ slightly for different hospitals, but this is usually how call will go.

After you have completed your ward duties (around 4PM), you should head down to the "IM Consultation Room," usually located in the ER area. There will be a board where you can write your name, year (MS13), team colour, and pager/phone number. Leave space for your seniors to write on the board, and write your name on the bottom of the board. Here is an example:

- Chloe Lim MS13, team red
  Pager- 604xxxxxxxx; Cell- 236xxxxxx

Introduce yourself to the senior (R2) on call, who will be distributing the consults. Don’t forget to introduce yourself to anyone there in the consultation room already!

Afterwards, get something to eat or you can hang out in your call room. Don’t hang out at the consultation room if people are working there as seats may be limited. During the night, you will get called by your cell or your pager. When you get a consult, refer to our “Consultation” section for more detail.

Depending on how busy the night is, you will get around 1-2 consults. Sometimes on a very busy night, you will get up to 3 consults. It is imperative to do a thorough job on each consult. At an MS13 level, a consult will take approximately 3-4 hours at the beginning of your rotation. You may be able to complete a consult within 2 hours if it is a more simple, single-system patient presentation. During your 6 week rotation, you will also learn how to be efficient with your time and complete more complicated consults within 2-3 hours.

Call in internal medicine is full day and overnight and occurs on a 1 in 5 schedule (some sites may have 1 in 4 at times). During the daytime, the senior resident will be down in emergency to accept any consultations that are called in by emergency department physicians (EDP) and will triage these patients based on acuity, complexity, and variety to a member of the call team. As this will be done in a balanced fashion, students can expect roughly every 4th to 5th patient that is referred to be assigned to them, depending on the size of the team.

Once assigned, students will see the patient, take a complete history and physical, formulate a differential diagnosis and preliminary plan (investigations, treatments, admission orders), then review with either the senior resident or staff attending regarding the patient. Once this review has occurred and has been discussed, orders will be written and sent, and the patient will either be admitted to the ward and become assigned to the student for daily rounding, or will be deemed fine to be discharged or referred to an alternative specialty. The process repeats as patients are referred to internal medicine and, depending on the night, each student can expect
to do anywhere from 2 to 4 consultations. If lucky, these will come during the daytime or early
evening. If not, they will stack up together after midnight and sleep will only be wishful thinking.
Thus it is advised to all students to nap when there’s downtime, and go to bed early if one
doesn’t have any pending consults.

The next morning, admitted patients will be reviewed with the staff attending, more morning
orders will be written, and then assigned patients will still be rounded on by students and
reviewed with the team as per normal. Students are ‘officially released’ post-call by noon at the
latest, but in practicality this may not always occur as there’s always work to be done, and on
some days students may stay until 3pm or later post-call afternoons.

Pro tips

- If your patient has important laboratory investigations pending, take it upon yourself to
  ensure you follow-up on these so you can update your senior resident or attending as
  they are often busy managing numerous patients! For example, if a patient has a
  pending repeat troponin it is important that this result is relayed in a timely manner to
  ensure this value is not trending in a potentially fatal direction!

- You should know where your patient is and how they are doing before you review
  overnight consultations with your attending physician. This means seeing the patient in
  the morning before you review to ensure they are stable and in the right location so that
  you don’t lead your team to see a 36-year-old female with an AKI instead of your 75-
  year-old male with ischemic cardiomyopathy.

- It is very important to be a team player. The most important thing you can do is always
  follow through on your tasks, be friendly, and introduce yourself to the nurses and unit
  clerks as they are often very knowledgeable about clinical status of patients and
  operational details within the hospital respectively.

Consultation

Include the following in this order:

**ID statement:** age, sex, relevant comorbidities (2-3 total) and reason for referral

- E.g.) 68-year-old male with a history of COPD, asthma referred for SOB

**Code status:**

- Don’t attempt to discuss code status by yourself, this is something that should be
discussed by a resident or attending, if previously well-documented this can be included
in the assessment. Do not assume full code unless documented before.

**Past medical history:** list all previous medical conditions and surgeries, include relevant
background information on the illness. Try to include the following:

- Diagnosis
- Objective marker
- Cause of Diagnosis (i.e. stroke due to afib)
- Subjective marker (i.e. in context of CHF, how many blocks before patient experiences SOB)
- Complication from diagnosis
- Specialists involved in patients care

See below for some examples, this list is not exhaustive:

- Atrial fibrillation: CHADS score of 3, on warfarin, managed by Dr. X.
- Chronic liver disease or cirrhosis: what is the Child-Pugh/MELD score?
- Congestive heart failure: what is the cause of the CHF? For example, is it secondary to ischemic, valvular, or infiltrative causes such as amyloidosis? What were the key findings (ejection fraction, valvular pathology) from the recent echocardiograms?

Allergies: include the reactions if possible, for example, did they have anaphylactic reaction? Clarify anaphylactic symptoms/hospitalization/treatment as they may not have actually had an anaphylactic reaction.

Medications: list all medications that the patient is on by using a medication reconciliation form and clarifying any additional medications not included such as herbal medication, OTC.

Social history:
- What is their living situation, financial support and if relevant, ethnic background?
- Do they have relevant risk factors for relevant diagnoses (for example imprisonment for TB or IVDU for hepatitis)?
- Quantify number of alcoholic beverages per week as well as pack-years of smoking.

Family history: include any relevant family history for the RFR, for example if referred for chest pain ask about sudden cardiac death (drowning, single vehicle MVA are clues towards SCD), MI, heart disease etc.

History of present illness:

Stay organized and focus on the temporal sequence of the events including relevant information leading up to their emergency visit, the reason they decided to come into emergency, pertinent details about what has been done in hospital, and how they are doing now. This information will need to be acquired by referring to various documentation in the chart including emergency physician orders as well as nursing notes which include total IV fluid counts.

End your HPI with a relevant ROS which should help you increase or decrease the likelihood of various diagnoses on your differential.

- For example, if a patient is referred for shortness of breath on exertion, you should ask questions regarding key symptoms of heart failure including weight gain, coughing, orthopnea, and paroxysmal nocturnal dyspnea.

Physical examination: stay organized and perform a relevant physical examination for the chief complaint. It’s better to include more physical findings than less if you are unsure if it is relevant so that you can report on it if your preceptor asks.

- Always start with vital signs, in your report you should start by noting the admission vitals and how they have changed overtime. If relevant, for example in a patient with diarrhea or increased stoma output, include orthostatic vital changes and note if there were any significant changes (30-20-10 rule).
- A full physical exam includes cardiovascular, respiratory, neurologic, abdominal, musculoskeletal, dermatologic, and rheumatologic examinations.
Investigations:
- Bloodwork: use shorthand notation (might want to include an image) and circle any abnormalities
- Imaging: try your best to interpret chest XRAYs without looking at the report, this is a good opportunity to practice your systematic approach to a CXR.
- Other investigations: similar to chest XRAYs, this is a good opportunity to practice ECGs and ABGs as your attending physicians will expect you to have a systematic approach to interpretation

Impression and plan:
- Start off by summarizing the case with an opening paragraph. Important information in the opening sentence includes age, sex, and 2-3 (the magic number) relevant items and the chief complaint. Next, note 2-3 key findings, whether this be from the physical, labs, or investigations depends on the case. Finally, create a prioritized differential, including the one most likely diagnosis. This is a good opportunity to begin committing to a diagnosis even if it feels uncomfortable. The important thing is that it makes sense given the chief complaint and findings as you will order investigations to rule out other possible causes.
- Next create a list of issues in order of importance. Each issue should have a brief description of the most likely etiology as well as other possible causes to be ruled out and a plan to manage it.
  - For example:
    1. Shortness of breath on exertion: likely secondary to CHF exacerbation, rule out pulmonary embolism. Order a CBC, BNP, repeat electrolytes, liver enzymes, BUN and creatinine, TSH, chest XRAY, EKG, venous blood gas analysis, and D-Dimer. Start 40 mg IV furosemide daily,
    2. Atrial fibrillation: CHA2DS2-VASc score of 2, therapeutically anticoagulated with an INR of 2.2 and adequate rate-control on 5mg PO metoprolol.
    3. Hypokalemia: likely secondary to decreased intake, order 40 mEq of K-Dur and repeat electrolytes in 3-4 hours.

Once you have completed the consultation and have finished writing up your report, you should prioritize flow within the hospital and review with your preceptor immediately if they are available and waiting to review with the next available student or resident. If they are busy reviewing another consult, try to write orders to admit the patient if you believe they will require inpatient stay. Often hospitals have preprinted order sets so familiarize yourself early with the protocol for your given hospital.

Pro tips
- Commit to a prioritized differential, workup plan, and appropriate treatments. Your preceptors don’t expect you to be right at this stage in your training, they do expect you to start trying to synthesize information and justifying your approach though. It is
important to transition from being a passive learner relaying information to one that is taking ownership to advance the care of your patients.

- Spend time preparing for the consultation. This may be obvious, but it is important to spend time acquiring relevant details so that your preceptor doesn’t have to go digging midway through your presentation. For example, if a patient is presenting with a chest pain in the context of a history of coronary artery disease, look for details on the most recent echo to include in your medical history as well as previous ECGs to look for changes from their baseline.

The Gear: What To Bring & Carry

The choice of what to carry around is important, as students can expect to be on their feet for a good portion of the day and be walking around quite a bit. Thus less is more. Essentials include one’s phone and pager, the patient ward lists, pen and paper, a stethoscope, a white coat, and an internal medicine reference such as the popular “Pocket Medicine” or “Approach to Internal Medicine” books. Advisables include a drug reference manual, a bottle of water, and some portable snacks (ex. granola bars). Although one could, most students opt to not carry their penlight, tendon hammer, and tuning fork with them (but do have them available somewhere in case they become required).

As you have already realized in your pre-clinical years, different resources work for different learning styles, below are a few of the resources that we found helpful. They are all very concise and straightforward which suits some learning styles, but others may prefer more comprehensive resources (E.g. Harrison’s).

- Blueprints medicine (6th edition) by V. Young, W. Kormos, and D. Chick
  ○ Quick 2-3 page summaries of high yield topics with epidemiology, etiology + pathophysiology, clinical findings, differential diagnosis, diagnostic evaluation, and treatment.
- Approach to internal medicine (4th edition) by D. Hui, A. Leung, and R. Padwal
  ○ Concise summary/reference with differential diagnosis, clinical features, investigations, and management of everything you will see in IM
- Pocket medicine (5th edition) by M. Sabatine
  ○ As the name suggests, a great pocketbook to carry around with you on the wards as a reference on call.
- Case files: internal medicine (5th edition) by E. Toy, J. Patlan, M. Warner
  ○ A great way to read around your cases and delve deeper into topics
- Toronto notes
  ○ No introduction needed, a good way to quickly brush up on topics

Phone Apps you may find useful
Free:
- UBC Radiology: helpful for approaches to XR and CT. Built-in quizzes to help with your understanding.
- UBC EKG
- Spectrum: app made by Fraser Health; very helpful for antimicrobial stewardship per guideline.
- Epocrates: app helpful for medication interactions, dosage, and contraindications.
- BC Guidelines: app with all the guidelines for BC in various topics.
- CDC Contraception: app helpful with types of contraceptives and recommendations per different category.
- MDCalc: an excellent app to look up medical equations, guidelines, and algorithms!
- Core Clerkships: free app to help with practical clerkship tips (how to write notes, call consults, present an EKG)

Subscription required:
- UpToDate: subscription with Family Medicine
- Medscape: free subscription. Helpful for quick look-up and user-friendly interface
- Journal Club: One-time payment of $9.99. VERY helpful app with condensed summaries of important landmark trials.
- RxFiles Plus: an app with a useful drug comparison chart. $95/year or $159/2years

Staying In The Know: The Best Ways To Keep Track Of Patients And Other Info

This comes down to personal preference. Some choose to write directly on the patient ward lists (although space may be limited), others use scrap paper or coiled notebooks, and some simply use their memory (although impressive, this is unlikely to be effective at our level, and is not recommended). You may also want to keep track of progress notes and the patient's current inpatient medicine list. This way, if one ever needs to refer back to what happened yesterday, or look up quickly what medications or dosage the patient is currently on, it’s available at the moment. It also helps to make checklists with boxes beside to-do items for each patient to keep track of tasks.

Becoming An Expert: Recommended Reading

There are a variety of resources available for reading, and which one to use is dependent on a student's learning style. A basic requisite is a pocket reference for when on the wards, such as “Pocket Medicine” (aka. the green book, or whichever colour corresponds to the edition) or “Approach to Internal Medicine” by David Hui. Beyond this, however, it also helps to have a more comprehensive book for at home reading, and the options vary:
if one likes flow and details in the text and information: Blueprints, Up-to-Date  if one likes only key facts and memory aids: First-Aid, Toronto Notes
if one likes quizzing Q&A with explanations: Lange Q&A, Pretest, Deja Review  if one likes patient-based teaching cases: Case Files
It’s recommended to just pick one reference and read that completely initially (ex. #1 or 2 above), then follow that with a reference of a different type for practice (ex. #3 or 4), rather than simultaneously referring to multiple sources erratically.

**What The Heck Was That?: How To Study During The Rotation**

One studies any chance they get, in any form they can get. This includes day-to-day tasks, such as during rounds, when seeing patients with staff or residents, during reviewing of new consultations while on call, teaching sessions, or when there’s spare time with residents. It is also very important to learn around patient cases, as this will both help to retain the knowledge, as well as to improve one’s patient care management. Both staff and residents are more impressed when students are well-versed in their patient’s condition(s) and what should be done regarding them, which inspires them to teach students in more detail beyond just the basics.

When outside of work, commit to reading a set number of topics or pages from a book of choice every night, and after 5-6 weeks one will realize that one has finished the majority, if not all, of the book. On weekends, take the extra time to go back on what was learned during the week and review key facts, such as diagnostic criteria, mnemonic memory aids, and approaches to conditions. The choice to make flashcards is entirely up to individual preference. Although they can be time consuming, they do prove useful when it comes time to quickly review in the week prior to exams.

Finally, make sure to maximize downtime as well as the 2 weeks of outpatient care! Downtime can occur while on call in the evenings, while waiting for the team to all gather for rounds, or on the commute home. Every little bit of reading helps!

**Getting Pimped: What The Doctors Tend To Ask**

Questions are usually patient-centred, and may relate to common presenting symptoms, differential diagnosis, criteria for ruling in or out diseases, and treatment/management plans. They may also ask more broadly applicable questions such as approaches to interpreting lab values, chest x-rays and ECGs. It is for these reasons that it is helpful to study around patient cases each night in advance of reviewing them with staff and residents the following day.

Being “grilled”, “pimped”, or “put in the hot seat” can be a nerve-wracking experience and may lead to one blanking completely in their panic. Just always keep in mind that doctors are asking in order to teach, not to embarrass. If one doesn’t know the answer, one should admit that, then make a formulated, logical guess at it. At the very least, it shows the doctor that one knows personal knowledge gaps, but that one can take some sort of approach to the problem nonetheless (and often end up pretty close to the right answer). It is never recommended to pretend to know, as one will be burned by this more often than not.

There are times when questions will be of the “what am I thinking?”, in which it is difficult for students to have any chance at knowing or even guessing the correct answer. Don’t sweat or
fret over these questions, they happen, doctors recognize (sometimes) when they’re asking one of these questions, and there isn’t any significant expectation for students to have to get these questions right. Just give it a best guess and once one finds out if it was right or wrong, remember to store the answer in memory and don’t get caught again next time.

**Hands On: Procedures You Get To Do In This Rotation**

The range of procedures one gets to do will vary depending on the patients one manages, enthusiasm, and of course, a bit of luck. Any chance that comes up to do, or at least observe, a procedure should be taken full advantage of, as another opportunity may not come up again during the rotation. Common procedures that students may receive a chance to perform include arterial blood gas draws, ECG placement and interpretation, DRE with occult blood testing, and foley catheter insertions. Each of these are well within a student’s abilities, but should still be supervised and guided by an experienced staff, such as a nurse or resident. Other less frequent procedures in which students can observe, and perhaps assist with, include CSF sampling, paracentesis, thoracocentesis, chest tube insertion, and joint aspirations. Be keen and keep on the look-out for procedures, and one is bound to see and do some interesting things!

**The Checklist: Must-sees And Must-dos That You Will Likely Get During This Rotation**

There is a list of patient encounter objectives available on Medicol and the One45 logging page for internal medicine, which includes conditions which students should have an opportunity to be involved in the management of, or at least learn an approach to. These can vary from the common such as chest pain, CHF, diarrhea, or anemia, to the more unique such as seizures, thyroid disease, and splenomegaly. Regardless of the condition, however, any student should have little trouble covering the majority of these patient encounter objectives through their inpatient management, and any missing areas can be taught by residents on request, especially during downtime while on call. Just remember to log encounters into One45 every week at minimum, as any longer duration will result in one forgetting what they’ve seen.

**Bread and Butter Topics**

The following are important topics that you should review prior to your rotation. Your goal when preparing for this rotation should be to have an approach with an understanding of the key diagnoses under each topic. However, you will become more comfortable with the rare and wonderful diagnoses when you see patients with each of the respective pathologies and have the opportunity to read around your cases. This is by no means an exhaustive list because internal medicine is a continuous journey and even senior residents are still actively learning! Bolded topics are very high yield topics you will likely come across or be asked about. Remember, approach is key; what that approach is depends on whether you prefer an
anatomical, mechanism, or the good old VINDICATE approach. For example, the stigmata of chronic liver disease can either be approached by dividing the stigmata into hands/face/trunk/abdominal or CNS manifestations (anatomical) OR portal hypertension, synthetic function, or metabolic dysfunction (mechanism).

Cardiovascular
1. Chest pain
2. Acute coronary syndrome
3. Heart failure
4. Coronary artery disease and stable angina
5. Common cardiac arrhythmias (Bradyarrhythmias, tachyarrhythmias)
6. Heart murmur
7. Syncope
8. Valvular heart disease
9. Vascular disease

Endocrine
1. Diabetic emergencies (DKA/HHS)
2. Thyroid disease (hyper/hypothyroid)
3. Adrenal insufficiency

Gastroenterology
1. Approach to liver enzymes
2. Cirrhosis
3. Hepatitis
4. Inflammatory bowel disease
5. Dysphagia
6. Abdominal pain
7. Adult diarrhea
8. Acute GI bleed
9. Splenomegaly

Hematology/Oncology
1. Anemia
2. Thrombocytopenia
3. Leukemia
4. Lymphoma

Infectious Disease
1. Cellulitis
2. Osteomyelitis
3. Sepsis
4. Infective endocarditis
5. Meningitis
6. HIV

Multisystem
1. Altered LOC
2. Shock/hypotension
3. Sodium disorders (hypo/hypernatremia)
4. Undifferentiated fever
5. Calcium disorders (hypo/hypercalcemia)
6. Lymphadenopathy

Nephrology
1. Acute Kidney Injury
2. Chronic kidney disease
3. Hematuria
4. Glomerular disease

Neurology
1. Headache
2. Seizure
3. Delirium
4. Dementia
5. Stroke

Respirology
1. Dyspnea
2. Pneumonia
3. COPD
4. Pulmonary embolism
5. Asthma
6. Interstitial lung disease
7. Pleural effusions
8. Lung cancer

Rheumatology
1. Acute monoarticular arthritis
2. Rheumatoid arthritis
3. Seronegative spondyloarthropathies
4. Connective tissue diseases
5. Vasculitis

Leveling Up: How To Prepare For The Exam

A good portion of learning will come from on the job experience and teaching sessions with residents and attendings. However, there is undoubtedly a need to study on one’s own in addition to these learning opportunities if one is to pass the exams. Most students pick a study resource based on personal preference, and in the end the choices are equivalent as long as it is matched to one’s learning style, and the student actually completes reading the resource. It is highly recommended to pace the studying right from the start, rather than leaving it to the last few weeks to cram. If one chooses 2-3 topics a day to read on during the first 6 weeks, they should find that the majority of topics will be covered. During the last 2 weeks, a brief overall review of conditions helps refresh and consolidate knowledge. A few days before the exam, attempt practice questions, in order to be accustomed to the mindset of reading and answering questions quickly, as well as the level of understanding required by the exam.

Some opt to create cue cards on various medical conditions for easy review closer to the exam. This choice is up to each student, as creating the review cards can be time consuming and may not be used effectively later on for studying, but the process of making them can be beneficial in itself.

The Final Boss: End Of Rotation Exams

The internal medicine exams consist of a multiple choice exam as part of the Brain and Behaviour block, which accounts for 50% of the exam along with Psychiatry. 60% or greater is required to pass the exam. Each question typically consists of a patient vignette illustrating a presenting case with associated investigations and results, followed by a clinical question with multiple choice selections. A reference sheet of normal lab values with both US and SI (international) units is provided, and students soon become accustomed to recognizing when a lab value is significantly abnormal. The questions are notably longer reads than previously encountered MC questions from 1st and 2nd year medicine exams, and have been known to
contain extraneous or excessive details not required to answer the question. As such, it is recommended that examinees first glimpse what the question is asking, then read quickly through the vignette before providing one’s best answer and moving on to the next question. Time can be lacking in the exam if every question is read meticulously and overanalyzed! All topics within internal medicine is covered, but generally questions are focused around diagnostic criteria and management of common cardiac, respiratory, and gastrointestinal illnesses/disease. As always, reviewing your material from Academic Half Days, teaching sessions, and going through Block Objectives can be helpful.

The List: 10 Things To Know

<table>
<thead>
<tr>
<th>5 symptoms you will need to know the differential and management for:</th>
<th>5 things you will be asked to interpret/demonstrate an approach to, or perform:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. chest pain</td>
<td>1. reading an ECG</td>
</tr>
<tr>
<td>2. shortness of breath</td>
<td>2. reading a chest x-ray</td>
</tr>
<tr>
<td>3. GI bleed</td>
<td>3. performing a DRE for occult blood</td>
</tr>
<tr>
<td>4. dizziness/lightheadedness</td>
<td>4. interpret abnormal lab values (ex.’lytes, CBC)</td>
</tr>
<tr>
<td>5. fever</td>
<td>5. interpret blood gases (ex. acid-bases, PCO2)</td>
</tr>
</tbody>
</table>

The Summary: Closing Thoughts And Advice

Internal medicine is a tough rotation. There’s simply no way to sugarcoat it. You will feel stressed, you will be tired, and you will have days where you want to break down because there’s so much to do. Many people do not actually enjoy this rotation, nor do they learn as much as they could have due to time constraints and fatigue. However, even those who aren’t IM-inclined can recognize the unique opportunity provided to actively diagnose and manage patients, a responsibility that may not be available again in any other rotation.

Regardless of your interest in this specialty, be keen, reliable, and amiable with your team, and you’ll find that residents and attendings become far more enthused to spend time teaching you. If you don’t understand anything, ask anyone you can for help, including the team pharmacist, the nurses (they know tons!), the physiotherapist or the social worker. For the most part
everyone around you is willing and happy to teach med students as long as there is time, and as long as the student demonstrates a willingness and eagerness to work hard. If you ever don’t know something or didn’t do something, don’t try to bullshit or lie, you’ll be caught and the outcome is far worse than admitting you have no idea or hadn’t completed that task. Don’t be discouraged on the bad days, everyone has them, and you recover quickly the following day if mistakes have been made.

Post-call days will be especially tiring, so don’t feel guilty if you end up sleeping most of the afternoon and evening after you get home, as this is much needed if you’re to return to work fresh the next day! Given that fatigue can be an issue on this rotation, make sure you get enough sleep each night. Also, being busy on service, you may not always have time to grab a bite, so definitely carry something quick and easy to eat (ex. granola bar, banana, etc) with you at all times, and there is certainly no shame in grabbing extra leftover food at the end of noon rounds!

As difficult as internal medicine will be, by the end all students come out of it having learned more than they could’ve imagined. They become far more adept at diagnostic and treatment skills, and have thus become better medical students because of it. Even if you don’t like the rotation or specialty, you’ll still feel like you’re closer to becoming a doctor than you have ever felt during the first 2 years of med school!
Pediatrics

The Big Picture: Introduction

Pediatrics is a six week rotation consisting of 3 weeks of primarily inpatient pediatrics at a major hospital site (BCCH, Langley, LGH, RCH, or SMH) and 3 weeks of primarily outpatient or subspecialty care in a community or subspecialty clinic.

Pediatrics isn’t just applying adult medicine on a smaller scale! Pediatrics is a standalone rotation, with skills and knowledge that are unique to the specialty.

Students will be sent an e-mail prior to the start of the rotation, asking them to rank sites for inpatient rotations and perhaps as well for outpatient rotations. These are often completed as a lottery, but if not specified in the email it may also be done as on a first-come-first-served basis, so respond quickly! Often an inpatient site choice will come automatically paired with an outpatient assignment(s).

Regardless of which hospital site or outpatient rotations a student completes, the vast majority of students really enjoy their experience in pediatrics! The staff and teams are very welcoming and supportive, creating a safe learning environment. Students will be able to exercise creativity when taking histories, completing physical exams, and building rapport with their patients and their families.

The Clinics: Outpatient rotation options

The 3 weeks of outpatient or subspecialty pediatrics can either consist of two 1.5-week rotations or one 3-week rotation. These can occur at various sites, but the majority are at BCCH or in Vancouver. Depending on the elective, students may be involved with clinics, inpatient consultations, or seeing new patients presenting to the emergency department. There is generally no call during the outpatient rotation, but depending on the rotation, students may be able to request additional shifts or volunteer to be on call if they are interested. Available options will vary from year to year and have included:

- **Cardiology (BCCH):** a busy outpatient pediatric clinic with scheduled teaching opportunities.
- **Community pediatrics (various locations):** a fairly relaxed experience with bread-and-butter pediatrics in a pediatrician’s office.
- **Emergency (BCCH):** fast track and acute care, most students find this rotation to be very enjoyable with lots of learning.
- **General pediatrics (BCCH Ambulatory):** referrals from GPs for common pediatric issues, as well as follow-up care for recently BCCH discharged newborns.
- **Multidisciplinary:** various pediatric clinics, such as dermatology, oncology, rheumatology.
- **Newborn unit (SPH or BCCH):** newborn exams at deliveries or post cesarean section, as well as checking on the babies in the nursery.
- **Neurology (BCCH):** mix of inpatient and outpatient care, including neurology consults.
- **Richmond outpatient clinic:** exposure to a variety of areas, including regular outpatient pediatrics as well as attending high-risk deliveries or cesarean sections.

The schedule varies depending on the rotation and can start earlier (e.g. 0700 for some days for cardiology) or later (e.g. 0900 for general pediatrics). Given the variety of these rotations, the day will finish at different times depending on the workload and scheduled appointments to the clinic. On average the typical outpatient clinic only books appointments until 1600, and this 3 week experience tends to be a reprieve in the middle of a hectic clerkship call schedule.

### Inpatient CTU: A typical day

In general, students may be placed in a variety of locations for their 3 week inpatient pediatric CTU experience, including BCCH, SMH, RCH, LGH, or Langley.

The start time for inpatient pediatrics varies from site to site, and may be as early as 0700 (BCCH) or as late as 0900 (SMH). The morning may start with handover from the overnight team, after which the patient list is split between the team. People will then have the opportunity to “pre-round” prior to team rounding (seeing their patients, reviewing vital signs and medications, meeting with their nurse). Team rounding is lengthy and can take until noon or even later depending on the size of the patient list and the team. Days end in the late afternoon/early evening.

BCCH is 100% ward care with no outpatient component, but the other sites may have variable outpatient exposure. For example, at SMH there will generally be ward rounding in the morning and the outpatient clinics (in a clinic based out of the inpatient ward) in the afternoons. There will be an academic half-day for all students on Thursday afternoons.

### Inpatient CTU: The overnight call shifts

Students will be assigned to a number of overnight call shifts during their inpatient CTU block averaging out to 1 in 4 call. On a weekday this entails the clerk attending handover at the end of the day and then proceeding to help with admissions and ward issues overnight. On a weekend this entails the clerk arriving for morning handover, helping to round on ward patients and write notes with a smaller team (usually the attending and a resident), and also see consults. Overnight the clerk will continue to help with consults and admissions, as well as with any ward issues. At smaller sites where the on-call pediatrician is responsible for attending deliveries (i.e. not BCCH), the clerk may also attend deliveries with the pediatrician. The pediatrician or resident will be first call to all deliveries, usually receiving a call 5-10 minutes before the delivery, and typically they will page the student with the delivery suite number while they’re on...
the go. This means students shouldn’t be surprised if they have less than 5 minutes between when they’re paged and when they have to rush down to the delivery suite. Being a light sleeper, having a loud cell phone ringer, and getting out of bed fast is a necessity!

The workload overnight varies based on the number of consultations and deliveries that occur and thus students may get a reasonable night of uninterrupted sleep, may be up the entire time, or may be regularly woken every hour. Pediatrics can be also stereotypically “seasonal”, with many overnight admissions for respiratory complaints in the fall and winter seasons.

Overnight call can be exhausting, but the learning is excellent and residents are friendly and always open to teaching. Make sure to take time for rest and self-care on post-call days!

The Gear: What to bring and carry

Bring the usual items one requires for most rotations, including a stethoscope (with a “pediatric side” if possible - this means keeping the membrane on your stethoscope bell (the small part of the stethoscope)), a pen, and a clipboard/notebook to securely store your patient list and keep track of patients’ vitals/issues.

There are, however, also some unique items to pediatrics. A printed or digital version of pediatric vital signs, developmental milestones, and fluid calculation formulas will be a lifesaver on the wards and on call! The calculator app on your phone will also get good use during fluid calculations. Another unique item that often is useful is a toy for your stethoscope, such as a clip-on plastic (read: washable!) animal or toy - this is really handy for keeping the little ones distracted while listening to their hearts and lungs! Whitecoats are not required or recommended.

Staying in the know: The best ways to keep track of patients and other information

Usually students will receive a patient list in the morning and notes can be written directly on the back side of this sheet (fold paper in half so you can still read the patient IDs and write the information on the blank side). If one needs more room, a clipboard with extra paper or a small notebook is helpful. Some people bring sheets pre-printed with areas to write vitals, fluid ins & outs, overnight issues, lab results etc. Another alternative is to use cue cards for each patient. A printed or digital version of pediatric vital signs, developmental milestones, and fluid calculation formulas will be a lifesaver on the wards and on call!
Becoming an expert: Recommended reading and listening

There are a variety of resources available for reading, and which one to use is dependent on a student’s learning style. It is up to the student if they wish to carry a pediatric pocket reference, which can be useful but not always necessary.


Pediatric review materials (books, podcasts) for studying:

A. **Explanations, pictures and slightly more detail (distilled down classic textbook):** Step Up to Pediatrics, Blueprints, Philadelphia Guide to Inpatient Pediatrics, Nelson’s Pediatrics (gold standard for pediatrics)
B. **Key facts and memory aids:** First-Aid, Toronto Notes
C. **Q&A format learning with explanations:** Lange Q&A, Pretest, NMS Pediatrics, Pediatric Secrets, Case Files
D. **Patient and case-based teaching cases:** Case Files with explanations, Aquifer cases
E. **Podcasts or on-the-go learning:** PedsCases.com has amazing podcasts covering all sorts of topics in a case-based format in addition to providing notes, questions, and study tools.

It is recommended to just pick one the above and read that it completely initially (eg. A or B), then follow that with a reference of a different type for practice (eg. C, D, E), rather than simultaneously referring to multiple sources on topics erratically. Don’t forget to read around your patient! Pediatrics can be host to some rare and wonderful cases, and spending the time to learn about your patient’s condition will greatly contribute to the quality of their care and your learning.

Three other highly recommended references are:

- **The online Aquifer cases:** see below for explanation.
- **The Canadian Pediatric Society (CPS) Statements:** The CPS releases position statements that have very helpful summaries and flow-chart approaches to the diagnosis and management of common conditions such as asthma, croup, seizures, etc. These can be found on the CPS website or by google imaging CPS and the topic you are interested in.
- [www.learn.pediatrics.ubc.ca](http://www.learn.pediatrics.ubc.ca): This UBC website contains numerous pages with approaches to common pediatric problems as well as physical examination videos to help prepare for the OSCE. It is currently in the process of being revamped and updated, but information is still accessible to users.
- [www.pedscases.com](http://www.pedscases.com): This Canadian based pediatric audio and video podcast is an excellent on-the-go learning tool that cover most common pediatric topics. Highly recommended! The website also has quizzes to gauge your learning.
• **www.onlinemeded.org**: Great educational resource that has free videos on all aspects of medicine, including major pediatrics topics. A paid trial of this website will give access to a question bank, flashcards, and study sheets.

### Aquifer Cases

Aquifer Pediatrics is a series of 32 online cases developed for medical student learning. They can be accessed either online through the Aquifer website or on your device through the Aquifer app - great for studying on transit, the wards, or on call!

Each Aquifer case is based on a simulated pediatric patient. The information regarding history, physical exam findings, differential diagnoses, investigation, and management is provided sequentially, similar to CBL cases. Interspersed with this information are questions to stimulate critical thinking and knowledge integration. Each case requires roughly 30-40 minutes to complete. There are also case summaries downloadable at the end of each case that serve as simple review sheets for the exams (highly recommend downloading or printing these for easy studying access for the exam). While completing the cases, it is recommended to read each of the “expert advice” windows for each section of a case. Although at times the information there may seem redundant or obvious, it still helps to read these window as there can be useful or interesting knowledge provided.

Log-in access to these Aquifer cases will be provided by the department (you will receive an email requesting you to sign into Aquifer to obtain access). Students will be required to complete at least 20 of the 32 cases (no marks associated, for completion only). However, as they are all helpful, it is highly recommended to complete all of the cases, as statistics show the number of Aquifer cases completed correlates to a student’s exam mark on their pediatric shelf exam. If one was to work through all of the online cases, then almost every major pediatric condition that students are expected to know will be covered. At a pace of one case each day, students could work through all of them within a month. They can then utilize the remaining time to review these cases and other study material.

More information regarding Aquifer can be found at [https://aquifer.org/courses/aquifer-pediatrics/](https://aquifer.org/courses/aquifer-pediatrics/).

### Studying pediatrics effectively during the rotation

As with any rotation, it’s important to maintain a steady pace of studying throughout the rotation to avoid being overwhelmed before exams. Pediatrics has a lot to learn and the best way is to center one’s studying around patient cases as they are encountered as well as completing the Aquifer cases. Try to read about various conditions as you encounter them, and remember to complete the Aquifer cases steadily throughout the rotation to cover a wide variety of topics.
Much of your learning accumulated through the different resources listed above and the Aquifer cases can be applied daily on the ward or in the clinic. Taking advantage of these opportunities will help to solidify your learning. For example, perform a full newborn assessment at all deliveries with the attending or alone even if it has already been completed by the pediatrician (presuming the parents are agreeable) as the more one attempts these exams, the more efficient and comfortable one will be with them. Take careful note of how fluid status and feeding/weight gain is evaluated and managed and then apply this knowledge to your ward management of patients.

**Getting pimped: What the doctors tend to ask**

The majority of questions clerks receive from attendings and residents will occur during rounding or while on call, and these will predominantly be surrounding the case or patient being discussed. A common focus for all newborns and infants is appropriate feeding, weight gain, urine output. Knowing how to calculate “ins and outs” as well as maintenance fluids is a must (see “Ward and Emergency Room Patient Care” section below). Other questions will focus on differentiating between common pediatric conditions such as bronchiolitis, croup, and asthma. Take the opportunity to suggest management strategies, though it will not generally be expected that a clerk will know details. The Canadian Pediatric Society has excellent flow-chart approaches for the management of common conditions, and the Aquifer cases also discuss simplified management. During newborn deliveries, expect questions regarding APGAR assessments, newborn exams, and possible ante- or post-natal complications.

In general, during one’s pediatrics rotation attendings want to know that the clerk is learning to differentiate between a “sick” and “not sick” child, and that they can conduct a reliable and detailed history and physical exam.

**Hands on: Procedures you get to do on this rotation**

Students may not get to do many procedures during pediatrics, as working with children tends to be more sensitive and many have more risks involved with inexperience. However, students may get to administer vaccinations or see or assist with starting IVs, performing lumbar punctures, or inserting NG tubes, depending on the area of pediatrics.

**The checklist: The must-sees and must-dos that you will likely get during this rotation**

There is a list of patient encounter objectives available on Entrada and the One45 logging page for pediatrics, which includes conditions that students should have an opportunity to be involved in the assessment of or learn an approach to. It is generally not difficult to complete these
objectives, especially while on call. Should there be any activities not observed or performed, one can approach residents and attendings to provide a brief teaching session on these topics or to learn from another student’s patient.

Bread and butter topics

The following are important topics that you should review prior to your rotation. Your goal when preparing for this rotation should be to have an approach with an understanding of the key diagnoses under each topic (bold topics are especially high yield). This is by no means an exhaustive list because pediatrics is a continuous journey and even senior residents are still actively learning! In general the Aquifer cases are a good representation of common pediatric issues and approach to differential diagnosis, investigation, and management.

You will also encounter the rare and wonderful in pediatrics, including congenital conditions, genetic syndromes, and metabolic conditions. In this case, your best approach is to read around the specific topic and learn more about your patient’s condition.

Cardiology and Vascular
- **Benign murmurs** (characteristics, differentiating between a benign and pathologic murmur)
- **Kawasaki disease**
- **Congenital heart disease**, including the 5Ts of cyanotic heart disease (1. Truncus arteriosus, 2. Transposition of the great arteries, 3. Tricuspid atresia, 4. Tetralogy of Fallot, 5. Total anomalous pulmonary venous return)

Dermatology
- **Atopic dermatitis and eczema**
- **Neonatal skins conditions**: cradle cap, milia, neonatal erythema infectiosum
- **Acne vulgaris**

Emergency Room
- **Surgical abdominal emergencies**: appendicitis, pyloric stenosis, intussusception, malrotation, Meckel’s diverticulum (Dr. Blair has a fantastic pediatric surgery guide that goes through their presentation and managements), testicular torsion, ovarian torsion
- **Foreign body aspiration**
- **Febrile seizures**
- **Respiratory presentations of cough, wheeze, or stridor** (see “Respiratory” section below)
- **Anaphylaxis**
- **Toxin ingestion**
- **Sudden infant death syndrome**

Endocrine
- **Diabetic ketoacidosis**
- **Delayed puberty**
- Precocious puberty

Gastrointestinal
- **Constipation**
  - Inflammatory bowel disease (Chrons, ulcerative colitis)
  - Approach to acute and chronic diarrhea
  - Celiac disease

Hematology and Oncology
- **Anemia**
- **Hemoglobinopathies**
- Acute lymphoblastic leukemia
- Neuroblastoma

Infectious Diseases
- **Acute otitis media**
- **Urinary tract infections**
- **Sepsis** (approach, work up, common organisms based on age)
- **Meningitis** (bacterial, viral; approach, work up, common organisms based on age)
- Pneumonia (common organisms based on age)
- Gastroenteritis
- Osteomyelitis
- Septic arthritis

MSK and Orthopedics
- Supracondylar humeral fracture (most common fracture in children)
- Osgood-Schlatter disease
- Legg Calve Perthes disease
- Slipped capital femoral epiphysis (SCFE)
- Transient synovitis

Newborns
- **Transient tachypnea of the newborn**
- **Respiratory distress syndrome**
- **Neonatal jaundice** (approach, workup, management)
- Infant of a diabetic mother

Neurology
- **Seizures** (febrile and other)
- Cerebral palsy

Psychiatry and Social
- **Child abuse and neglect**
- **ADHD**
- Depression
- Anxiety
- Obsessive compulsive disorder
- Tics
- Substance use

Respiratory
- Bronchiolitis
- Croup
- Asthma
- Foreign body aspiration
- Pneumonia
- Cystic fibrosis
- Epiglottis

Ward and Emergency Room Patient Care
- ***Calculating maintenance and replacement fluids
- ***Interpreting normal pediatric vital signs (“normal” varies depending on the patient’s age)
- ***Interpreting “ins and outs” (daily fluid balance)

Well Child Exam and Systemic Concerns
- Developmental milestones
- Vaccination schedule
- Failure to thrive (approach: organic or non-organic)

Leveling up: How to prepare for the exam

Use your inpatient experience and learn around each patient case and presentation then apply your learning to each re-iteration of the case that arises. There should also be plenty of time during the outpatient rotation(s) to study and complete Aquifer cases and, as long as a steady pace is maintained, there should be no requirement for cramming before the exam. See the recommended reading and listening above for suggestions of good case-based and Q&A study resources. The academic half-days also cover a lot of the major high-yield topics as well, so it is worthwhile to attend.

The few days before the exam, it is also recommended to review some of the more specialized pediatric topics that one may not have encountered during one’s inpatient experience, such as pediatric hematology, allergy/immunology, genetically inherited conditions, and developmental or neurological conditions. These topics may arise on the exam and without having some familiarity with the subjects, it can be quite difficult to discern the correct answers. Other more common subject areas should have been consolidated already over the rotation into one’s repertoire of knowledge and thus would only require a brief refresher as needed.
The final boss: End of rotation exams

The pediatric exam consists of a joint MCQ exam on “Women’s and Child Health”, a conjunction with OBGYN and pediatrics, occurring in the final week of the 12-week Women’s and Child Health Block. Questions typically are presented as patient vignettes with multiple choice answers, similar in format to the progress test. A good test-taking strategy for longer vignettes is to first read what the question is asking (the last sentence), and then read through the vignette in this context prior to selecting an answer.

The list: 10 things to know

<table>
<thead>
<tr>
<th>5 common pediatric issues to know about and differentiate</th>
<th>5 aspects/parts of a pediatric history that you shouldn’t forget to cover (depending on patient)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Respiratory problems</strong> (croup, bronchiolitis, and asthma)</td>
<td>1. <strong>Developmental history</strong> (ie. milestones, delays, failure to thrive)</td>
</tr>
<tr>
<td>2. <strong>Fluid/feeding problems</strong> (dehydration, failure to thrive, no weight gain)</td>
<td>2. <strong>Pregnancy and birth history</strong> (ie. gestational age, maternal immunity, consanguinity, pregnancy or birth complications, drug and EtOH use, modality of birth (SVD or C/S), prolonged rupture of membranes, GBS status, APGARs, pre/postnatal care, NICU stay, neonatal jaundice)</td>
</tr>
<tr>
<td>3. <strong>Infectious diseases</strong> (sepsis, meningitis, acute otitis media, urinary tract infections, pneumonia)</td>
<td>3. <strong>Ins and outs history</strong> (ie. fluid intake, eating, diuresis, bowel movements, weight gain, diet)</td>
</tr>
<tr>
<td>4. <strong>GI problems</strong> (vomiting, diarrhea, and constipation)</td>
<td>4. <strong>Social history details</strong> (ie. who lives at home, vaccinations, pets in the home, childcare, how school is going)</td>
</tr>
<tr>
<td>5. <strong>Physical injuries</strong> (burns, breaks, trauma, and abuse)</td>
<td>5. <strong>Adolescents:</strong> HEADSSS assessment (home, education/employment, activities, drugs/diet, safety, sexuality, suicide)</td>
</tr>
</tbody>
</table>
The summary: Closing thoughts and advice

Many students can be intimidated by pediatrics as it presents a new and foreign world of medicine. Not only is there the pressure of treating ill children, but there are potential challenges associated with working with concerned caregivers as well. Some students have difficulties with knowing how to appropriately interact with children or adolescents during an interview. These are not skills that come naturally to all but they can be improved upon through observation and practice. Watch children play, observe how they interact with their caregivers and environment, tailor your approach to the age group of the patient and when appropriate involve them in the history taking and interview. Not only does this empower the patient, but they are also usually far more astute and intelligent than they receive credit for. Avoid medicales and jargon, adjust your tone of voice to be warm and friendly, get down on your knees or into a squat to be at their level and smile! Build trust and rapport with the caregivers and help them to understand that you are there for them. There is usually a lot more behind an upset or tearful caregiver than meets the eye - love or fear for their child, sleepless nights, etc. Use this rotation to exercise empathy.

Although during the first week or so of the rotation, you may feel completely lost and confused in the foreign territory that is pediatrics, it doesn’t take long to get the hang of the specialty and you can focus on learning for the rest of the rotation. Your team will be supportive of your learning and approachable. Ask questions and rely on your residents. Be kind to your nurses! They’re extremely knowledgeable and are on the frontlines of patient care, so inquire into their thoughts regarding patient care. Introduce yourself early on, be courteous, genuine, and receptive to their concerns.

Pediatrics can often be the most rewarding experience of clerkship! While there is a lot to learn, your ability to be present to patients and their families will be welcomed and greatly appreciated. Caring for sick children and adolescents brings people together, regardless of patient outcomes. Be present, have fun, and work hard on your pediatric rotation: you will learn lots - not only about pediatrics - but maybe yourself too!
Surgery

1. Introduction
2. Logistics: call, tools, lists, scrubs
3. Operating room tasks, and operating
4. Reading and learning resources
5. Must sees and must dos (one45)
6. Exam and evaluations
7. General surgery
8. Orthopedic surgery
9. Surgical selectives
   - Cardiac surgery
   - Neurosurgery
   - Otolaryngology/H&N surgery
   - Pediatric general surgery
   - Plastic surgery
   - Radiation oncology
   - Thoracic surgery
   - Urology
   - Vascular surgery
   - Example student selective choices
10. Conclusion

Introduction

Basic information and the culture of surgery

Welcome to surgery.

Your surgical rotations will comprise 10 of the 12 weeks you will spend on the Surgical and Perioperative Care (SPC) block. The rotation lead is Dr. Geoffrey Blair, a now-retired pediatric general surgeon who remains very involved in medical education.

The rotation consists of:
(i) 4 weeks of core general surgery;
(ii) 2 weeks of core orthopedic surgery;
(iii and iv) 2 surgical selectives, each 2 weeks in length;
(v) biweekly academic full day (AFD) on Tuesdays.
This nets a total of 10 weeks of surgical training, which as of 2020, is the most core surgical training of any program in the country. Selective choices vary slightly between sites. As of 2020, NMP only has one 2-week surgical selective, and every student rotates through a two-week urology core. Sites for general and orthopaedic surgery are assigned.

As most of you are aware, surgical rotations involve early start times and the days can be longer than other rotations. For those of you interested in surgery, this will provide an introduction into life as a surgical trainee and provide you with exposure to 4 surgical specialties in case you are between a few choices.

Perhaps more importantly, for those of you not interested in surgery, this may be the longest - and in some cases, only - surgical training you will receive in your medical career. For that reason, it would be wise to take advantage of this time and absorb as much as you can - a GP or internist with rudimentary surgical knowledge is a powerful cat. Your experience on surgery is more dependent on your disposition than your knowledge. Work hard, be respectful, and you will be taught and liked. Cutting corners will be noticed and will simply lead to seniors investing less effort in your learning.

Below, you'll find information and recommendations regarding logistics, learning, and evaluations. You'll also find useful information about the different surgical services, which can be consulted in advance of ranking your surgical selectives.

Have fun and keep your hands between your armpits and your waistline.

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**Logistics**

**Schedules**

General day schedules may vary, but generally include: AM rounding (usually start 0600-0630h, a few might be slightly earlier or later), assigning tasks (clinic, OR, consults, minor surgery), and getting the day going - the day sometimes ends with a team meet-up as time allows. Some rotations will assign specific tasks for you on specific days, but these are not always followed exactly, so if you really want a learning experience, it would be wise to put yourself in a position to materialize it. Keep in mind that your days might be combinations of the above elements - it's common to round, scrub in, go see a consult between cases, review with the senior while they're scrubbed, admit the patient, then scrub into the final case of the day.

Several factors should be considered to ensure a smooth start to your rotation, as below:
Training Modules
Make sure to complete the necessary modules for your site. Ensure that you have access to the electronic medical records system and that you have hospital access with your hospital ID badge. Generally, it may take up to 5 business days for permissions to be granted so complete this in advance.

Rounding and note-writing
Rounds in surgery are generally brief - teams will complete AM rounds before the ORs for the day start. On some teams, rounds are conducted together - in this case, medical students will usually be transcribing progress notes as the residents examine the patient. More commonly, a resident will split the list at the start of the AM - in this case, you’ll have a few patients to see (number depends on the list length, other team members, and your abilities). It’s wise to see them properly but quickly in the interest of making it down to ORs before they start - it’s always harder to jump into a pre-existing OR with a staff you’ve never met before than to introduce yourself properly at day’s beginning.

Call
Call is an opportunity to learn from the unforeseen. During the surgery block, call is limited to a maximum of q4days (every 4th day) on average. Call schedules and expectations are dependent on subspecialties and sites, which will be outlined in detail in their respective sections. For the most part, expect to return ward pages, consult new cases in the emergency department, and assist in emergent operations. For those keen on surgery, call is an opportunity to demonstrate your interest and knowledge as you work closely with a resident and attending throughout the day. You will generally go home post-call after morning rounds.

Tools
At the start of your rotation, bring a stethoscope and assess whether it is required. Most other tools can be found on the ward. Technical skills of third year medical students are rudimentary at best, but a demonstrated enthusiasm to learn is lauded.

During your general surgery rotation, you will receive a surgical toolkit provided to you during your first academic full day. This includes a knot tying kit, silicone skin base, needle driver, scissors, forceps, and a suture kit. This can be used to practice the techniques described in “THE OPERATING THEATRE” below.
Lists

Printing patient lists prior to rounds is a simple way to help the team. On the first day, students generally ask or observe how the lists are printed and then inherit this role throughout the remainder of their rotation. Be mindful of other students on your rotation and ensure that responsibilities are shared.

Attire

As comfortable as scrubs are, it is essential to conduct yourself professionally. Unless otherwise indicated by your site’s introductory email, dress professionally on your first day to gauge the dynamic of the team. Afterwards, adjust your attire appropriately. As usual, dress professionally for all clinic days. Scrubs may be found in multiple locations throughout the hospital, however the operating room changing areas are guaranteed to stock them.

The Operating Theatre

What you can do, and what you should do

The operating room is unlike any other environment in the healthcare setting. For some of you, the experience may feel foreign, uncomfortable, and rigid; for others, the OR may serve as refuge from the bombardment of the outside world. Regardless, scrubbing into surgery is one of the great privileges of our training careers and should be treated as such.

Some quick tips, most of which are probably covered in the OR section earlier: remember how to scrub, know your glove size/material preferences, and write your name and glove size on the OR board. Be respectful to everyone, and understand that you will be yelled at (at least once) by someone - that’s expected and shouldn’t come as a surprise, especially if this block is your first time in the OR.

Your job in the OR is relatively straightforward: first, don’t break the sterile field and don’t interfere with the scrub nurse’s setup (that means not grabbing instruments off the mayo tray, too). Second, help with moving the patient onto (and later, off of) the operating table, and assist with prep where possible. Third, answer any questions and complete any tasks posed to you. And fourth, don’t try to do too much - understand that you are almost certainly the least experienced in any given room. If you’re scrubbed, observe intently and appreciate what you’re staring at. If you’re not, then observe - minimize phone use unless work related. Either way, don’t ask questions if no one else is talking.
If you do some reading in advance, come to rotation willing to do what is asked of you, and make it clear that you care about what’s going on, most senior colleagues will notice and give you more opportunities and more teaching.

Recommended OR knowledge

The vast majority of intraoperative questions will focus on operative anatomy, so review your anatomy PRN. There are some classic questions in each discipline, which you will know if you do your reading and ask around. See “Learning in Surgery” and discipline-specific sections below for recommendations.

Recommended OR skills

Learn early on how to transfer the patient to and from the operating table. Always be mindful of anesthesia equipment whilst doing so. Brush up on surgical instruments (the basics), suturing patterns (simple, mattress, buried, subcuticular, drain stitch). If you’re keen, hand-tying and some basic knowledge about sutures (absorbable vs. non-absorbable) can be useful. Other “procedural” elements of the rotation may include staple closure (or removal of staples in the clinic setting), dressings, NG tube insertion, foley catheter insertion, and specialty specific tasks (checking a VAC, removing nasal packing, etc).

Learning In Surgery

Strategies, books, and other resources

Learning in surgery is, as you will experience, different from other disciplines. Scheduled teaching outside of morning rounds is rare, but the operating theatre and clinic are conducive to teaching.

Consider it wise to be familiar with the most common and most emergent cases in each discipline you’re working in, as you’ll be much more comfortable throughout the rotation and on call. Many of these will be covered in the academic full day lectures, but your rotation may fall in advance of receiving those lectures. Some students feel it necessary to read daily, while others read more on their weekends off. All methods can be successful or unsuccessful.

Most importantly, the goal of this rotation is to introduce you to thinking surgically. Whenever you see a patient, ask yourself “do they need surgery?” If so, when? Now? Within a few hours?
Can it wait until tomorrow, or next week? Use this rotation to develop and exercise your intuition, because many of the decisions we make in all areas of medicine rely on this sense.

In terms of learning for the exam, most of what you need to know will be grasped on service, but going through the academic full days lectures - especially for the selective services you weren't on - is probably smart.

Here’s a list of popular learning resources:
Full text: Up-to-date, Churchill (provided at start of rotation)
Quick and dirty: Toronto Notes, First Aid
Case-based book: Case Files
Questions-based book: Pestana, Lange Q&A
Question bank: UWorld, Canada QBank
UBC specific resources: “Adventures in Surgery” modules
  General surgery: https://prezi.com/view/KjohW6t1DU0leTF1X4AG/
  Otolaryngology: https://prezi.com/view/7twUQAQp5c5S52ruQdqeM/
  Plastic surgery: https://prezi.com/view/5JhyoYE6XzRSZd2OHeJ/
  Urology: https://prezi.com/view/3gWSnCJmAJSwXpXvUXfD/
  Vascular surgery: https://prezi.com/view/fosH94qQcfEUnunvZ2yp/

For books, pick one (at most, one per discipline) and stick to it. Use the question-based or interactive resources as you see fit. Specific resources of surgical disciplines will be provided in their respective sections below.

**Must Sees And Dos**

Recommendations on what to cross of your list

As with other rotations, there are required “Must See” and “Must Do” items to be noted on One45. These logs are easy to neglect when on busy rotations but it is best practice to take time at the end of every day or every week to record the different experiences that you have had. An easy way to track which items you have completed is by using the pocket cards provided by the faculty that are available on Entrada (MEDD431>Assessments>Assessment Resources).

As a student, you have the opportunity to be a guest and temporary member of the health care team. However, given your transient role, many preceptors are not aware of your required tasks. You need to take initiative and advocate for yourself to complete the recommended items by asking your team to participate. This can be accomplished by arriving early to the operating room and offering to put in the foley catheter. Or before you put in the order for a nasogastric...
tube insertion, offer to put it in right then and there yourself with the supervision of a senior. This approach to active learning will ensure your rotations, surgery or otherwise, are most valuable.

Evaluation And Examination

What they look like

The Surgery and Perioperative Medicine written MCQ examination is approximately 180 questions over 3 hours. The questions are proportionally divided with 60 questions being dedicated to general surgery, 30 to anesthesia, 30 to orthopedic surgery and 60 to the surgical selectives (so usually less than 10 per discipline). Unique to this block, you will be tested on fields that you may not have rotated on; anything is fair game. As such, it is advised to share notes with friends and attend the academic full days. There are days dedicated to each specialty and questions are derived from these lectures. Students generally do reasonably well on this exam, despite ambiguous feelings immediately post-exam.

You will also be required to complete 12 work based assessments throughout your block. This equates to approximately one assessment per week. These assessments may be completed by staff or residents. However, it is recommended to complete these early into your rotation so as not to have to scramble for them before you leave the site.

General Surgery

General surgery is a 4-week core rotation for every clerk at UBC. True to its name, it is the hallmark of a lot of specialty surgery and covers a wide range of pathology and anatomical sites including but not limited to, the abdomen, pelvis, chest, head and neck, and breast. At VFMP the possible sites include Vancouver General Hospital, St. Paul’s Hospital, Royal Columbian Hospital, Lionsgate Hospital, and Richmond General Hospital. Depending on the site you’re assigned to, students will be on a designated team which can vary from Acute Care Services (ACS/AGSS), colorectal, surgical oncology, hepatobiliary (HPB), minimally invasive surgery (MIS), or a general team in the smaller hospitals. At each site there may be variable set-ups to your surgery team which includes medical students (3rd and 4th years), nurse practitioners, residents, and fellows in addition to your attending(s). For example, at VGH and SPH you will almost certainly have one or more residents/fellow on your team (usually a Jr. and a Sr.) in addition to the attending; however, at other sites such as RCH you may have an elective/visiting resident with a nurse practitioner or no resident/fellows, and the nurse practitioner manages the
majority of the day-to-day ward patients. Regardless of the team set-up, you will always have support from the staff and should never feel uncomfortable to reach out in any situation.

Similar to other rotations, the day-to-day varies greatly depending on the site and team you are on. Always clarify expectations (i.e. are you expected to always scrub or does it depend, etc.) on your first day of the team. For the most part, the day generally starts fairly early on the ward at around 0630hr depending on how big your team is. You will round on your teams’ patients and may attend a larger hand-over session. After that you will follow your individual schedules which could be outpatient/emergency ORs, consults from emergency/other specialties, ward duties, scopes, clinics, or teaching sessions. Additionally, after those scheduled activities, you may be on overnight call.

Be mindful of the early start times as it may affect your transportation plans - be aware that public transport may not begin early enough to get you to AM rounds on time.

What you need to know

History + physical exam:
- At the most basic level, you should be able to quickly determine if a patient is sick vs. not sick. Surgical patients can quickly decompensate in the ED. Know when to call your residents/staff immediately and when it can wait until their case/other consults are done. Always err on the side of caution.
- Full history – in Gen Surg the diagnosis can end up being very simple or very complex, so generally a more complete Hx is required compared to other surgical specialties. Pay special attention to:
  - Anticoagulation/Meds
  - Always ask about personal and FHx of any and all (GI) cancers
  - Previous abdominal incisions for scars/adhesions intra-op
  - Screen for IBD – overlying IBD diagnosis can make any abdominal operation a lot tougher
  - Code status/MOST form/substitute decision makers can often be the most important things to address in Gen Surg
  - Functional status at home
- Abdominal and rectal/perianal examinations and signs are very important! You should be able to conduct a full and comprehensive examination as per your OSCE guides.

Anatomy:
- Depends on surgical team/OR slate of the day but at minimum:
  - Layers of the abdominal wall
  - Layers of the bowel wall
  - Different types of hernias and anatomy for each, particularly for direct and indirect inguinal hernias, for both laparoscopic and open anatomy
  - Hepatobiliary anatomy for cholecystectomies
Blood supply to stomach/spleen/liver, small bowel, colon (including appendix), rectum
- Breast anatomy (blood supply, nerves)

- Learn how to read basic imaging for Gen Surg as well, especially CT chest/abdomen/pelvis (CT CAP), abdo X-ray 3 views, and chest X-rays. Surgeons love to pimp on anatomy via the CT and they do the majority of their diagnosis and surgical planning with it as well.

**Common complaints/cases:**

1. Appendicitis and some similar presentations (i.e. Meckel’s diverticulitis, mesenteric adenitis in kids)
2. Acute cholecystitis/cholelithiasis/choledocholithiasis/ascending cholangitis
3. Diverticulitis (Hinchev staging)
4. Bowel obstructions (small vs. large)
5. Cancers – colorectal, breast, HPB, gastric, neuroendocrine, sarcomas, thyroid
6. IBD: Crohn’s and ulcerative colitis; toxic megacolon
7. GI bleeds – upper and lower
8. Trauma (although no trauma team): primary and secondary survey
9. Perianal abscesses, anal fistula, anal fissure, hemorrhoids (internal, external), anal strictures
10. Peptic ulcer disease and potential bowel perforation & GERD
11. C. Diff infections
12. General concepts for Gen Surg good to familiarize yourself with:
   a. Pain management
   b. General wound management, dressing types
   c. Stomas – types, management, outputs
   d. Types of tubes and drains
   e. ICU care as you will have patients to round on in the ICU – good to have an idea of ventilator settings, basics about pressors, etc.

**Emergent cases:**

- Bowel perforation
- Intestinal ischemia – mesenteric ischemia and ischemic colitis
- Trauma
- Massive GI bleeds – upper and lower

- Overnight/on-call (common)
  - Post-op bleeding
  - Wound issues – dehiscence or bleed
  - Chest pain or SOB
  - Post-operative afib/tachyarrhythmias
  - Urinary retention (very common)
  - Delirium (very common)
  - Pain (very common)
Tips

General surgery is one of those rotations that historically has been widely enjoyed and helpful for future practice and training regardless of what specialty you’re interested in. The hours may be long and days start early, however, the beauty of Gen Surg is that its breadth is wide and excellence in the field requires a multitude of skills including interpersonal and managerial skills which suit anyone in medicine. Feel free to ask to have your schedule adjusted if you prefer being in the clinic more than the OR, for example. Residents tend to love it when you cover their pagers/clinic/ward/consults for a while so they can operate in peace. A Gen Surg resident aptly told me that the best student you could be is the student that ultimately decreases the amount of pages the residents get later or overnight - Gen Surg is one of the busiest services in the hospital, and therefore thoroughness in your orders, history, rounding, etc. is imperative to increase the workflow and efficiency.

Specific learning resources or books

- Churchill's Pocketbook of Surgery, 5th edition
- On Call Surgery
- Learn Oncology (https://www.learnoncology.ca) modules for colorectal, pancreatic, breast, thyroid, and melanoma/skin cancers are great learning for Gen Surg
- If seriously interested in surgery for residency (particularly Gen Surg and its related subspecialties), you can consider Sabiston Textbook of Surgery (can use as a Resident)
- If seriously interested in surgery for residency, you can look up videos and different surgical approaches for each operation and their associated anatomy/surgical atlases

Orthopaedic Surgery

Orthopaedic surgeons are trained in the preservation, investigation, and restoration of the form and function of the extremities, spine, and associated structures by medical, surgical, and physical means. An orthopaedic surgeon is involved with the care of patients whose musculoskeletal problems include congenital deformities, trauma, infections, tumors, metabolic disturbances of the musculoskeletal system, deformities, injuries, and degenerative diseases of the spine, hands, feet, knee, hip, shoulder, and elbow.

This is a core two-week rotation at UBC, but that is not the case at some other schools. Orthopaedic surgery has been available at RCH, SPH, LGH, and other variable sites (VFMP),
KGH (SMP), RJH (IMP), and UHBC (NMP). VGH does not have a third-year orthopedic surgery rotation.

There is no night call on this rotation, but sites generally have their own call requirements. At RCH, where a large chunk of students at VFMP will rotate, you take one weekend day of call. Otherwise, the majority of this rotation will be spent in the following three settings:

(i) Operating theatre - standard etiquette and expectations, as outlined in earlier sections.
(ii) Cast clinic - assessing pre- and post-operative patients, removing plaster casts, removing staples, assessing ROM, determining if medically fit for elective ORs.
(iii) ED - doing consults. Generally ortho consults are pretty brief, and the plan will usually depend on fracture architecture.

What you need to know

History: keep histories brief - in the ED, this means knowing the story of the injury, basic past medical history, smoking status, living and mobility situation (pre-injury, did they use a walker, walk freely etc.), and if they’ve had similar fractures in the past (helpful for diagnosing low bone density conditions). Note: # = fracture.

When working with a staff for the first time, it may be helpful to explain fractures as they appear rather than using their eponym. It shows thought to say, “This is a fracture of the distal radius with the distal fragment displaced and angulated dorsally with respect to the posterior fragment. This is also known as a Colle’s fracture.” However, some staff may tell you to just get to the point.

Physical: refresh your memory on your MSK examinations that were covered in preclerkship. Know your special tests. By far most importantly, ALWAYS check the neurovascular status of the injured limb distally.

Anatomy: MSK, as covered. Operative anatomy PRN.

Common presentations: fractures (location, alignment, pattern, soft tissue defects, specific details). Fracture treatment modalities (conservative, soft fixation, rigid fixation, external fixation, internal fixation) should also be reviewed if possible.

Emergent presentations: acute joint dislocations, open fractures or those with neurovascular compromise, acute spinal trauma with complicated features, septic arthritis, compartment syndrome, cauda equina syndrome

Tips

Every physician should know some basic orthopaedic surgical principles. Spending some time in the cast clinic is probably useful for most trainees, especially if you’ll be casting and removing casts for patients. Certain sites have some opportunities for paediatric orthopaedic surgery clinics as well, so take advantage of those PRN. Intraoperatively, handling drills and other tools are not uncommon for students, and the often big, open cases showcase amazing anatomy.
Try to come to rotation with your exams fresh in your mind. Cast clinic is high volume (can easily accommodate 50, 60, 70+ patients per day), so you should feel comfortable banging out the exams, checking films for fractures, and making a plan. It’s okay if your plan is wrong. Division of labour is common in orthopaedic surgery - if you want to see foot cases, find out who the foot/ankle “guy/gal” is on the team.

Specific learning resources

https://www.orthobullets.com/ - the online Bible of ortho. Has more information than you will ever need, but is easy to sift through if you have a few minutes between cases or as you’re walking down to the ED for a consult.

Cardiac Surgery

Cardiac surgery is the surgical discipline focused on the surgical treatment of the heart and great vessels (including the ascending aorta), often in the context of ischemic, valvular, or congenital heart disease, as well as endocarditis, rheumatic heart disease, and transplantation, amongst others. Cardiac surgery has not been available at VFMP for the past two years but this may change. It is available at KGH (SMP) and RJH (IMP).

Cardiac surgery is generally a very high volume service in most tertiary care centres, so ORs every day are common. There is an increasing volume of joint interventional cardiology/cardiac surgery cases as well. This rotation would fit well for anyone interesting in cardiology, critical care, vascular surgery, general surgery, or anyone that wants to see a beating heart in person - it is a truly remarkable experience.

What you need to know

**History:** Previous vascular pathology (including peripheral/cranial), valvular disease, medication history.

**Physical:** Cardiac examination.

**Anatomy:** Surgical anatomy of the heart and great vessels, and basic anatomy of the thorax, including MSK.

**Common presentations:** Ischemic heart disease, valvular heart disease.

**Emergent presentations:** Ascending aortic dissection, mediastinal/thoracic trauma, STEMI.
Tips
Cardiac care conferences are amongst some of the most interesting multidisciplinary conferences in medicine - good opportunity to see cardiac surgeons, cardiologists, anesthesiologists, and intensivists debate and collaborate.

Specific learning resources
Lilly - Pathophysiology of Heart Disease remains unbeaten for general cardiac knowledge.

Neurosurgery

Neurosurgery is the surgical discipline that focuses on surgical pathology of the central, peripheral and autonomic nervous system. A neurosurgeon is adept at the neurological physical examination, interpreting relevant radiographic imaging, pre- and post-operative medical management of neurosurgical diseases, and of course surgical treatment of congenital and acquired neurosurgical pathology.

Neurosurgery is a dynamic field with rapidly evolving technology and therapeutic opportunities. The patients often present acutely and severe deficits are not uncommon. This rotation will be valuable to anyone interested in either neurology, neurosurgery, or physiatry, and also those keen on other surgical specialties that often share patients with neurosurgery such as the fields of otolaryngology, plastic surgery, and ophthalmology.

At present, the only site available at VFMP is VGH. This rotation focuses exclusively on cranial pathology as there is a separate spine service at VGH. During this rotation, you will be assigned a neurosurgery preceptor for each week and you will be given their schedule and are encouraged to join them in the OR and in clinic. However, you will primarily be working with the neurosurgical team at VGH which consists of neurosurgery residents, off-service residents (eg. neurology, plastic surgery, radiology…), nurse practitioners, pharmacists, patient care coordinators, and other medical students. Days generally start early for rounds. After rounds, medical students usually have some flexibility in their schedule with some choosing to spend time in the OR, in clinic, seeing consults with the on-call resident, or independently studying if things are slow. Call is taken q4 days (on average) where you will be called to assist with emergent consults or ward calls.
What you need to know

**History:** Baseline neurologic function, timeline of deficits, mechanism of head injury, previous medical history, seizures, trauma, previous neurosurgical history

**Physical examination:** Neurological examination (complete)

**Anatomy:** Gross cortical anatomy (hemispheres (dominant vs. non-dominant), lobes), cranial nerves, skull, scalp

**Common pathologies:** Trauma (subarachnoid hemorrhage, epidural hematoma, subdural hematoma), aneurysms, epilepsy, parkinson’s disease (if working with Dr. Honey), tumors (meningioma, vestibular schwannoma)

Tips

1. During rounds there will be opportunities for you to either assist in or perform the neurological physical examinations at the bedside. This is a unique opportunity for observation and constructive critique that you will not get elsewhere. Both neurological and neurosurgical pathologies are often “black boxes” for physicians and having a foundation in an approach to localization will make you a better clinician regardless of the field you pursue.

2. The nurse practitioners and pharmacists are your friends. They are incredibly informative and eager to help, especially if the residents are busy in the OR or otherwise. The first day on the ward will be overwhelming so do not hesitate to reach out to your team members.

3. Try to find your way into an OR where burr holes are required. Lucky medical students (even 3rd years) may find themselves holding the drill!

Specific Learning Resources

1. Neuroanatomy: neuroanatomy.ca
2. Greenberg: Handbook of Neurosurgery

Otolaryngology/Head & Neck Surgery

Otolaryngology (or Ear, Nose and Throat surgery, ENT) is the study of essentially everything above the clavicles, minus the brain (neurosurgery) and the eyes (ophthalmology). This specialty is incredibly dynamic and has a bit of everything for everyone! Whether you like office procedures, complex 12-hour head & neck cancer surgeries, otology and cochlear implants, managing emergent complex airways, or facial reconstruction, you will definitely find something special during your two-week rotation.
The ENT rotation experience at VFMP varies greatly. The sites that you may be placed at are VGH, St. Paul, and BCCH. You may also be assigned a day at community ENT clinics across the lower mainland. Because this specialty is quite subspecialized, the experience ranges from lots of hands on, to very minimal hands on and basically shadowing, depending on who you are working with and your motivation to get opportunities.

Call:
You must complete two weekday and one weekend call shifts. Although it’s a “home-call”, you are expected to be within 15 minutes from VGH, BCCH, and St. Paul’s Hospital. Weekday evening calls are from 1700 to 2200, and weekend calls are 0800 to 2200. You do not get a post-call day and are expected at morning rounds. Check in with the resident on call and let them know that you are available to help out with any consults they get.

For students interested in surgery:
If you are interested in plastic surgery, neurosurgery, orthopedics, or ophthalmology, consider rotating through this specialty. There can be a lot of overlap between ENT and plastic surgery (the use of skin grafts, tissue flaps, facial reconstructive surgeries, rhinoplasty, etc.). There have also been joint surgeries between ENT and neurosurgery for skull base surgeries, giving you the opportunity to see both at the same time. At times, ENT surgeries can feel like mini-ortho, as they use saws to cut through temporal bones, or even the fibula to reconstruct parts of the mandible!

For students interested in family or emergency medicine:
There are many clinic and non-OR opportunities in ENT. Many primary care complaints are in the realm of ENT, so this rotation would give you a good base of managing vertigo, dizziness, rhinosinusitis, otitis media, hoarse throat, or other sinus/throat/ear complaints. There are also patients who are referred to ENT for treatment of sleep apnea, which will definitely be relevant in primary care.

For students interested in internal medicine or neurology:
There is no internal medicine counterpart for ENT. There can be a lot of medicine within ENT, as these specialists have to manage the non-surgical and surgical causes of ENT complaints and diseases. In addition to neuro-otology and hearing loss, there are many cases that have cranial nerve and the cerebellar involvement, which may be of interest to those who are interested in neurology. If you have an interest in respirology, you may also find this rotation valuable due to the laryngology component of the specialty.

What you need to know

History + physical exam:
- History: Nothing extra in particular, and it depends on what your staff likes to know about because it can depend on which subdivision within ENT they are in.
- **Physical exam:**
  - Ear Exam
  - Oral Cavity and Neck Exam
  - Face and Nose exam
  - Nasopharynx and Larynx exam
  - Neuro-otologic exam (tuning fork tests, cranial nerve and cerebellar testing, Dix-Hallpike maneuver, oculomotor exam, gaze and positional nystagmus)

**Anatomy:**
- Outer and inner ear (including tympanic membrane), oral cavity, larynx, neck (muscles, vasculature, innervation)

**Common complaints/cases:**
- Epistaxis, otitis media, otitis externa, sinusitis, vertigo, tinnitus, neck mass, hearing loss, nasal obstruction/septal deviation, epiglottitis, pharyngitis/laryngitis

**Emergencies:**
- Epistaxis, auricular hematoma, mastoiditis, facial nerve paralysis, facial/nasal fracture, septal hematoma, upper airway/nasal/esophageal foreign body, ear foreign body, sudden sensorineural hearing loss, peritonsillar abscess, epiglottitis

**Tips**
- You may need to be more vocal about getting some hands on. Opportunities for hands-on experience may include: assisting with closing a fibular harvest wound, assisting with flexible laryngoscope, assisting with small office procedures, assisting in a minor surgery.
- If you are at VGH, read around tracheostomy tubes, laryngectomy, and free flaps. These are the few in-patient cases you will see, and you can learn a lot about the post-operative management of these.
- There is a lot of oncology in ENT, especially in new neck masses or thyroid masses.
- You may not get a lot of formal teaching during these two weeks as the residents are quite busy running clinic, managing the wards, and covering consults from all three hospitals.

**Specific learning resources or books**

  Recommended by rotation: Primary Care Otolaryngology manual
  [https://www.entnet.org/content/ebooks](https://www.entnet.org/content/ebooks)
  LearnENT: available as a website and an app. Contains cases, anatomy review, flash cards, question banks, etc. [http://learnent.ca](http://learnent.ca)
Pediatric General Surgery

Pediatric General surgery is a subspecialty within general surgery that focuses on diagnosis and management of congenital anomalies, infective disorders, cancer, thoracic diseases, and trauma in the pediatric population. Pediatric General Surgery has been only available at BCCH (VFMP) due to the specialized nature of the field.

During your time at this rotation, you will see common childhood diseases, conditions, and clinical presentations. Pediatric General Surgery is a broad and interesting field where you will see a variety of diseases within a wide spectrum of ages (from babies to young adults; ages 0 to 16). As the medical student, you will have an opportunity to see pediatric general surgeries from hernia repairs to emergency laparotomies. This rotation will be helpful for students that have a particular interest in pursuing pediatrics as you will see very sick children and learn how to form your differential for surgical presentations. Furthermore, this rotation is helpful for students interested in general surgery and family medicine as well.

Day-to-day:
The start time will depend on the rounding time, so make sure to contact the fellow beforehand. Each day will be shaped differently depending on how many learners (i.e. residents) are on the rotation. Your day will start with morning rounding; this includes checking on the patients in the general surgery wards and NICU. You will be paying special attention to vitals, Ins and outs, and any new events during the night. You will learn how to write efficient SOAP notes, specific to the pediatric population. After morning rounds, you will be placed in either clinics or in the OR.

When you are placed in a specific OR, make sure to join in the morning huddle before the first case (usually 15 minutes beforehand). You will have an opportunity to introduce yourself to the rest of the OR team, and will learn about each patient and the surgical procedures that will be performed that day. On the other hand, clinics are held on the basement floor. Introduce yourself to the MOA as well as the surgeons you are working with that day. There are computers on the basement floor that you can use to look up patient information and past medical history.

On-call:
You are able to choose two call shifts that will finish at 11pm. You will not receive a post-call day because of the end time. During this call shift, you will be working closely with the fellow or resident on call. Inform them that you are on call during the morning rounds. Your responsibility during your call shift will consist of seeing new consults in the emergency department. Your consults should take around 40 minutes, but clarify the expectations with your resident. Make sure you take a focused history and physical exam. If you are not busy with consults, being on call is a great opportunity to scrub in during emergency surgeries.
What you need to know

**History**: depends on each condition, but don't forget prenatal, perinatal, neonatal history. Genetic conditions are fairly common, so make sure to ask about family history as well.

**Physical**: for neonates, perform a full physical exam (check anterior fontanelle, various neonatal reflexes, cardiac, respiratory, MSK, and abdominal exam). For children, perform relevant exams. Distinguishing an undescended testicle from a hydrocele is also important to know.

**Anatomy**: also very broad, make sure to know hernia anatomy.

**Common presentations**: various hernia types (inguinal, femoral, umbilical), hydrocele, necrotizing enterocolitis, appendicitis, anal fistula, abscess. Know that common presentations differ vastly depending on the patient’s age. Know the common diseases in each age category.

**Emergent presentations**: intussusception, volvulus, testicular torsion, any type of trauma

**Tips**

Pediatric general surgery is quite a different field from your general surgery rotation. Take this opportunity to learn the various conditions that you may encounter in your future career. This is a great opportunity to practice your pediatric physical exam. Also, make sure you have access to your PHSA account and dictation ID.

**Specific learning resources**

There is a Pediatric Surgery Primer written by Dr. Geoffrey Blair, a pediatric surgeon. It is available through Entrada in the pediatric surgery folder. This primer is a great resource for medical students in preparation for this rotation.

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**Plastic Surgery**

Plastic surgery is the surgical discipline that focuses on the repair, reconstruction, or replacement of physical defects of form or function involving the skin, musculoskeletal system, craniomaxillofacial structures, hand, extremities, breast and trunk, and external genitalia or cosmetic enhancement of these areas of the body. Plastic surgery has been available at VGH, SPH, RCH (VFMP), KGH (SMP), RJH (IMP), and UHNBC (NMP). Students do not rotate on cosmetic services.

Because of the breadth of surgical problems handled by this service, a rotation in plastics may suit many trainees. Those interested in primary care will benefit from exposure to difficult wounds, hand trauma, cutaneous malignancy, and burns. Those interested in oncology will benefit from observing oncologic primary and secondary oncologic reconstructions. Those
interested in any surgical discipline will learn principles of soft tissue handling, closure, flaps, and microsurgery, as well as specific anatomy exposure (head/neck for ENT, hand/upper extremity for ortho, abdominal wall for gen surg, brachial plexus for neurosurg).

What you need to know

History: history and mechanism of injury, smoking/diabetes, time since burn, mechanism of burn (flame/contact/scald/chemical/electrical)
Physical: hand exam, craniofacial exam, burn ABCs, total body surface area (%TBSA) estimation
Anatomy: very broad - basic overview of MSK at a minimum.
Common presentations: complex lacerations, non-healing wounds/ulcers, hand trauma, craniofacial trauma.
Emergent presentations: orthopedic emergencies of the hand/upper extremity (including compartment syndrome), craniofacial trauma with neurovascular/functional compromise, large open soft tissue defects, large/deep burns.

Tips

The breadth of this field is perhaps the largest of any surgical discipline and most of the material is brand new for most trainees - use this opportunity to get comfortable with hand and craniofacial assessments, as well as learn what skin grafts, flaps, and microsurgery are. Often, smaller cases that don't require a full operative set-up can be completed in minor surgery. This is a great opportunity to get some operative experience and practice performing procedures with an awake patient.
If an unfortunate patient comes in with a massive burn, you will likely not be assessing them - nonetheless, you should go down to see the patient, as well as how they're managed acutely. Burns are often considered one of the most devastating types of trauma.

Specific learning resources

If you're especially keen, Janis - Essentials of Plastic Surgery is more than you will ever need as a medical student.

Radiation Oncology

Radiation oncology is the unique discipline that focuses on the treatment of cancer with the use of ionizing radiation, as well as a host of techniques associated with it. This is a very beneficial
rotation for just about anyone because cancer is COMMON. This is a very interesting area of medicine as it requires extensive collaboration between family physicians, diagnostic imaging, allied health, surgeons and many others. You will learn to appreciate the complex understanding of the physics of radiation, cancer biology, and clinical care that is required to be a radiation oncologist.

So what should you expect during your radiation oncology block? You will be given the opportunity to do full consultations with patients referred for radiation. This will often be in the context of various other treatments that may be concurrent with the proposed radiation treatment or even following failed trials of other treatment modalities. In addition, you will have the opportunity to learn about the hallmarks of cancer, how cancer spreads and staging of cancer which are topics that are relevant to many other fields and life in general!

As you are aware, there is an extensive list of possible diagnoses that you may see, some common and some more rare. The key at a clinical clerk level is to develop an understanding of the basics of cancer and radiation therapy and how to apply these in various clinical scenarios. It is not as important to have an in-depth understanding of the rare forms of cancer. Rather, it is more helpful to read around your cases for a deeper understanding when you come across these cases in the clinic for your own interest and learning. Given that there is no call for this rotation you will have more time in the evenings to read around cases than most other surgical rotations.

What you need to know

Cancer Basics:
1. What are the hallmarks of cancer? Inappropriate cell proliferation, neoangiogenesis, invasion and metastasis, genomic instability
2. How does cancer spread? Direct invasion, lymphatics, hematogenous
3. How is cancer staged? And what is the difference between clinical and pathologic stage? TNM system
4. What is the difference between staging and grading?
5. What are the goals of cancer treatment? Radical, (neo)adjuvant, palliative
6. What are factors to be considered in cancer therapy? Patient, tumor, treatment
7. What are the different treatment options? Surgery, systemic, radiation

Radiation Basics:
1. How does radiation treat cancer?
2. What are the different types of radiation therapy? External beam, brachytherapy, isotope therapy
3. What are the acute and late side effects of radiation therapy? Acute = within 6 months, late = after 6 months

Emergent cases: Superior vena cava syndrome, spinal cord compression, brain metastases
Consults:
A complete history and physical as you are used to is necessary here. However, the key is asking the right questions which may not be as intuitive for cancers you have never heard of. Included below are some points that are more specific to radiation oncology which may prove to be helpful. Beyond these, use the excellent history and physical examination techniques you have acquired during the last two years of your training.

- In your HPI you should be assessing for pertinent positives or negatives for a given cancer. For example, if a patient is being referred for radiation therapy following a diagnosis of a squamous cell lung cancer (SCLC), you should ask about cough, hemoptysis, pleuritic pain, and dyspnea. You should also ask about distant areas of metastases such as bone pain and headaches (for bone and brain mets respectively).
- Your examination should be thorough for the location of the primary cancer. For example, for a patient with an SCLC you should do a thorough respiratory examination. You should also assess for any common areas of regional metastases such as supraclavicular lymph nodes as well as distant metastases such as the brain in the form of a neurological screen.

Day-to-day:
Your day-to-day experience may vary depending on the site you are at and may include seeing a mixture of consultations and follow-up appointments. Follow-up appointments are generally short and focus on residual problems related to the patients cancer and treatment regimen as well as new health problems. Various rounds and meetings are held each week. Try to attend these whenever you can as they are often about interesting and rare pathologies that you may not have exposure to otherwise. Your preceptor will also likely show you the various pieces involved in treatment planning such as mould rooms, simulators, dosimetry rooms as well as treatment units where radiation therapists run the treatment machines after all of the extensive planning is complete.

Tips
1. Always arrive early so that you can review the files of new patients. They will often have an extensive history including previous imaging, pathology reports and other forms of treatment which will inform the questions and physical examination maneuvers you will need to perform. This is especially important for rare forms of cancer that you may have never come across in pre-clinical years. Reading about these topics briefly before seeing patients can be quite helpful in ascertaining as much relevant information as you can before reviewing with your preceptor.
2. The amount of time allocated for a given consult varies depending on clinic flow. Prioritize keeping the clinic on time to the best of your ability as radiation oncologists have extensive treatment mapping that they often have to work on in a timely fashion!
3. Some conversations may be of a very sensitive nature and may involve a component of palliative care. These conversations should only be undertaken under the supervision or approval of your preceptor. It is better to defer difficult questions surrounding the end of
life to your preceptor as these are often beyond the scope of what is expected of you as a clinical clerk.

4. Offer to help with dictations. Your preceptor may prefer to do these on their own but it doesn’t hurt to ask!

5. Come prepared with questions, there may be downtime if a patient misses their appointment as this is an outpatient rotation. Use this time to ask any relevant questions you may have to facilitate discussion and display an interest in the topic. Your preceptors are often very passionate about their respective field and are happy to answer questions you may have about content or about what a career in radiation oncology entails.

Specific Learning Resources

1. www.learnoncology.ca
   a. This an EXTREMELY useful website with concise and entertaining videos on the key bread and butter topics listed above. Use this as one of your essential tools during your radiation oncology rotation as well as a component of your exam prep. It has virtual cases which you can work through in order to apply your learning as well.

2. The radiation oncology AHD is a very concise and useful resource for exam prep as well as throughout your rotation.

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**Thoracic Surgery**

Thoracic surgery is the specialty responsible for most pathology and conditions spanning the thorax and upper GI system, including lung transplants. It is offered as a 2-week clerkship selective at VGH in clerkship and has the reputation of being a hidden gem, even for students not interested in surgery at all. It may at first appear daunting and subspecialized, however, the thoracics team at VGH is phenomenal and offers lots of support. On the team are generally two NPs who help with transplants and day-to-day ward management, usually 1 or 2 residents on their core junior surgical blocks or electives, and/or a fellow, and the 5 thoracic surgeons at VGH. Included in the rotation are double lung transplants, lung resections via both open thoracotomies and video-assisted thoracoscopic surgery (VATS), sternotomies, esophagectomies (various approaches of mix of chest/abdomen entry), scopes (EGD/bronchs), chest tubes (pigtail and large-bore), and hiatal hernia/upper GI repairs (MIS or open), and occasionally massive trauma repairs which the trauma surgeons ask thoracic surgeons for help with, just to name a few things. In general, you will tend to see more lung-related patients (mostly post-lobectomy) than patients in for a GI condition.
In terms of day-to-day, each morning tends to start around 0600hr on the Thoracics ward for rounding, often including patients in the ICU. Afterwards, you are often assigned a very flexible/rough daily schedule which includes OR, clinic, EGDs/bronchoscopy, ward duties, or teaching. During this time, there are often consults from other wards, the emergency room, or transfers from other hospitals/rural sites, as well as the occasional lung transplant recipient who is coming in for a transplant later that evening. Additionally, thoracic patients, particularly post-transplant and post-esophagectomy patients, can be quite ill and therefore ward and PACU pages are not infrequent throughout the day. The schedule, however, is otherwise flexible to your goals and may change depending on where surgeons have more need. There is no mandatory call for thoracic surgery. You may choose to take some if there are scheduled emergency cases or if they are busy, however, usually the consults overnight for thoracics are quite few and sporadic and it is generally not worth staying, with the exception for double lung transplants, which I highly recommend opting to attend at least one.

For students interested in a surgical specialty, thoracics is a subspecialty which falls under both Gen Surg and Cardiac surgery and can be done as a fellowship following both those residencies in Canada. Thoracic skills, particularly with chest tubes, are also imperative to trauma. Thus, thoracics could be a perfect adjunct if interested in either Gen Surg, trauma in the future, or cardiac surgery.

Thoracics is also a favorite amongst students not interested in trauma as their wide skill set with chest tubes, chest and respirology physiology, and EGDs and bronchoscopies are close to many other specialties particularly in internal medicine - especially respirology, gastroenterology, and medical oncology, as well as anesthesiology, emergency/trauma, and ICU care. Its variable day-to-day and flexible schedule allows you to direct your learning toward the direction you’re interested in - for example if you’re not interested in OR you can opt for clinics which are great learning for GI/IM/med onc.

What you need to know

**History + physical exam:**

A full history is fairly important as a large chunk of thoracic patients have been referred for cancer of some sort. Specific history questions pertain to the patient presentation, for example, for the patient referred for “trouble swallowing” learn to characterize it and dig deeper - is it progressive? To solids and liquids? Weight loss? Previous barium swallow/EGD/manometry/CXR? The history for lung transplant recipients is very comprehensive and the two NPs on your team have been trained in that field so generally you are not expected to do the intake for those patients prior to their operation, however, it can be an interesting learning point and you should ask the NPs if you are interested.

Truthfully, even though it is THORACIC surgery, no resident or staff carried around stethoscopes, although it can arguably be important at times. Checking for lymph nodes depending on the pathology can be important. Naturally if it is a patient with a GI condition/post-
op from intra-abdominal operation then an abdominal exam as with Gen Surg is warranted. However, most physical examinations at the bedside relate to checking the wound/incision and looking at the tubes (chest tube, drains from abdomen, or feeding tubes). Learn about basic chest tube insertions, management and daily checking (air leaks), and how to pull them. Otherwise, thoracics is heavily dependent on imaging (often daily for most patients) and vital signs (O2 requirements) to assess the course of a patient.

**Anatomy:**
- **Thorax:** at first, the anatomy of the thorax and mediastinum through VATS can be particularly disorienting and confusing. It may be helpful to watch some videos online first to orient yourself to intrathoracic anatomy.
  - Anatomy of the chest wall, mediastinum, and airways
  - Vasculature of the chest
  - Lobes of the lung
  - Major lymph node (i.e. paratracheal, prevascular, subcarinal) for lung CA spread
  - Diaphragm anatomy; possible hernias of the diaphragm

- **GI:**
  - All GI anatomy required for Gen Surg with a focus on upper GI anatomy including the vasculature around the stomach, first part of the duodenum, and liver/biliary system

- **Imaging:** similar to Gen Surg, imaging for thoracics is fairly important, particularly chest X-rays (daily for the majority of your patients) and CT chest/abdo as all lung resections are closely planned with pre-op CT chests. Half of rounding consists of reviewing the daily AM CXR of patients. Basic imaging interpretation is important and it is highly suggested to review this prior to your rotation.

**Common complaints/cases:**
- **Thorax:**
  - Pneumothorax (primary, secondary, spontaneous)
  - Lung cancer (of all kinds)
  - Anterior mediastinal tumors (thymoma, lymphoma, teratoma, thyroid)
  - Massive chest trauma that trauma surgeons cannot handle i.e. hilar vessel or bronchi damage requiring pulmonary resections such as lobectomy/pneumonectomy
  - Lung transplants (~1/week)

- **GI:** (know your work-up with barium swallow, EGD, pH testing, manometry, etc.)
  - Esophageal/GEJ/gastric cancer
  - Hiatal hernia (and fundoplications)
  - GERD
  - Achalasia (and Hellar myotomy)
  - Esophageal lacerations from foreign bodies (fish bones, etc.)
- Less commonly, esophageal strictures, webs, diverticulum, scleroderma causing similar symptoms

- Know the basics of ICU care as you will have many patients to round on in the ICU – good to have an idea of ventilator settings, basics about pressors, their tube management, etc.

**Emergencies:** - most things in thoracics are quite high acuity and can be considered emergencies. In particular, post-transplant, post-esophagectomy, trauma, and pneumothorax patients can be troubling.
- Pneumothorax/Hemothorax/empyema
- Injury to airway from major trauma i.e. tracheal damage
- Hiatal hernias causing bowel strangulation/SOB
- Trauma causing hilar vessel or bronchi damage
- Upper GI bleeds/lacerations/damage

**Overnight/on-call (common):**
- Wound issues – dehiscence (particularly clamshell incisions post-transplant)
- Chest pain or SOB*** concerned for new/enlarged pneumothorax/hemothorax
- Fever** concerned for empyema if chest, anastomotic issues if GI/esophagectomy
- Post-op bleeding, post-op afib/tachyarrhythmias
- Urinary retention (very common)
- Delirium (very common)
- Pain (very common)
- Vomiting/diarrhea/dehydration

**Tips**

If you’re not interested in Thoracics as a specialty you may never see some of these very incredible and unique surgeries/patients again. In particular, VGH does approx ~50 double lung transplants a year, meaning there is a high chance that you may be on rotation when there is one happening! Therefore I would highly advise that you try to stay to see at least one double lung transplant! They usually start late in the evening ~10PM and go into the early mornings after which you bring the patient from the OR to the ICU. The team will let you go home afterwards as a “post-call” day.

Intraoperatively, depending on the surgery and the surgeon, they may let you be involved in different ways which is fantastic. Thoracic operations are generally fairly high-risk (playing around the PA is never safe) and when you are holding the camera, a good view at all times is, even more so than other surgeries, especially critical for the surgeon. If you are retracting, be very careful with the pressure as the chest wall is very vascular and lung tissue is very sensitive - a small tear in vessels can be incredibly detrimental, either for the patient or because it will
keep bleeding into the camera/view which is already hard to see in the tight space. This is not the rotation to dose off on intraoperatively!

Depending on the surgeon who is doing the planned teachings, they may go around in a circle asking students questions. It is highly suggested to be prepared with anatomy and reading around the topic of that teaching session.

Specific learning resources or books
- The thoracics team will send along some helpful cheat sheets prior to rotation
- Read up specifically about chest tubes and their management (and insertion) - there are lots of resources online
- Learn Oncology (https://www.learnoncology.ca) modules for lung, esophageal, and gastric cancers are great learning
- If particularly keen about this specialty can consider buying Sabiston Textbook of Surgery
- Suggest looking up videos of VATS surgeries for orientation in the thoracic cavity

Urology

Urology is the specialty which deals with pathology and conditions pertaining to the genitourinary system, including renal, ureter, bladder, urethra, testicles, and prostate-related processes with a large part of the specialty focused on cancers of those organs. At UBC it is a 2-week selective students can rotate through at VGH, SPH, and RCH, as well as at BCCH for Peds Urology. It is a fantastic rotation for students interested in both surgical and non-surgical specialties and certain skills such as catheter/urinary retention management is important across the board. Depending on where your rotation is, your team will generally consist of one or more residents (generally a Jr. and a Sr.) as well as the attending.

Your day-to-day depends greatly on your site and daily schedule. Generally morning rounds every day start fairly early around 0600hr - 0630hr depending on the patient load. Following that you may be going to clinic, OR (scheduled or emergency), consults (ED and from other services), or managing the ward. Generally a fair number of consults flow in throughout the day and either the resident will send yourself to check it if they’re scrubbed, or check them in between procedures. There is no mandatory call expected, however, it may be offered to you to help out with weekend morning rounds one day. Additionally, at SPH there are occasional renal transplants throughout the days and nights, though often in the late evening. The donor nephrectomy may be scheduled during the day, however, I would highly recommend staying to participate in one recipient surgery which can run into early mornings.
For students interested in surgery, urology can be a very interesting and helpful rotation, even if you are not interested in the specialty itself. It's a very innovative field with lots of tech and gadgets - they are the primary specialty using the Da Vinci robot (at VGH), use various MIS techniques, and do scopes and other forms of treatment as well. They are the experts in pelvic anatomy which can be challenging for other fields that work in the same area, therefore, this rotation can be helpful for other surgical specialties such as General Surgery and ObGyn. Additionally, urinary retention and difficult foleys will be prevalent across all surgical specialties, particularly post-operatively, and it can be helpful to learn to manage difficult catheters that nursing have trouble with, rather than calling Urology every time.

For students interested in non-surgical specialties, urology also has many ties to nephrology, transplant, medical oncology, family medicine (prostate cancer, voiding issues), and emergency medicine. Again, the catheter and urinary retention skillset is useful across almost all medical specialties.

What you need to know

**History + physical exam:**

Full patient histories can be important in certain Urological patients, such as cancer presentations. However for simpler presentations it can be quite focused, such as in the case of acute postoperative urinary retention, where specifics (i.e. procedure details, catheter trials, medication details, previous BPH/pelvis imaging) are important to elicit, however, a full detailed Hx may not be required. Additionally, symptoms of cancer must be screened for almost all patients particularly with obstructive-type presentations. Additionally, the pelvis is particularly prone to vascular bleeding due to the complex anatomy and all medications affecting coagulation should be disclosed to the team immediately.

Physical exams to know include the full urogenital examination for males as well as the abdominal exam, including eliciting costovertebral angle (CVA) tenderness and DREs. Part of the daily physical exam in Urology rounds includes examining the foley - position, output, color, cloudiness, etc.

**Anatomy:**
The anatomy required to know is dependant largely on the OR slate and the specific patient pathology, however, basic anatomy knowledge includes:

- Layers of the abdominal wall
- Renal collecting system and vasculature
- Pelvic anatomy including basic lymph nodes, vasculature, and all the structures inside
- Testicular anatomy
- Prostate anatomy

Basic image interpretations, particularly the CT abdo/pelvis with different contrasts as well as renal/bladder/prostate ultrasounds can be very helpful and recommended in Urology.
Common complaints/cases:
Adult Urology: large focus on oncology in Urology
- Bladder cancers, renal cancers, prostate cancers, testicular cancers, renal transplant, renal colic/nephrolithiasis/septic stone/outflow obstruction, BPH (and TURPs), trauma - renal/bladder/urethral/testes, interstitial cystitis, bladder prolapse, erectile dysfunction, prostatitis, most common consults/presentations from ED or services (urinary retention, gross hematuria, stones)

Peds Urology:
- Phimosis, paraphimosis, hydronephrosis (genetic or congenital conditions such as post-urethral valve), undescended testis

Emergencies:
- Septic stone, acute outflow obstruction (i.e. stone), trauma to testes/urethra/bladder/kidney

Overnight/on-call (common):
- Wound issues (i.e. dehiscence)
- Post-op bleeding
- Post-operative afib/tachyarrhythmias
- Urinary retention (very common)
- Delirium (very common)
- Pain (very common)
- Chest pain or SOB
- Fever
- Vomiting/diarrhea/dehydration

Tips
This is a great rotation to practice all the foley catheter inserts you could ever need and get all the tips from the resident for difficult insertion (i.e. Coude catheter). Also, this rotation can be very busy, depending on your team and location, as Urology gets a ton of consults from everywhere in the hospital. You may start earlier and end later than any other surgical service. Because of this, the residents and staff greatly appreciate efficiency and helpfulness from medical students - anything you do to make their lives easier will be remembered. Teaching from certain staff, particularly at VGH, can be intense and I would highly recommend reading up on the topic/patient and being well prepared for the session. Lastly, if you are at SPH, I would highly recommend staying to catch a renal transplant recipient surgery at least once if they line up with your rotation.

Specific learning resources or books
- The lectures through medical school and the Urology AHD lectures are good
- Toronto Notes is a great overview of all the major Urology presentations
Vascular Surgery

Vascular surgery addresses the diagnosis and treatment of diseases of the vascular tree, including arteries, veins, and lymphatic vessels, exclusive of those within the cranial cavity and the heart. The principal diseases treated involve those affecting the carotid arteries, the aorta, and those supplying the blood supply to the lower extremities, the kidneys, and the abdominal viscera. Common procedures performed include carotid endarterectomy, repair of abdominal aortic aneurysm, and revascularization of the lower extremities. Vascular surgery has been available at VGH and SPH (VFMP), KGH (SMP), and RJH (IMP).

Vascular surgery has no medical counterpart and involves open and endovascular procedures (the latter of which are often split with interventional radiology depending on hospital convention). Many vascular patients require longitudinal follow-up and some require re-intervention. The patient population tends to be older.

A selective in vascular surgery might be useful for a trainee interested in family or internal medicine, since much of the primary prevention of these conditions is in the non-surgical setting, and many urgent complaints involve titration of anticoagulant medications. A trainee interested in neurology might be keen to get involved in some of the carotid cases as well. This rotation might also be useful for trainees interested in surgery, as general vascular principles (surgical approach, vein harvesting, etc.) are used in many surgical disciplines, like cardiac, plastics, and neurosurgery.

What you need to know

**History:** Past medical and anticoagulation/antiplatelets, as well as previous vascular injuries/interventions (not only peripheral vascular - think brain and heart).

**Physical:** You should be comfortable with the major peripheral pulses. More minor pulses in digits etc. involve use of doppler.

**Anatomy:** General vascular anatomy - arterial patterns of upper and lower extremity, branches off abdominal aorta, and major veins. You will learn a lot of the common stuff early in the rotation because the cases tend to be similar across patients.

**Common presentations:** acute and chronic arterial ischemia, DVT, AAA, carotid stenosis

**Emergent presentations:** vascular trauma, ruptured AAA, descending aortic dissection, limb ischemia requiring revascularization, mesenteric ischemia
Tips

Practice pulses on patients - this is your best opportunity to learn what the difference between a weak and strong pulse is in difficult-to-assess populations (e.g. elevated body habitus). Learn to use a doppler early on, as it can accelerate your assessments.
If you're not scrubbed in, hop onto the OR computer and pull up the CT/CTA - scroll through and see if you can spot the region requiring revascularization.
Open cases often require long, large incisions, which means lots of opportunities for closure.
Get in there and practice your subcuticular.
Always remember thyroid protection.

Specific learning resources

The vascular surgery team generally does a reasonable job of distributing some resources before the rotation. If they don't, upper years should have their hands on them.

Which Selectives Should I Choose?

Choosing your selectives occurs at the mid way point of your second year, and if you’re reading this, you might have already finished this process. Nonetheless, below are a few “case studies” of students in different situations, and examples of what they might rank highly. Note that all of the following are examples, and students have been successful following completely different paths - these simply provide a framework of how to think about the rank.

Student #1 - interested in rural family medicine
- General surgery - 4 weeks
- Orthopedic surgery - 2 weeks
- Urology - 2 weeks (voiding issues, BPH, prostate cancer)
- Plastics - 2 weeks (lacerations, wounds, hand injuries, burns)

Student #2 - interested in subspecialty internal medicine, neurology, or anesthesia
- General surgery - 4 weeks
- Orthopedic surgery - 2 weeks
- Any two of the following:
  - Cardiac surgery - 2 weeks (joint interventional/surgical cases, cardiac ICU exposure)
  - Thoracic surgery - 2 weeks (surgical treatment of lung malignancy)
  - Vascular surgery - 2 weeks (anticoagulation in the surgical context)
  - Neurosurgery - 2 weeks (surgical intracranial pathology)
  - Radiation oncology - 2 weeks (cancer care)
**Student #4 - interested in urology**
- General surgery - 4 weeks
- Orthopedic surgery - 2 weeks
- Urology - 2 weeks (of obvious benefit)
- Vascular surgery - 2 weeks (approach surgery, vein grafting, arterial anastomosis)

Note: each of the surgical selectives are their own direct entry CaRMS discipline, with the exception of thoracic surgery and pediatric general surgery, both of which are fellowships completed after general surgery residency (thoracics also through cardiac surgery). As such, if you are 100% set on applying to general surgery, you might find it useful to do selectives in thoracics and peds. But if you aren’t 100% on general surgery, it might be wise to choose selectives besides thoracics/peds in order to gain exposure to a distinct CaRMS discipline.

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**Conclusion**

**Remember what matters**

Your surgical rotations, perhaps more than any others, will be a self-fulfilling prophecy. If you go into them with the mindset that you will be disinterested and tired, your experience will likely be a reflection of that. Conversely, if you take advantage of what you can do and see - for many of you, the only chance you’ll have to do and see intraoperative depiction of pathology - you are likely to get out of these few months an incredibly rewarding experience, whether you’re interested in pursuing surgery or not.

To that effect, you are encouraged to get in the OR as much as you feel comfortable with - and maybe a little more on top of that. Surgical residents and staff are not the type to babysit you to make sure you’re having fun, and if you try hard enough, you’ll be able to avoid the OR. But consider: might there be something outside of your comfort zone that will not only be of benefit to you as a future physician, but to your future patients? Getting in the OR is a formative experience of the medical trainee and you will see things you won’t forget for the rest of your life - take advantage.

Wake up early, eat when you can, practice your skills, and do the things you are capable of doing. Everyone wants you to succeed.
Emergency

The Big Picture: Introduction

Emergency is a 4-week rotation which the majority of students absolutely love. Students will see a wide variety of patients, get the opportunity to do procedures such as suturing, and even possibly be involved in some life-and-death situations. One might even help to revive someone with CPR!

The field of emergency medicine spans a broad scope of knowledge and skills and requires certain personality characteristics such as the ability to multitask and think or react quickly. Although emergency department physicians (EDPs), like family doctors, must understand a little about a lot in order to know how to treat and manage a new patient, they must also learn a very specialized skill set related to acute resuscitation, critical care, and disaster management. Emergency is a specialty in which triaging patients based on urgency is turned into an art, and directly resolving or redirecting problems becomes second nature. There are few things that can come through the doors that an EDP would not know how to handle, or even make them nervous!

The Itinerary: Student Schedules

On average, most students will be scheduled for 17 shifts during the 4 weeks, and each shift will usually be 8 to 10 hours long, depending on the hospital site, type and time of the shift (ex. overnight shifts may be shorter than daytime shifts, acute care vs fast track, etc). The time of day you start work will vary as well, with some shifts beginning early in the morning while others are in the afternoon or evenings; most people will work at least a few overnight shifts as well. In general, student schedules will group a series of day shifts together, and a series of night shifts together, in order to try and provide some sort of regular sleep cycle for students. However, students shouldn’t be surprised if they find themselves working 4 days followed by 3 nights with only a single day off in between. There are also academic half days on Thursdays that students will attend and are mandatory with attendance taken (unless you have worked the previous night shift, in which case you are exempt). Along with weekend shifts, students should expect to have roughly 6-7 days off only during the 4 weeks. Despite the busy schedule, there is lots to see and do and thus many students don’t find themselves bored or overworked.

The Overnight: Call Shifts

There are no traditional call shifts in emergency, as students are scheduled for shifts (some of which may be overnight), and thus the schedule is pretty straightforward.
The Gear: What To Bring & Carry

In the emergency department, students should bring their stethoscope, a pen, and snacks. Emphasis on the snacks. Emergency can be very hectic and busy, and it may be difficult finding time to stop and eat a proper meal. Having a penlight, small reflex hammer and tuning fork are other things to consider in your toolkit but usually they are available in the ED.

Give yourself some time to arrive early before the start of your shift. You will need time to change into scrubs and put you things away in a locker. Try and be in the ED and familiarize yourself with who your preceptor is 10-15 minutes before the start of your shift. Being prepared and early will get you started on the right foot! Depending on your site, you may be asked to wear a lab coat as an alternative---always refer to your individual site for directions on appropriate dress.

Having a small pocket reference book like Pocket Emergency Medicine (usually accessible from the hospital library if you plan ahead of time!) can be very useful. Having apps on your trusty smartphone such as MDCalc, Medscape and UpToDate for quick access can be truly valuable when you're in a fast paced working environment and need to look things up.

Staying In The Know: The Best Ways To Keep Track Of Patients And Other Info

Most of the time students will write directly in the patient’s paper chart which is usually on a clipboard. You can also track your patients in the emergency department by accessing the local electronic medical record. A lot of students prefer having a notebook handy to jot down what they’ve seen for logging and studying purposes. When you start seeing multiple patients during one shift and things start to accumulate, the notebook can also serve as a great tool for tracking to-do items or jotting reminders about a case you are seeing during the shift.

Becoming An Expert: Recommended Reading

Students will be provided with a core content manual on Entrada that they are expected to read through. The other reference that is highly recommended is Toronto Notes as it has it covers a breadth of topics in a reasonable amount of detail that one can easily review before the start of the rotation. Depending on the person, NMS Emergency or Pocket Medicine will also work, but often there won’t be sufficient time or energy to read too many in-depth books.

There are also core content videos and academic half-day sessions that can supplement your learning! The academic half-day sessions are an excellent interactive way to go through cases and reinforce what you have learned at home or on shift.
What The Heck Was That?: How To Study During The Rotation

Emergency medicine can be a very busy rotation and often the expectation is that you are efficient with your patients. Unfortunately, this heightened pace of work does not allow for a lot of time to sit and read around conditions you encounter. To maximize learning on this rotation, it is best to come prepared with a strong foundation in common presentations and approaches, and to apply that knowledge to a practical setting. As such, it is recommended that you record cases you were unfamiliar with and allocate a reasonable amount of time at home between shifts to brush on these topics.

At home, the bread and butter resource is the “Core Content Manual” that you can find on Entrada. It is a comprehensive package containing 42 PDFs (26 chapters) created by UBC that goes over common presentations and is fully examinable for the block exam. The content is fantastic and appropriate for the clerkship level, but mostly presented as walls of text, so be sure to pace yourself and aim to only read a few chapters a night. While the Core Content Manual uses a narrative approach in providing a strong foundation and understanding, the emergency medicine section of Toronto Notes provides a more succinct reference guide with clean flow charts, diagrams, mnemonics, and landmark trials, making it a great secondary reference to review with once you have a basic grasp of the topic. If emergency medicine is a field you are interested in and dive deeper into the topics, you can look into more advanced resources such as Tintinalli’s Emergency Medicine Manual and Rosen’s Emergency Medicine. The former presents more like a pocket guide and the latter reads more like a textbook. It goes without saying, but Academic Half Days are also fantastic resources on specific topics but due to limited time cannot cover all the topics necessary.

For audio learners or those with long commutes, podcasts are often a great free resource to learn from. EM Clerkship (by Zack Olson) is an absolutely fantastic resource that caters to the clerkship level. They are highly digestible 10 minute episodes covering approaches, common questions that attendings ask, and things you cannot miss, and there are episode summaries available online. Personally, this was my primary resource as my commute was two hours round trip and that allowed me to maximize that time to cover more than ten topics a day. EM Basic (by Steven Carroll) also covers emergency medicine at a clerkship level but is less regularly updated. For more in depth podcasts, CRACKCast is a Canadian podcast that covers every chapter in Rosen’s Emergency medicine, and EMCRit RACC Podcast focuses on topics around specifically critical care in emergency medicine.

During your clinical shift, you often only have time for a quick read or refreshers. UpToDate is the primary resource and a great starting point for your cases. Sometimes when you have more time, you can supplement with Toronto Notes, Core Content Manual, or Tintinalli’s if you have the PDFs on your phone.
Getting Pimped: What The Doctors Tend To Ask

After seeing your patient, you have to be ready to present the case and then answer any questions your attending has. Presenting the case can often be difficult depending on what your prior experiences were. For example, if you just finished your internal medicine rotation and are used to writing and presenting long, detailed consults, you may have a hard time adjusting initially. When presenting a case in emergency medicine, you want to make sure that you are concise and cover only relevant points and pertinent negatives. Ask yourself “what brings this patient to the ER, what are possible explanations for this specific complaint, and what are you going to do about it?”.

The most common areas that the attending physician may ask around include critical diagnoses, differential diagnoses, clinical rules and interpretations, investigations, management, and disposition. Critical diagnoses are very important in emergency medicine – these are diagnoses that you absolutely cannot miss and must always have in the back of your mind. For example, a patient coming in with chest pain should automatically prompt you to think of ACS, cardiac tamponade, PE, aortic dissection, pneumothorax, and ruptured esophagus. You should have information from the history and physical exam that supports or refutes these diagnoses, and an investigational plan to further narrow your provisional diagnosis. Another example would be to examine the upper fibula in a fracture of the medial malleolus to check for a Maisonneuve Fracture. Be sure to familiarize yourself with various rules/scoring systems and when to apply them, including Ottawa Ankle Rule, Canadian CT Head Rule, Heart Score, Wells Criteria, etc. Have a strong approach to interpreting ECGs and X-rays, as you often don’t have a formal report available for you in the emergency department. At the MSI3 level, you are expected to have an approach to management but the specifics are often less important than everything else mentioned.

Hands On: Procedures You Get To Do In This Rotation

The range of what students actually end up doing will vary widely depending on the site, which patients happen to come in during one’s shifts, the comfort level of the attending, and the student’s proactiveness. Students can expect the chance to do suturing, fracture/dislocation reductions & casting, IVs (just ask the nurses), POCUS, and possibly ABGs, thora/paracentesis, intubations, and CPR. Review and practice suturing (especially simple interrupted) and application of local anesthetics at home as it is almost guaranteed that you will have multiple opportunities to suture lacerations. You may be able to get by emergency medicine without doing any POCUS yourself and instead wait for your attending. Having said that, POCUS is so readily available in the ER and is an extremely important tool, it is recommended that you read about it and proactively use the ultrasound machines when you examine the patient. CPR is a mandatory Direct Observation item in clerkship. Some students may not have the opportunity to do CPR and will have their forms signed on Trauma Half Day. However, it is important to be prepared in case the opportunity does come in the emergency room. Unlike most other
procedures, there is no time to slowly look things up and review prior to the actual procedure. Most likely, you will be doing something totally different, and a code blue is called or someone is rolled into the trauma bay, and your attending will grab you. You will have to be ready to help with CPR, pulse checks, or BVM ventilations. Be sure to brush up your technique and familiarize yourself with the ACLS guidelines to maximize your learning. You can increase your chance of being able to participate in these activities by asking politely to hang around the trauma bay (if your hospital has one) whenever a patient comes in, even if your attending is not responsible for that patient. Remember, you have to be proactive and show that you prepared at least somewhat at home in order for your attending to give you opportunities for procedures.

The Checklist: Must-sees And Must-dos That You Will Likely Get During This Rotation

Students will see most of the emergency requirements and will also likely check off several of the must-sees for internal medicine, psychiatry, and orthopedics, given the wide variety of conditions that can walk through the door. The faculty has provided a list of Must-Sees and Must-Dos that you have to record on One45 – refer to that.

Leveling Up: How To Prepare For The Exam

Students should ensure they read the many excellent files and resources available to them to prepare for the exam (check with more senior medical students regarding which exact files to read, and where to find them). The core content manual is also mandatory reading during the rotation and provides much useful information for students to read and learn from. Although this rotation can be busy, try to find time at home to study, as there will likely not be any time to study while on shift. Refer to the section above on how to study at home for resources. If you regularly used resources and studied during your rotation, you won’t need to do much studying to pass the block exam other than to review some major topics.

The Final Boss: End Of Rotation Exams

The end-of-rotation exam is a computerized 50 question multiple choice exam, to be taken at the LSC multipurpose lab at UBC on the last Friday of the rotation. If students have read through all of the required and recommended material, they should have no problems passing the exam.
## The List: 10 Things To Know

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<tr>
<th>5 conditions not to miss diagnosing</th>
<th>5 procedures to read on in advance, as you will likely do them in the ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MI</td>
<td>1. Suturing</td>
</tr>
<tr>
<td>Although the classical description of heavy pressure chest pain/discomfort with radiating pain to the left neck and arm is hard to miss, MIs don’t always present this way. Instead, one might see pains to the back or abdomen, and often women present differently than men typically do. If there’s ever a suspicion of an MI, it’s worth getting an ECG and troponins to be sure.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lacerations, lacerations, lacerations. In no other rotation will students get more opportunity to practice their suturing skills (surgery inclusive). Luckily, students usually won’t have an attending/resident watching over their shoulder, presuming they demonstrate they are familiar and competent with suturing techniques (having pre-read and all!).</td>
</tr>
<tr>
<td>2. Stroke</td>
<td>2. Fracture reduction and casting</td>
</tr>
<tr>
<td>A hemorrhagic stroke can be rapidly life-threatening, and also be contraindicated for certain stroke treatment protocols. In any case of acute neurological or behavioural deficit/change, especially in the elderly, one should investigate to rule stroke out urgently.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There’s undoubtedly going to be more than 1 broken bone coming through the doors, and one shouldn’t be surprised to see multiple on a single shift. Although some fractures are too complicated to resolve in the ED and require an orthopedic consult, many others are simple transverse fractures that can be reduced and casted by ED doctors (and students).</td>
</tr>
<tr>
<td>3. AAA</td>
<td>3. Draining/aspirating fluid/pus/blood filled cavities</td>
</tr>
<tr>
<td>There is a vast differential for abdominal pain, and among them includes abdominal aortic aneurysms, which poses a very high mortality rate in cases of rupture. Patients with complaints of pain in the abdomen should always be palpated for a pulsatile mass, and if coupled with rapidly decreasing blood pressure, should be assumed to be AAA until it is otherwise ruled out.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If there’s a body part one can think of, there’s a way to fill it with some sort of fluid, be it pus, blood, mucus or any other body secretion. Fortunately, there’s also almost always a way to stick a needle in it and drain the cavity. If an infection is suspected, don’t forget to save the aspirate for culture, and not just instinctively toss the entire needle in the safety bin!</td>
</tr>
<tr>
<td>4. C-spine fracture/injury</td>
<td>4. Resuscitation:</td>
</tr>
<tr>
<td>Whether it’s a high speed motor vehicle collision, high level fall, or a impacting sport injury, one must always presume there is a c-</td>
<td>CPR, airway management, and fluid replacement are all procedures that require quick thinking and efficient action, and</td>
</tr>
</tbody>
</table>

Clerkship Handbook 2020
spine injury and protect the neck until it is ruled out, either through x-ray or based on clinical findings. Even if the patient is able to move their head on their own, this does not guarantee no occult fracture has occurred. 

students may be called upon to contribute in various ways. It helps to not be caught off-guard like a deer in the headlights.

<table>
<thead>
<tr>
<th>5. GI Bleed</th>
<th>5. POCUS is readily available in most, if not all, emergency departments. It is non-invasive and provides a lot of useful clinical information. Read about it at home, and grab one with you when you see a patient (if relevant of course). Proactively do this for practice, as attendings often do not have the time to watch you fumble with the ultrasound machine while they're seeing the patient. Familiarize yourself with the FAST scan so you don't look lost in the trauma bay.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sometimes innocuous, sometimes worrisome, sometimes dire, depending on the amount, the timing, and the colour. Many patients can have chronic occult GI bleeding, which warrants further investigations, but not on an urgent basis. However, it is those which have a severe amount of bright red blood that persists that requires an immediate consultation from the GI service, especially if the patient is on a blood thinner.</td>
<td></td>
</tr>
</tbody>
</table>

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### The Summary: Closing Thoughts And Advice

Emergency isn’t simply a triage and referral service, redirecting any and all comers to the appropriate specialist. They are in themselves a specialist of managing acute problems, ensuring appropriate treatment or consultation is provided for all diseases and conditions, and of course, saving people’s lives in life-threatening emergencies.

As a rotation, you will find a large amount of enjoyment, knowledge, and satisfaction in completing each shift, despite the longer hours of non-stop work (time passes faster when there’s stuff to do!). Certainly there will be many cases that one has no idea how to diagnose or treat, but it is in these where the most learning is to be gained. Furthermore, you'll develop your skills in multitasking like never before, and you'll be surprised how much your short-term memory can store when you need to track 4 patients at the same time! Whether you have this rotation at the beginning, middle or end of your year, there’s much to see, do, and like!
Anesthesia

The Big Picture: Introduction
Anesthesia is a 2 week long rotation and is generally considered a relaxed and enjoyable learning experience. No other rotation provides as much one-on-one time with an attending, and this provides an excellent opportunity to learn about pharmacology, physiology, and other topics in perioperative medicine. While much of your patient care will be procedural, the pre-anesthetic assessment is an opportunity to practice focussed history taking and to comfort anxious patients. By the end of the rotation, students should expect to have practice with many hands-on procedures including tracheal intubations, bag-mask ventilation, and IV placements.

The Itinerary: Student Schedules
The majority of the 2 weeks of anesthesia will be at an assigned hospital site, with the exception of 1 day of maternity at BCWH and 1 day of pediatric anesthesia at BCCH. Information about OR start times, reporting instructions, and important contacts for each hospital site is available on the Entrada MEDD 431 Anesthesiology page. There are occasional lunchtime seminars/teaching sessions with residents, but these are site-specific. Note that there are no morning rounds, no call shifts, and no weekend shifts!

The typical day spans from approximately 7 AM to mid-afternoon. Most sites will send an email each afternoon with the following day’s assigned anesthesiologist and OR number so that you know who to report to in the morning. Ensure you always arrive early - I recommend 15 to 30 minutes before the OR time - to orient yourself and see the first patient. Assessing the patient before the first case will free up time for your preceptor to check-in with you and set-up their anesthesiology cart.

Throughout the day expect to assess patients in the pre-op holding area and present them to your attending. It is a good idea to have an organized approach and offer to see the next patient toward the end of each case. To maximize hands-on learning, assist with setting up equipment and offer to do intubations, and bag-mask ventilation.

Once the patient is asleep during the operation, you will have lots of time for one-on-one teaching with your attending and will often be allowed to go for a coffee or study break while the case is happening. Sometimes preceptors need a break from teaching, so take breaks when offered.

Most OR slates are usually scheduled until 3 to 4 PM in the afternoon, but often the supervising anesthesiologist will let you go early after the last patient of the day has been induced as there are less learning opportunities remaining after that.
The Overnight: Call Shifts
As previously stated, there are no call shifts scheduled for this rotation. For students particularly keen or interested in anesthesiology, it may be possible to talk to the site director and arrange for additional or replacement shifts to span the overnight period.

The Gear: What To Bring & Carry
Be sure to bring a stethoscope, a charged smartphone, a notepad or scrap paper for some note-taking, and a pen. Arrive early to locate the change rooms (if you don’t know where, ask the surgery check-in clerk) and change into scrubs. Some sites have lockers for students so bring a lock, however the OR lounge may also be used to store belongings (be careful with valuables). Come prepared with reading material, either in paper or electronic format, as there may be lots of downtime. Finally, don’t forget to load the Daily Assessment Form (https://ubc.ca1.qualtrics.com/jfe/form/SV_eLqefZ3CiQH0IEh) onto a mobile device and have it ready for your preceptor at the end of each shift.

Staying In The Know: The Best Ways To Keep Track Of Patients And Other Info
Most departments use an anesthesia consult sheet that documents important information relevant to perioperative health and anesthetic risk factors. Fill this out when assessing patients and take this sheet (or a photocopy) to your attending when presenting the case. Otherwise there isn’t much information that needs to be tracked. Pre-writing questions or topics to discuss with your preceptor is a good idea, and can be helpful to refer to when logging via the Daily Assessment form.

Becoming An Expert: Recommended Reading
The Ottawa Anesthesia Primer (Sullivan, 2012), is the recommended textbook for this rotation and is highly regarded for teaching Anesthesia at a medical student level. Aim to read this book cover to cover throughout the 2 week rotation; having this requisite knowledge will impress attendings and prepare you well for the MCQ. The faculty recommends reading chapters 3, 6, 7, 8, and 9 within the first two days of the rotation. It is a good idea to read the pediatric (26) and obstetrical (19) chapters before the night before visiting BCCH/BCWH. Reading the Toronto Notes is also very useful for a quick summary of anesthesiology.
What The Heck Was That?: How To Study During The Rotation

Students should do the 7 (and increasing number of) modules available online on Entrada to get a general sense of topic areas. Then, each day, students should choose a topic from the objectives to cover with staff throughout the day. Memorizing common drugs (ie. propofol, rocuronium, etc.) and dosages also goes a long way when in discussion with attendings. Don’t be afraid to ask questions throughout the induction process, or request to help or perform various tasks for hands-on learning and practice.

Getting Pimped: What The Doctors Tend To Ask

There is a large focus on pharmacology and cardiac/respiratory physiology. Mechanisms of action/dosages/pharmacology of common anesthetic agents are all fair game to be asked about, but don’t feel like you must know everything down to the letter. Hypothetical scenarios (ex. what to do if a patient desaturates, if BP goes down, if there is excessive blood loss, etc) may be posed by the anesthesiologist as well. Anatomy of the airway or spine is also commonly discussed in the context of intubations and epidural/spinal anesthetics. Maternal/pediatric anesthesia is only discussed with relevant patients at BCWH/Children’s, unless one happens to be in an OR where c-sections or pediatric surgeries are taking place, which may happen in a community hospital.

Hands On: Procedures You Get To Do In This Rotation

Anesthesia will likely be the most hands on rotation throughout the year, and there will be something to do for every single patient that comes through the OR. Procedures that students should expect to get the chance to assist with/perform include:

Airway management procedures
- Manual bag-mask ventilation of a patient for pre-oxygenation or assisted ventilation
- Endotracheal tube (ETT) placements
- Laryngeal mask airway (LMA) insertions
- Extubations

Anesthesia induction procedures
- IV insertions (peripheral or possibly central lines)
- Placing pulse oximeter, BP cuff, ECG leads, other monitoring equipment
- Spinal/epidural insertion (rarely)
- Drawing up and administering IV anesthetic drugs
- Monitoring/documenting patient status
The Checklist: Must-sees And Must-dos That You Will Likely Get During This Rotation

There should be no challenge logging the appropriate must-do’s and must-see’s as the expected entries for anesthesia will likely occur several times throughout the rotation. Don’t forget that two WBA’s are required: peripheral IV insertion and bag-mask ventilation.

Leveling Up: How To Prepare For The Exam

Much of the formal learning in this rotation will be self-directed, so plan time to study. Questions will be based on the academic full-day sessions and the online modules so reviewing these is important. As stated above, the Ottawa Anesthesia Primer is a gold-standard resource and anecdotal evidence suggests that students who read the textbook do well on the exam.

The Final Boss: End Of Rotation Exams

The MCQ exam comes at the end of the 12-week SPC block, and 30 of 180 questions are anesthesia related. Many classmates felt this portion of the exam to be the most challenging, so prepare accordingly with the above mentioned resources.

The List: 10 Things To Know

<table>
<thead>
<tr>
<th>5 A’s of anesthesia</th>
<th>5 components of airway assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analgesia: patients should experience no pain throughout the surgery, and have controlled pain afterwards</td>
<td>1. Mouth opening: should be able to put 2-3 fingerbreadths into the mouth when patient opens it as wide as they can</td>
</tr>
<tr>
<td>2. Amnesia: patients should have no memory of the surgery itself</td>
<td>2. Thyromental distance (TMD): should have at least 3 fingerbreadths of width between the top of the thyroid and the bottom of the mandible</td>
</tr>
<tr>
<td>3. Anxiolysis: patients should be calmed before and after the surgery</td>
<td>3. Prognath: should be able to put their mandible out so their lower teeth are in front of their upper teeth</td>
</tr>
<tr>
<td>4. Akinesis: patients should be immobile and have relaxed musculature</td>
<td>4. Mallampati score (class I to IV): with their mouth open, how much of the uvula and posterior pharynx can be seen?</td>
</tr>
</tbody>
</table>
5. Autonomic control: patients should have a stable heart and respiratory rate

5. Dentition: does the patient have any loose/capped/false teeth, or another dental issue that is an aspiration risk?

The Summary: Closing Thoughts And Advice

Prior to this rotation, many students only have a vague understanding of anesthesiology. Many of the stereotypes of these “sleep docs” apply - they do indeed trade stocks, read newspapers, and indulge in coffee - but behind the sterile curtain, anesthesiologists must also continually monitor vitals, administer drugs, and prepare equipment, all while being ready to stabilize a crashing patient if needed. As a practice, anesthesiology combines knowledge of physiology and pharmacology with a skill set of various highly dexterous procedures. Many students greatly enjoy this rotation as there is much to learn and do. Be sure to actively seek out opportunities to start IVs, bag and intubate patients, and place monitoring equipment, as this is the best time to learn these fundamental skills. Regardless of your interests, I hope you gain a lot from this rotation and enjoy it!
Obstetrics and Gynaecology

The Big Picture: Introduction

Obstetrics and gynaecology (obs/gyne) is a 6-week rotation and, depending on where students do their rotation, the split between obstetrics and gynaecology can be distinct or integrated throughout the 6 weeks. One of the weeks is a ‘preceptor week’ during which students are assigned to one obs/gyne physician and will spend the whole time with him/her (clinic, OR, and call) – more info on the preceptor week can be found below.

This can be a very busy rotation! Babies come at all hours of the day or night and students can be just as (or even more) sleep-deprived in this rotation than they are during CTU or general surgery. However, most call shifts are 24 hrs in-house (from 8 am - 8 pm) and one always goes home at 8 am (the residents do!). That being said, how busy students are on this rotation is very dependent on how much they put into it. Because things tend to happen very quickly on this service, residents and nurses may not have time to page students even if they are asked to! Most will make an effort, but good communication between students and the resident/preceptor/nursing staff, as well as consistent follow-up on patients, are both ways to ensure involvement.

The Itinerary: Student Schedules

Each student will receive a detailed individualized schedule at the beginning of the rotation with a nice mix of clinic and inpatient learning opportunities. Call shifts are approximately 1 in 6, although not necessarily evenly distributed throughout the weeks.

If students are not on call, they will be spending time at various clinics (colposcopy, fertility, midwifery, ultrasound) or in the OR.

During "preceptor week", students will have the chance to work with one specific obs/gyne doctor and follow them to their clinic/call/OR. Their evaluation over the course of this week will make up a large part of one’s overall clinical evaluation.

There are two academic half days per week, usually Tuesday and Thursday mornings with lectures videoconferenced from BCWH to all of the satellite sites. Clinic hours are typically 8 am - 5 pm, but should be checked ahead of time with the clinic office. Call shifts are 24 hours with post-call days off.

The Overnight: Call Shifts

There is slight variability depending on the site, but calls are typically 24 hours starting from 7 - 8 am. Students do get post-call days off. When on call for obstetrics, students will usually simply stay around the ward and follow women through the course of their labour & delivery. Students’
level of involvement will very much depend on personal initiative, so students should remember to ask the nurses and/or preceptor to call for any patient issues.

The Gear: What To Bring & Carry
Dress code will depend on where students are scheduled to work for the day. The usual business casual +/- white coat/stethoscope is appropriate for clinic, while scrubs are best when on call.
Shoe covers are highly recommended if students are working on labour & delivery (amniotic fluid and uterine blood spillage is the norm)! One should bring along some study material in case there is a break and an opportunity to get some reading done. Snacks are also great for busy days when students might not get a chance to grab lunch on time, as patients may need very frequent and regular monitoring during labour.

Staying In The Know: The Best Ways To Keep Track Of Patients And Other Info
Some students found it helpful to make some index cards that they could fill in for each patient they were following. This is particularly beneficial for obstetrics, when one may be following multiple women in active labour throughout the course of the day. Include details on each patient’s GTPAL, EDD, GBS status, time of membrane rupture, contraction frequency, vaginal exam findings, etc.

Becoming An Expert: Recommended Reading
The faculty-recommended textbook for this rotation was Hacker and Moore’s Essentials of Obstetrics & Gynecology, but some may find this to be a little too dense and detailed for their needs. Instead, many students found Toronto Notes and the Blueprints or NMS books to be adequate for exam preparation. The department will give students a link for uWise, a question bank with lots of practice questions, which are very useful for review studying. Students also liked Pretest and Lange Q&A as further preparation for the NBME.

What The Heck Was That?: How To Study During The Rotation
Students should read through their review textbook or Toronto Notes when/if they get a quiet moment on the wards. Study around the cases that are seen. As exam time nears, try going through as many practice questions as possible. Looking over some of the SOGC guidelines can also be useful for the ward.
Getting Pimped: What The Doctors Tend To Ask

Do expect to be quizzed regularly by doctors and residents, as there can be lots of spare time in between checking up on labouring patients. Most quizzing will be centered around pregnancy conditions and risks, as well as the process and management of delivery. In the OR, questions regarding anatomy and function should be expected as well. Common questions to expect (and thus to know well) are:

- What are the stages of labour?
- What is this structure (pelvic anatomy)?
- Maternal complications of pregnancy – gestational hypertension, gestational diabetes, antepartum bleeding, postpartum hemorrhage, infections
- Fetal complications of pregnancy – small for gestational age, oligo/polyhydramnios, Rh incompatibility, post-term pregnancy, miscarriages
- Approach to amenorrhea, menorrhagia, etc.

Hands On: Procedures You Get To Do In This Rotation

There are a variety of procedures that students will have an opportunity to be involved with throughout the rotation, both in labour and delivery, the OR, and the clinic. The amount of opportunities to do this depend highly on the student's initiative and motivation, and this begins first with introducing one’s self early on in the labour process to the patient and her partner, as well as the nurse. The better they know the student, and can see he or she is reliable and caring, the more they’ll trust and allow the student to do procedures such as an internal exam, or actually delivering the baby!

The expectation is that by the end of this rotation, students should be reasonably comfortable with the management of an uncomplicated vaginal delivery. Most students had the chance to perform a few vaginal deliveries on their own over the course of the rotation. There should be ample opportunity to assist in or even personally perform the delivery of placentas, suturing of vaginal tears, insertion of foleys, and coaching the patient through contractions. During clinics, students should be able to perform routine pregnancy physical exams (including fetal heart rate assessments by dopplers), pap smears, STD and other infection swabs, biopsies, and possibly even ultrasounds depending on the availability within the preceptor's clinic office. There will also be the chance to assist in C-sections and other procedures in the OR (hysterectomies, D&C, etc.).
The Checklist: Must-sees And Must-dos That You Will Likely Get During This Rotation

Students should expect to complete most of the following while on call or during the scheduled clinics. Any items missed should be reviewed independently, as they are important when it comes to exam time.

Must-Dos

- Vaginal delivery
- Assist at C-section or minor/major surgery
- Pelvic exam and Pap test
- Urinary catheter insertion (female)
- Assessment of labour: abdominal and vaginal exams
- Suturing of vaginal tears

Must-Sees

- Antepartum assessment
- Pregnancy complications
- Labour & delivery Postpartum assessment
- Vaginal bleeding
- Abdominal pain/pelvic mass

Leveling Up: How To Prepare For The Exam

Reading over a review text of choice and doing some practice questions. Read around cases and go over a general approach to common obs/gyne clinical conditions. Know an approach to:

- Routine prenatal care and prenatal screening/diagnostic tests
- Gestational diabetes
- Hypertension in pregnancy/HELLP syndrome
- Intrauterine growth retardation
- Postpartum hemorrhage
- Ectopic pregnancy
- Management and complications of multi-gestation pregnancy
- Abnormal vaginal bleeding
- Pelvic inflammatory disease (PID)
- Contraception - both hormonal and non-hormonal options, in the form of oral medications, intrauterine devices, or other methods
- Pap smear – schedule for follow-up if normal or abnormal, how are histological changes classified, indication for colposcopy etc.
- STIs and vaginal/cervical swabs (ex. gonorrhea, chlamydia, GBS)
- Oncologic screening, diagnosis, and management of gynecological cancers
- Urinary incontinence/ prolapse
- Normal labour and delivery - cardinal signs
- Abdominal exam (including Leopold’s maneuvers)

## The Final Boss: End Of Rotation Exams

The Obs/Gyne exams consist of an MCQ exam as part of the Women and Child Health block exam, consisting of 50% of questions. The Obs/Gyne MCQ section is one of the more straightforward block exams one will write in third year, and should not present any major surprises in terms of knowledge range and depth required.

## The List: 10 Things To Know

<table>
<thead>
<tr>
<th>5 aspects to describe on an internal exam of the pregnant/labouring patient</th>
<th>5 aspects of a tocograph to describe to classify as a normal/abnormal tracing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cervical dilation: how open is the cervix (closed, 1-9 cm, or fully dilated), and at what rate of dilation is it opening?</td>
<td>1. Baseline rate: 110-160 bpm is normal (look for long relatively stable segments of tracing that only flutter a little in rate)</td>
</tr>
<tr>
<td>2. Cervical effacement: how thick is the cervix (stated from 0-4 cm in length, NOT effacement percentage, which can be confusing and variable in patients)?</td>
<td>2. Variability: 6-25 bpm is normal moderate variability, while less, more, or sinusoidal for an extended period of time is abnormal and concerning</td>
</tr>
<tr>
<td>3. Station: how far down is the foremost presenting part in relation to the ischial spines (from -3 to +3, but in practical use, should only range from -2 to +2)?</td>
<td>3. Accelerations: &gt; 2 accelerations with a peak &gt; 15 bpm for 15 seconds (in term) or &gt; 10 bpm for 10 seconds (in pre-term) is normal</td>
</tr>
<tr>
<td>4. Membranes: is the membrane still intact, felt as a bulging water balloon in the middle of the dilated cervix (don’t push too hard or it’ll rupture!)?</td>
<td>4. Decelerations: no decelerations or occasional variable decelerations &lt;30 seconds is considered normal. Long variable or late decels are abnormal.</td>
</tr>
<tr>
<td>5. Presenting part: if the membranes have ruptured, feel for the fontanelles and sagittal suture to determine the orientation of the head (left or right OA/OP, or transverse)?</td>
<td>5. Stability: has this tracing remained relatively the same over time, or have there been any changes to its appearance or characteristics recently? Is the nurse concerned at all with the tracing’s stability?</td>
</tr>
</tbody>
</table>
The Summary: Closing Thoughts And Advice

Obstetrics and gynecology is one of the most unique rotations, and provides you with very special opportunities to fully participate hands-on in patient care. Many students feel privileged to be a part of the joyous occasion of birth, and the parents are often extremely appreciative of the role students have played in their care. Although at times it can be messy (don’t wear nice shoes or clothes!), getting your hands dirty is the ONLY way to do obs/gyne. No learning will be gained if students are not keen and proactive in this rotation.

Get involved in assessing women when they are admitted, or introduce yourself early on in the labour process before the patient becomes too distracted and is in too much pain to acknowledge your existence. Make sure to check in on them on a regular basis through the course of their labour, and provide any reassurance or assistance they might require (this might even be something as simple as a cool soaked towel for their forehead!). Nurses play a key role in managing labour, so introduce yourself to the nurses taking care of your patients and ask them to call you for any issues so that you can get involved, or when they’re planning to do an internal exam so that you can observe or even practice. They are also a great source of knowledge and experience to learn from. Remember, if neither the patient nor nurse knows who you are and they are not comfortably acquainted to your presence in the room, you certainly won’t even be welcome to stay in the room come delivery time, let alone actually catch the baby!

Some pregnant women feel uncomfortable with having a male student in the room (there has been the odd female student asked to leave as well!). Do not feel discouraged or offended if this happens to you; it certainly isn’t anything personal, simply that the patient’s comfort and preference is the priority. There will be many future opportunities in which you will be welcomed to participate. The best advice to increase the likelihood that a patient will allow you to participate in her care is to try to meet the woman early in her labour (i.e. from admission if possible) or to stick with either a family doc, resident, or obs/gyne and have them introduce you as a part of the team. Also, when you initially meet the patient, make a conscious effort to be warm and caring. Smile (but not in a creepy fashion), and don’t rush the initial patient interview. It is easy to forget to do this through 3 am-waning-caffeine-blood-level fatigue.

Although it may be true that many students have in mind a specialty in which they will rarely encounter maternity patients and won’t require this knowledge, that is no excuse to slack off or put in a half-hearted effort. Yes, if you choose to, you can hide yourself in the background and not be called for anything, but keep in mind that hands-on learning is a means to properly prepare for the NBME and OSCE, and thus students should seek as much experience and opportunity as possible. Be proactive, and there’ll be lots to see and do!
Ophthalmology

The Big Picture: Introduction

Ophthalmology is a 1-week rotation (Monday to Friday only) and is typically paired in the schedule with dermatology, another 1 week rotation. This specialty focuses on diseases and pathology of the eyes and orbit. Typical conditions include chronic conditions such as cataract, glaucoma, and diabetic retinopathy, as well as acute trauma to the eye. Students will rotate between general and subspecialty clinics, and there may be an opportunity to observe ophthalmologic surgeries as well. The week is mostly spent at VGH/Eye Care Centre but you could also be assigned to outpatient clinics in the community. You will see patients that are usually otherwise healthy.

The Itinerary: Student Schedules

A typical day starts at 8am and ends between 4-5pm. Students are assigned to a different clinic for each half-day and are expected to telephone the clinics in advance to confirm the start time or their attendance.

Clinics vary from student schedule to schedule, and can include general clinics, residents clinic, or subspecialized clinics focused on glaucoma, cornea, neuro-ophthalmology, pediatric ophthalmology, or retina.

Students will also have an afternoon in the suturing wet lab, in which they will have the opportunity to practice tying microsutures (10-0 suture!) under microscope visualization on pig eyeballs. There may also be an afternoon scheduled for students to observe cataract and glaucoma surgeries in the OR.

The Overnight: Call Shifts

There is no overnight call in ophthalmology scheduled for students.

The Gear: What To Bring & Carry

Students are expected to bring their own ophthalmoscope and this is included in the rotation instructions. Try to obtain your own so that you can practice and become familiar with direct ophthalmoscopy. If you cannot obtain your own, sometimes you can also borrow ophthalmoscopes from classmates.
Beyond this, students should carry paper and pen with them as per usual, as well as multiple copies of their evaluation forms and attendance sheets as you will often have to have these on hand towards the end of the day to give to your preceptor.

After each clinic, students need their preceptors to sign their attendance sheet and fill out an evaluation form, and these will be submitted to the program assistant on the 3rd floor of the Eye Care Centre at the end of the week. Students should also bring their whitecoat, as preceptors may wish them to wear it in the clinic setting.

**Staying In The Know: The Best Ways To Keep Track Of Patients And Other Info**

Students have not found it necessary to keep track of patients in detail as they are generally outpatients, and students do not attend the same clinic more than once.

**Becoming An Expert: Recommended Reading**

The recommended textbook is Basic Ophthalmology 9th Edition by Richard Harper (2010). It is available at the administration office in the Eye Care Centre and can be loaned out for the duration of the rotation. As it is only one week long, it is unlikely students will have time to read a full ophthalmology textbook during this time, nor is this necessary. There are also 3 virtual patient cases, interactive online eye modules, and ophthalmology exam technique videos on Entrada. It is expected you have reviewed the Entrada materials prior to your academic half day. Other useful resources include Tim Root's OphthoBook - this is a free textbook and video lecture series with cartoon illustrations intended for medical students. Students wanting to go beyond the medical student level may wish to read a resident level resource like the Wills Eye Manual. For optional humorous reading on the life of an ophthalmologist, you can check out @DGlaucmflcken on twitter (see below).
What The Heck Was That?: How To Study During The Rotation

Students may benefit from a quick review of material on eye anatomy and common conditions such as diabetic retinopathy and glaucoma prior to the start of the week to familiarize themselves with the specialty. There is also more than adequate time to study in the evening regarding any new or unique conditions encountered while in the clinic during the day.
Getting Pimped: What The Doctors Tend To Ask

As the clinics can be busy, how much students are asked questions vary from preceptor to preceptor. When this does occur however, expect questions such as:

- Can you see the fundus? Describe what you do or do not see there.
- Eye anatomy and methodical slit lamp exam.
- The differential diagnoses for a red eye, etc.
- What should be asked on eye disease history
- How to measure and record visual acuity for distance and near vision, both with and without correction and with pinhole where appropriate.
- Examine pupillary response (direct, indirect, RAPD, accommodation)

Hands On: Procedures You Get To Do In This Rotation

As ophthalmology is highly focused on the eye, there are essentially only 3 procedures students will need to perform during their rotation:

1. Direct ophthalmoscopy: examine the fundus to visualize the optic disc, macula, vessels, and any abnormalities of the retina. At the end of ophthalmology week, you should aim to be reliably visualising the fundus. Practice on every patient you see as it is not an easy skill! Start with dilated patients and then work on undilated patients.
2. Slit lamp examination: examine external eye structures (lids, lashes, and conjunctivae) and anterior segment (cornea, anterior chamber, iris) for abnormalities
3. Vision testing: this can include visual acuity, extraocular eye movements, pupillary reflex, RAPD testing, colour vision testing, peripheral field testing, etc.

Students will also get the opportunity to practice suturing on pig eyeballs with 10-0 filament sutures under microscope visualization in the wet lab.

The Checklist: Must-sees And Must-dos That You Will Likely Get During This Rotation

Students will obtain a Year 3 rotation procedure and patient encounters must see/do list, which they must log on One45. By the end of the year, students must have performed 10 ophthalmoscopic examinations (direct) and 10 slit lamp examinations (this shouldn’t be difficult to complete). You are required to have completed 2 electronic WBA direct observations by the end of this rotation. You must complete diary sheets and evaluation forms for each clinic you attend. These will be submitted to the Administration Office at the Eye Care Centre on the Friday afternoon of your rotation.

Aside from the course requirements, what you see depends on the clinics assigned and your own interest. You may examine patients with the following common eye conditions: age-related macular degeneration, cataracts, conjunctivitis, blepharitis, chalazion, corneal foreign body or
abrasion, diabetic retinopathy checks, open angle glaucoma, posterior vitreous detachment, retinal tears, optic neuritis and various other conditions.

Leveling Up: How To Prepare For The Exam

The best method of studying is to read and review the academic half day materials and the recommended Harper textbook. In addition to these resources, students can also read around various patient cases they see in clinics using the reference book of their choice (such as Toronto Notes for a medical student level review or the Wills Eye Manual for those interested in applying to ophthalmology).

The Final Boss: End Of Rotation Exams

You will be tested on the material from your ophthalmology rotation as part of the ambulatory block exam. The question breakdown aims to be representative of clinical exposure to that specialty so ophthalmology has less questions than the other rotations. However, ophthalmology does have overlap with other ambulatory rotations like emergency and family medicine. Also, ophthalmology is a rather specialized field so it’s worth studying as questions will generally be hard to guess based on your other clinical experiences!

The List: 10 Things To Know

<table>
<thead>
<tr>
<th>5 steps to direct ophthalmoscopy</th>
<th>5 steps to a slit lamp exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patient set-up:</td>
<td>1. Slit-lamp set-up (do this before patient enters room)</td>
</tr>
<tr>
<td>- Ensure patient is sitting straight</td>
<td>- Turn the slit lamp on (the switch is usually on the edge of the near side of the slit lamp platform) and make sure the light is working (a beam of light should appear, place your hand in front of the slit lamp to check).</td>
</tr>
<tr>
<td>- Adjust chair height so the patient’s eye level is just below your shoulder height</td>
<td>- Unlock the slit lamp from its locked position by unscrewing the securing device on the horizontal bars, so that the slit lamp can slide around on top of the platform</td>
</tr>
<tr>
<td>- Have the patient focus on a distant spot on the wall. Tell them to look ONLY at this point with BOTH eyes (this is crucial, because if the patient moves their gaze around, you’ll soon become dizzy and disoriented!)</td>
<td>- Select the desired light colour (normal light for examination or the blue light for fluorescein), adjust the slit lamp light width to</td>
</tr>
</tbody>
</table>
be only a few millimetres in thickness. The vertical height should be ~2cm.
- Adjust the viewing eyepieces so that the interpupillary distance matches your own.
- Slide the slit lamp into position in front of the patient’s right eye. By convention, you first examine the patient’s right eye. After fully examining the right eye, move on to the left eye.

2. Examiner set-up:
- Turn the room lights off, leaving only a dim light source on directed away from the patient, or leaving the door open slightly.
- Adjust the ophthalmoscope’s light setting to the desired setting (generally the mid-sized circle at medium brightness is best to start).
- Set the focus dial to the appropriate +/- eye prescription, depending on if the examiner is or isn’t wearing their glasses for the exam.
- Take a stable stance, bending yourself to bring your eye to the patient’s eye level. Stabilize yourself by holding onto the patient’s shoulder or chair with your non-scope hand.

Patient set-up:
- Ensure the patient is sitting straight, and have them place their chin on the support, with their forehead against the strap (very important!).
- Adjust the patient’s height, the slit lamp table’s height, and the slit lamp height so that the patient’s eye level is at the black lines on the vertical bars, and the eyepieces are roughly at your eye level.
- Positioning is very important because the slit lamp has a short range, so take your time to do this properly. Often the table has to be lowered more than expected so that the patient’s head is against the strap (especially if the patient is larger).

3. Approach:
- Look through the scope with the same eye as the patient’s eye being examined (use your right eye to look at the patient’s right eye).
- Ensure the light is pointed at a 15 degree angle on the temporal side and approach the patient while looking through the ophthalmoscope. You need to be uncomfortably close to the patient to get a good view!

3. External structures:
- Examine the lids, lashes, and lacrimal for problems like inflammation (ex. blepharitis), styes/chalazions, or other abnormalities (ex. ingrown lashes). All students should learn how to flip the eyelids in order to examine for foreign bodies underneath (especially useful for family medicine and emergency).

4. Orient:
- Once you can look into the patient’s pupil at the back of the eye, search for landmarks such as vessels, and trace them back to their

4. Conjunctivae, Sclera, and Cornea:
- Examine for redness, dilated or broken blood vessels, jaundice, or epidermal damage (ex. corneal abrasions).
source to find the optic disc. The optic disc is often more nasal than expected when you are first learning to visualise it.

- Students interested in ophthalmology or emergency medicine can ask to look at a fluorescein exam to see corneal damage caused by dry eye and abrasions.

5. Explore:
- Look around at other parts of the fundus to find other landmarks, such as the macula.
- Observe the main branches of the vessels for signs of nicking.
- Also look for any other abnormal changes such as papilledema or hemorrhages.

5. Anterior chamber:
- Examine the iris, pupil, lens, and anterior chamber for problems such as pupil non-reactivity, or cataracts. Students interested in ophthalmology should also try to see and grade cells in the anterior chamber, the type and grade of cataracts, visualise the anterior vitreous, look for Schaffer’s sign if the patient presents with flashes and floaters, and identify a shallow anterior chamber.

The Summary: Closing Thoughts And Advice

Ophthalmology is one of the most specialized rotations you will do in your third year. However, many physicians in family or emergency medicine must manage simple eye complaints on their own. As such, it is important for every doctor to learn how to reliably perform direct ophthalmoscopy, test vision, assess pupils, flip eyelids to look for foreign bodies, and have a differential for basic eye complaints. There is also significant overlap between ophthalmology and neurology, rheumatology, ENT, plastics, among others! Having a reliable and systematic eye exam will be helpful to you in those specialities too.

Ophthalmology is an excellent speciality to consider as a career if you want a speciality that includes both medicine and surgery, makes use of exciting new technologies, and if you enjoy treating all patients (from babies to the elderly!). If you are interested in pursuing ophthalmology as a career, use this week-long rotation to gain additional physical exam skills to prepare you for electives. Try to use an indirect lens with the slit lamp to visualise the fundus (practice on dilated patients first) and make sure your direct ophthalmoscopy skills are solid. Let staff and residents know you are interested in ophthalmology so they can show you interesting cases or help you with your technique.
Dermatology

The Big Picture: Introduction
Dermatology is a 1 week rotation and is interchangeable in the schedule with ophthalmology, another 1 week rotation. It focuses on the integumentary system including the skin, hair, and nails. Dermatology is a field encompassing many common conditions as well as numerous rare conditions that are unlikely to be touched on outside the field. Although it is short in length, it is very fast-paced and includes ample clinical exposure covering most bread and butter topics in dermatology, including those relevant to other medical specialties. It is a very enjoyable rotation, and students will gain a key review of the integument block from 2nd year.

The Itinerary: Student Schedules
For VFMP, the schedule is split into half days consisting of clinic, consult service, or teaching. Students will receive a schedule assigning them to a certain clinical track (VGH and SPH), although outpatient clinics will vary in location across the Lower Mainland. Start times are variable but can range from 8:00am to 9:30am. Students may need to travel to get to their afternoon activity from their morning one. End times are variable and depend on patient volume and complexity.

For distributed sites, the schedule is split into a total of three half days consisting of either morning or afternoon outpatient clinic. Additionally, you may be assigned to an outpatient clinic located at the hospital. There is a province wide academic half day for dermatology which may fall before or during your dermatology week. Students may need to travel to get to their afternoon activity from their morning one. End times are variable and depend on patient volume and complexity.

The Overnight: Call Shifts
There is no overnight call during this rotation. Students may, however, be asked to see hospital consults during the day if they have no clinic scheduled, which will be reviewed with the resident or staff.

The Gear: What To Bring & Carry
Writing implements and a clipboard are highly suggested. Some clinics choose to document electronically but it may be helpful to have scrap paper on hand for notes. Some students choose to carry a pocket guide with dermatology images and information, but this is not mandatory. Smartphones are extremely useful for looking up images or diagnostic information,
and will be necessary for WBA evaluations. Stethoscopes and white coats are seldom used in dermatology by medical students but should be available upon request. Some offices may have a spare dermatoscope for students to utilize.

**Staying In The Know: Best Ways To Keep Track Of Patients And Other Info**

Students should ensure they have read the orientation package to learn how to take a dermatological history and physical examination in order to write a proper consult. Proper draping and positioning for full skin exams should be reviewed. Dermatological issues often have more specific questions compared to other body systems and it is highly suggested students review these for common conditions. Clinics are often fast paced and proper documentation is essential. Keeping written notes regarding each patient is suggested for proper presentation, and some preceptors may expect notes to be finished before moving onto the next patient. For hospital consults, a more thorough history and physical should be done with regards to the patient’s clinical course and other relevant information (medical and dermatological history, medication changes, etc.)

**Becoming An Expert: Recommended Reading**

Beginning with a review of integument week content from Year 2, followed by a brief review of the online UBC dermatology website and modules is suggested. Students should also read the provided reading materials (ex. The Fundamentals of Skin Disease Therapy), prior to the start of the week. Further reading can be done based on student discretion and interest since this rotation is only a week long. Some students may find it relevant to maintain checklists of conditions (e.g. Dermatology DDX Deck) or study skin conditions commonly seen in their chosen field of practice. For students looking for a comprehensive overview of undergraduate-level dermatology, the American Academy of Dermatology basic curriculum is suggested (https://www.aad.org/member/education/residents/bdc), and advanced topics can be looked up using point-of-care resources (UpToDate) or dermatology websites (https://dermnetnz.org).

**What The Heck Was That?: How To Study During The Rotation**

Students should review dermatological history taking and physical examination, including proper description of skin lesions. A basic understanding of common skin conditions prior to the start of the week is suggested (see ‘The List’ below), including knowledge about treatment modalities (drugs, excision, phototherapy, etc.). Knowledge of pharmacology is an asset, and can include knowledge of topics including but not limited to topical drug vehicles, steroid strengths, non-
steroid topical agents, oral/systemic agents, immunosuppressant drugs used in dermatology, and biologics. Students should be familiar with options for skin biopsy and point-of-care tests (scrapes, smears, etc.). Specialty clinics (e.g. contact dermatitis, pediatric dermatology, etc.) may require more specific reading.

Keeping a case list is highly suggested. After each day, students can read around any conditions encountered using their list. By the end of the week, students should be knowledgeable on the majority of the common skin conditions, and be familiar with select uncommon dermatological issues.

Getting Pimped: What The Doctors Tend To Ask
Students should be prepared to describe a lesion using appropriate dermatological terms (see ‘The List’ below), and to come up with a differential diagnosis based on the morphology and history of the lesion. Some preceptors will ask students to formulate treatment/management plans, so students should be prepared to offer their opinion during or after presentation. Common questions students are asked include spot diagnoses (what is this lesion) or differentiating between similar skin conditions (eczema vs. psoriasis, melanoma vs mimics).

Hands On: Procedures You Get To Do In This Rotation
Clinics are fast-paced and student involvement will vary. Procedures done in clinic include biopsies (shave/punch, unlikely excision), cryotherapy, scraping, or intralesional steroid injection. Students that have not undergone their surgery rotation should review basic suturing skills.

The Checklist: Must-sees And Must-dos That You Will Likely Get During This Rotation
Although there are no strict rules regarding what procedures students must do during the rotation, they are expected to see most of the common skin conditions.

Leveling Up: How To Prepare For The Exam
Reviewing integument block materials and clerkship lecture slides along with clinical exposure will serve as ample preparation for the ambulatory block exam. Students should aim to see a variety of different lesion presentations and identify key differentiating features, as many examination questions will contain images.
The Final Boss: End Of Rotation Exams

The ambulatory block exam has proportional representation from dermatology alongside other material covered in this block.

The List: 10 Things To Know

<table>
<thead>
<tr>
<th>5 categories of dermatology</th>
<th>5 pearls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Acneiform diseases;</td>
<td>1. Primary lesion:</td>
</tr>
<tr>
<td>○ Acne</td>
<td>macule/patch, papule/plaque, nodule/tumor,</td>
</tr>
<tr>
<td>○ Rosacea (and subtypes)</td>
<td>vesicle/bulla, pustule, cyst, wheal, burrow,</td>
</tr>
<tr>
<td>○ Perioral dermatitis</td>
<td>comedone, telangiectasia, petechiae/purpura</td>
</tr>
<tr>
<td>○ Hidradenitis suppurativa</td>
<td>/ecchymosis, milium/milia, keloid/hypertrophic</td>
</tr>
<tr>
<td>○ Primary lesion:</td>
<td>scar</td>
</tr>
<tr>
<td>○ macule/patch</td>
<td></td>
</tr>
<tr>
<td>○ papule/plaque</td>
<td></td>
</tr>
<tr>
<td>○ nodule/tumor</td>
<td></td>
</tr>
<tr>
<td>○ vesicle/bulla</td>
<td></td>
</tr>
<tr>
<td>○ pustule</td>
<td></td>
</tr>
<tr>
<td>○ cyst</td>
<td></td>
</tr>
<tr>
<td>○ wheal</td>
<td></td>
</tr>
<tr>
<td>○ burrow</td>
<td></td>
</tr>
<tr>
<td>○ comedone</td>
<td></td>
</tr>
<tr>
<td>○ telangiectasia</td>
<td></td>
</tr>
<tr>
<td>○ petechiae/purpura</td>
<td></td>
</tr>
<tr>
<td>○ ecchymosis</td>
<td></td>
</tr>
<tr>
<td>○ milium/milia</td>
<td></td>
</tr>
<tr>
<td>○ keloid/hypertrophic</td>
<td></td>
</tr>
<tr>
<td>○ scar</td>
<td></td>
</tr>
<tr>
<td>2. Eczema: “the rash that itches, and vice versa”</td>
<td>2. Secondary lesion/associated characteristics:</td>
</tr>
<tr>
<td>○ Atopic dermatitis</td>
<td>scale, crust, excoriation, lichenification,</td>
</tr>
<tr>
<td>○ Allergic contact dermatitis</td>
<td>maceration, fissure, erosion, ulcer, alopecia,</td>
</tr>
<tr>
<td>○ Irritant contact dermatitis</td>
<td>atrophy, Koebnerization, pathergy</td>
</tr>
<tr>
<td>○ Prurigo nodularis</td>
<td></td>
</tr>
<tr>
<td>○ Lichen simplex chronicus</td>
<td></td>
</tr>
<tr>
<td>○ Asteatotic eczema</td>
<td></td>
</tr>
<tr>
<td>○ Prurigo nodularis</td>
<td></td>
</tr>
<tr>
<td>○ Stasis dermatitis</td>
<td></td>
</tr>
<tr>
<td>○ Keratosis pilaris</td>
<td></td>
</tr>
<tr>
<td>○ Seborrheic keratosis</td>
<td>erythematous (red), violaceous (purple),</td>
</tr>
<tr>
<td>○ Acrochordon</td>
<td>pigmented (brown, black, grey), variegated</td>
</tr>
<tr>
<td>○ Dermatofibroma</td>
<td>(multi-coloured), hypode-pigmented, yellow,</td>
</tr>
<tr>
<td>○ Keloids and scars</td>
<td>orange; margins (smooth/irregular, well/poorly</td>
</tr>
<tr>
<td>○ Cysts (epidermal, pilar)</td>
<td>demarcated), polygonal, targetoid,</td>
</tr>
<tr>
<td>○ Milia</td>
<td>umbilicated, verrucous</td>
</tr>
<tr>
<td>○ Basal cell carcinoma</td>
<td></td>
</tr>
<tr>
<td>○ Actinic keratosis</td>
<td></td>
</tr>
<tr>
<td>○ Squamous cell carcinoma</td>
<td></td>
</tr>
<tr>
<td>○ Nevi</td>
<td></td>
</tr>
<tr>
<td>○ Melanoma and mimics</td>
<td></td>
</tr>
</tbody>
</table>
### 4. Psoriasis: scaly, well-demarcated, salmon-color plaques
- Psoriasis (and subtypes)
- Seborrheic dermatitis
- Pityriasis rosea
- Lichen planus
- Lichen sclerosus

### 4. Configuration:
- linear, annular (circular/ring-shaped), arcuate (curved), polycyclic, reticulate, grouped, zosteriform/dermatomal

### 5. Infectious skin diseases:
- Impetigo
- Cellulitis
- Folliculitis
- Verruca vulgaris
- Condyloma acuminate
- Molluscum contagiosum
- Herpes simplex
- Candidiasis
- Tinea

### 5. Location/Distribution:
- body part, flexural/extensural surfaces, symmetry bilaterally, localized/generalized, relation to worn objects/exposed skin

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**The Summary: Closing Thoughts And Advice**

Dermatology is a fun, but short rotation that offers a relaxed learning environment for students who are keen to learn. The rotation also presents a chance for you to see very unique skin conditions. During these opportunities, you will be asked what you think this patient has. Take a moment, describe using the correct dermatological terminology described above and develop a differential for each encounter. This will allow you to maximize your learning opportunities, regardless of your future interests, as many skin issues are seen in a variety of specialties such as internal medicine, family medicine, ophthalmology, infectious disease, rheumatology and emergency medicine. Although most of the patients you will encounter will have common skin conditions with a relatively standardized treatment protocol, there are always small nuances to the care and management that can only be appreciated through observation and discussion with a dermatologist.
Psychiatry

The Big Picture: Introduction

Psychiatry is a 6 week rotation during which both inpatient and outpatient care is integrated. Students will experience aspects of both adult and child psychiatry in a variety of settings including patient wards, clinics, and the emergency department. Various common and uncommon psychiatric conditions will be encountered, including mood, anxiety, psychotic, and personality disorders. Students will understand patient management using the biopsychosocial model of care, help make decisions on whether to admit the patient into the hospital and improve their pharmacology knowledge to become adept at psychiatric medication use, Although some may regard psychiatry as a 'soft' specialty of medicine, consisting of all talk and little actual medicine, this is far from the truth. Psychiatrists train for 5 years of residency in order to fully understand the depth and breadth of psychiatric conditions, to become experts in the subtle nuances of each medication in a given drug class, and most importantly, to hone their interview skills to the point where they can truly understand the psychiatric patient. Students should enter this rotation with a respect for these skills, as it will increase enjoyment and learning throughout their 6 weeks. Surgery may be a dissection of the body, but psychiatry is a dissection of the mind!

The Itinerary: Student Schedules

The schedule depends on the placement location both in terms of which hospital and what service the student is on. Certain services, such as PAU (Psychiatric Assessment Unit) or psych emergency, have more regular hours; other assigned attendings may be part of the consultation liaison team, and thus the hours (and workload) may vary from day to day. Typically, the average placement should expect to start at work at 9am and end around 5pm. Depending on the preceptor, students may leave early or stay until 7pm. In a given day, students may observe interviews with the doctor, or actually see patients and manage the ward patients relatively independently. Students typically will interview new patients, round on admitted patients, attend family and interdisciplinary meetings, complete dictations, and participate in teaching sessions.

Call Shifts

Call hours vary between hospital sites but are generally 5pm-11pm on weekdays and either 8-9am to 6pm or 11pm on weekends. Pediatric call is on weekends between 8:30am and 11am. The number of call shifts depends on one’s placement and can range from no call to 7 call shifts. Depending on the site, there may be the option of being off-site as long as students are within a reasonable distance to return for patient assessments and, if the call shift is quiet, the resident may be happy to let students go early. Generally, call shifts will involve assessing new patients who come into the emergency department, in order to determine whether they need to
be admitted to the psychiatric unit or not. There may also be ward calls for inpatient management, but generally the psychiatry nurses are very competent at managing common issues as appropriate orders would have already been provided through the initial admission and daily rounds.

The Gear: What To Bring & Carry

Students will not need to bring much, and this is one rotation where one won’t need a stethoscope. The Psychiatry Survival Manual, which students should receive in the orientation email from the Department, is quite helpful as a quick reference. Bring along some notepaper, a clinical handbook such as Current Clinical Strategies: Psychiatry, and a drug reference such as Tarascon Pocket Pharmacopoeia or Rx Files for looking up psychiatric medications. Most importantly, don’t forget a pen (or two or three)! It is also important to carry an emergency alarm key with you at all times in an in-patient setting. In psychiatry, nothing comes second to your own safety – never be afraid to leave an encounter early, refuse to see a patient, and/or activate your alarm. Usually preceptors are really good judges of what would be an appropriate encounter at the student level but things can always shift quickly!

Staying In The Know: The Best Ways To Keep Track Of Patients And Other Info

Each student will be assigned to see a preceptor’s patients on the ward and can expect to manage 4-8 patients at a time. The best way to keep track of patients is to maintain a personal day sheet to record any changes in symptoms, medications, patient concerns and management plan for each day. Depending on the preceptor, one may also do consults and therefore should document the same items in one’s own day sheet. Because histories can be very extensive, take notes on a separate piece of paper and don’t rely strictly on memory! It can be helpful to create copies of a daily history and consultation template to ensure all essential information is collected and reported back to the preceptor.

Becoming An Expert: Recommended Reading

First Aid is a very popular resource to cover the basic knowledge and info. First Aid for the Psychiatry Clerkship includes most of the information they will test you on for this rotation, including the DSM criteria for common psychiatric conditions, common psychotherapy methods, and psychiatric medications. (Kirsten Roche).Toronto Notes, NMS and Blueprints are also popular depending on the level of detail one requires. In order to prepare for the exam, do questions - lots of them! Both Lange,Pretest and UWorld are excellent choices for practice. Reading the actual DSM is not recommended as an effective method of studying, as it is too detailed and dense for practical student use. Instead, use it to look up specific criteria for
diagnosis, or when there is confusion after reading review books. One should also ensure that one has learned, in detail, at least 2-3 commonly used medications in each psychiatric drug class. The Department also provides modules for bread and butter psychiatric topics which are high yield material for both exams and as pre-reading for site-specific teaching sessions.

**What The Heck Was That?: How To Study During The Rotation**

Read around patient encounters in order to develop a strong understanding of their diagnosis, issues related to it, and appropriate management. Recalling patients as case examples will help when asked about a psychiatric condition in the future. Students should devote time each day to reading about specific psychiatric disorders or drug classes. Ideally, by the time exams come around, students will have a familiarity with the general ‘picture’ of a patient with psychiatric condition “x”, the main diagnostic criteria, and the initial and long-term management. Another large component of learning in psychiatry is discussions with attendings and residents. Observe their interview methods and questions, and use every chance available to ask questions and talk about what the patient may have, and what to do about it.

**Getting Pimped: What The Doctors Tend To Ask**

Psychiatrists usually ask about basic DSM criteria for major diagnostic groups such as mood disorders, psychosis, and personality disorders, and will often have students give their differential diagnosis using the DSM-5 diagnostic format. Drug classes, their side effects/adverse effects (especially the potentially life-threatening ones, such as Stevens-Johnsons Syndrome for lamotrigine and Neuroleptic Malignant Syndrome for some classes of antipsychotics), monitoring parameters and dosing options can also be quizzed. Students should also know how to inquire about specific symptoms, and which are most important for a given illness. Students may also be asked on their overall impression of the patient, whether any safety concerns exist, and whether you would like to admit the patient or not. Overall, psychiatry is a relatively relaxed atmosphere, and the doctors don’t tend to grill students intensely (phew!), though students should still be prepared to answer questions.

**Hands On: Procedures You Get To Do In This Rotation**

The only major (and required) procedure to observe and assist with in this rotation is electroconvulsive therapy (ECT). Do utilize the opportunity to learn about ECT, its benefits and risks, and its methods, as it is an unique chance to see one of the most effective treatments available to psychiatry. There still remains a lot of stigma around ECT; during the rotation or even in future practice, this topic may arise again from patients or opponents to the procedure.
The Checklist: Must-sees And Must-dos That You Will Likely Get During This Rotation

Students should have no difficulty seeing the most common psychiatric disorders such as depression, anxiety and schizophrenia. There should also be ample opportunity to observe other mood disorders (e.g. bipolar), psychoses (e.g. schizoaffective), and neurological function deficits (e.g. dementia and delirium) at least once or twice. However, there may be a smaller chance of observing conditions such as personality disorders, sleep disorders or drug overdoses, as these are more commonly managed in the outpatient setting.

Leveling Up: How To Prepare For The Exam

There are many options in terms of exam preparation, and each has its merits, whether students prefer to read review books throughout the rotation, to learn around their patients and supplement missing information, or to do nothing but practice questions until they are adept at recognizing psychiatric disorders based on the patient description.

The most likely pitfall of students in psychiatry is neglecting the exams altogether because they expect them to be easy. Students should not expect to ‘wing’ the exam and cruise through. Psychiatry requires a strong grasp of pharmacologic treatment options, including benefits, risks, and side effects of medications. There are also subtle nuances of diagnosis that differentiate between disorders. Do NOT leave studying to the last minute!

A steady pace of reading throughout the rotation will allow for a more relaxed and fun experience, and prevent exam anxiety during the last week. Mentally review patients encountered throughout the weeks to use as case examples of management, and the days prior to the exams, repeatedly review the classes of psychiatric medications until at least 1-2 different drugs per class are memorized, as well as how to use them appropriately in the treatment of conditions.

The Final Boss: End Of Rotation Exams

Many people found the end of block multiple choice exam for psychiatry fair but more challenging than they expected. Students are recommended to learn as much as they can during their rotation and to read around their cases. Students should also have a firm idea on the diagnostic criteria (from the DSM V) and treatment options for the common presentations in the field including depression, anxiety, bipolar disorder(s), mania, and schizophrenia. Studying using the block objectives and mandatory modules is recommended as students may or may not encounter all the presentations listed in the objectives during their rotation. It is also important to learn about child & adolescent psychiatric conditions. Depending on your placement you may or may not have had much exposure to this field, but it is tested on the exam.
# The List: 10 Things To Know

<table>
<thead>
<tr>
<th>5 categories of psychiatric disorders</th>
<th>5 classes of treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. MOOD DISORDERS:</strong> depression - MDE, dysthymia bipolar - type 1 (manic) and 2 (hypomanic)</td>
<td><strong>1. ANTI-DEPRESSANTS:</strong> SSRI - fluoxetine, paroxetine, fluvoxamine SNRI - (des)venlafaxine, duloxetine NDRI - bupropion SARI - trazodone TCA - ami/nor- triptyline, clomi/imi- pramine</td>
</tr>
<tr>
<td><strong>2. PSYCHOTIC DISORDERS:</strong> brief psychotic episode (&lt;1 month) schizophreniform (&lt;6 months) schizophrenia (&gt;6 months) schizoaffective (persistent psychotic symptoms with additional periodic mood/affective disorders) delusional disorder</td>
<td><strong>2. ANTI-PSYCHOTICS:</strong> typical - haloperidol, loxapine, thioridazine atypical - clozapine, olanzapine, quetiapine, risperidone, paliperidone, aripiprazole</td>
</tr>
<tr>
<td><strong>3. ANXIETY DISORDERS:</strong> generalized anxiety disorder (GAD) social anxiety +/- agoraphobia specific phobia - animal, environment, blood-injection injury, other obsessive-compulsive disorder (OCD) post-traumatic stress disorder (PTSD)</td>
<td><strong>3. ANXIOLYRICS AND SEDATIVES:</strong> benzodiazepines - lorazepam, diazepam, clonazepam (good for GAD) antipsychotics - haloperidol trazodone</td>
</tr>
<tr>
<td><strong>4. PERSONALITY DISORDERS:</strong> cluster A: paranoid, schizoid, schizotypal cluster B: anti-social, borderline, histrionic, narcissistic cluster C: avoidant, dependent, obsessive-compulsive personality disorder (OCPD)</td>
<td><strong>4. MOOD STABILIZERS:</strong> lithium - monitor levels (0.6 - 1.2 OK), renal function, and toxicity symptoms divalproex/valproic acid - monitor levels atypical antipsychotics - risperidone, olanzapine, quetiapine lamotrigine and carbamazepine</td>
</tr>
<tr>
<td><strong>5. SUBSTANCE USE DISORDERS:</strong> tolerance vs dependence vs addiction</td>
<td><strong>5. THERAPY MODALITIES:</strong> electroconvulsive therapy cognitive behaviour therapy interpersonal therapy psychoanalysis exposure and confrontation therapy</td>
</tr>
</tbody>
</table>
The Summary: Closing Thoughts And Advice

Psychiatry is a rotation where most students may have no idea what to expect. However, many students complete it with newfound appreciation for the skills and experience possessed by psychiatrists that are necessary to fully engage and understand their patients. There are many commonplace disorders and conditions (e.g. depression) that can act as comorbidities for patients in all specialties, as well as a few unique disorders that medical students will only have the opportunity to see during this rotation.

Students who start their psychiatry rotation with an open mind and a keen motivation to learn all they can about this specialty will learn far more, and will garner the appreciation of their psychiatry attendings and residents. Students who continue to regard psychiatry as a menial part of their clinical training may survive the 6 weeks and pass the exam, but they will likely be less satisfied than their enthusiastic colleagues.

By the end of the rotation, students will ideally have vastly improved their interviewing and communication skills, and have seen at least a few patients or diagnoses that are unlike anything previously encountered. Regardless of the disorder, every patient in psychiatry has a life story, the details of which are pieces of the puzzle that one must complete to find a correct diagnosis.
Year 4: Electives and CaRMS

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SECTION LEAD | EMILIE RUSSELL
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Year 4 Overview

Year 4 Outline
As we write this in 2020, in the midst of the COVID-19 pandemic, we know there are lots of changes being made to our medical school curriculum. For the 2019-2020 academic year, year 4 looked like this:

- Electives (July - November) - 20 weeks
- FLEX block (December) - 4 weeks
- TIPP (January - April, with breaks for CaRMS interviews and post-CaRMS elective)
- CaRMS interviews (January - February)
- Year 4 OSCE (February)
- Match Day (early March)
- Post-CaRMS elective (March)
- TIPP exam
- MCCQE part 1 exam (typically written in late April or early May)

At this time, the plan for year 4 for the 2020-2021 academic year looks like this:

- FLEX block (April - June)
- Completion of MEDD 431 (July - August)
- Electives (September - January) - 20 weeks
  - Out of province electives begin sometime after September 26, 2020
- CaRMS application deadline February 7, 2021
- TIPP (February - March, with breaks for CaRMS virtual interviews March 8-28, 2021, concluding with TIPP exam)
- Post-CaRMS elective (April)
- Match Day (April)
- MCCQE part 1 exam dates uncertain

The current plan for year 4 for the 2021-2022 academic year looks the same as for 2019-2020.

Work-life Balance
While there is much to learn and to organize in fourth year – including travel, electives, and CaRMS – the workload is less intense than in Year 3. Call is less demanding and studying becomes more focused, so you should have more time for friends, family, and other interests. On many electives, call is optional for fourth year students, or is only until 11 pm (so that you have fewer post-call days, where you miss important interactions with preceptors). Some students intentionally choose electives that are light on call, and in general find it easier to maintain a healthy work-life balance than in previous years. Many rotations are less demanding and much of your time will be spent reviewing and adding on to previously learnt material. This
is a good year to make extra time for friends and loved ones, especially if you are travelling and frequently away from home for electives.

**Benefits**

Benefits of fourth year include being able to tailor your learning to topics of clinical importance without constantly focusing on exams, having more time to spend with friends and family, having more autonomy and choice in clinical electives, and working fewer call shifts. You also have the opportunity to travel to new cities, spend time in out-of-province hospitals to experience how they run, and choose electives based on your interests and career goals. Following CaRMS matches, you can enjoy your electives without the stress and uncertainty that comes with the application process.

**Challenges**

Major challenges include a potential loss of connection with friends and colleagues, frequent travel, and anxiety about CaRMS matches. Try to make time to meet with friends and classmates, as this does not occur easily when everyone is doing different electives. The lead-up to CaRMS is the most challenging period, followed by uncertainty prior to match day. Keep in mind that the vast majority of people are happy with their match result, and that you really do have more control over the process than you think! Do your best to stay focused on learning and patient care; this is often a challenge when you are working on applications or awaiting interview invites or match results. Also keep in mind that there is an OSCE in February, a few weeks before CaRMS interviews. Most people pass, but you do need to prepare for this.

**Expenses**

These are highly variable. Many students spend ~$3000-5000 on travel and accommodation, including electives and CaRMS. Keep in mind that if you are applying to a competitive specialty at a specific site, it may be to your advantage to have done an elective there and to make contacts at other schools.

You can save some money by staying with friends or family, taking the train or bus between CaRMS interviews (e.g. train in Ontario and bus between Edmonton and Calgary), and booking flights well ahead of time when prices are lower. Carpooling during the CaRMS tour can give you a chance to meet new people and is more affordable than the bus, particularly in BC or Ontario (just ensure you are with good friends because the people around you can affect how you handle the stress!). Take advantage of WestJet seat sales, the Doctors of BC website, and CFMS resources for flight, hotel, and car rental deals. Find out who will be in the same city and try to share taxis, car rentals, or hotels. While some students found AirBnBs to be more economical during the CaRMS interview period, others preferred the reliability of hotels (hotels are less likely to cancel last-minute, and have 24-hour check-in for late-night flights).
How To Prepare

Study hard – just as you have been doing throughout your academic years! Keeping your CV up-to-date is helpful, as is keeping notes on meaningful activities or experiences to help as you write your CaRMS applications. Do your best to develop excellent working relationships with your classmates and with others on your team during Year 3 rotations. Keep in mind that you may use general reference letters from third year for your CaRMS application, so if you have a positive experience with a staff member, do not hesitate to ask for one. Try to maintain your interests outside of medicine as well.

Explore specialties early to figure out what interests you, and reflect on what it is about certain specialties that appeals to you (or not). In first and second year, shadow in areas you think might interest you, seek out mentors who can answer your questions, and talk to residents about their training experiences whenever you can. If you are trying to decide between very different specialties, consider trying to do these rotations earlier in third year or in early fourth year electives. Finally, remember that most people figure out what they want to do, even if it is at the very last minute – you don’t need to have a plan before starting clerkship!

Fourth year can be draining at times, especially with frequent travel and the stresses of CaRMS applications and interviews. If you can, take some time during your break between third and fourth year to recharge, so you feel ready to take on the adventures and challenges ahead!
Electives

Choosing Elective Specialties

Choose electives that interest you and help you cover a broad base of medicine as you prepare for residency. Major considerations include experiencing multiple programs, building skills to improve on weaknesses, and gaining experience that will be useful for your specialty of interest. Ask staff and residents in your specialty of interest lots of questions about electives and what they would recommend.

General electives are well suited to a four-week time period, while more specialized electives are often two weeks long, although this varies considerably. Students often choose to complete multiple two-week electives in their specialty of interest in order to visit as many programs as possible. Completing these prior to CaRMS deadlines will allow you to experience more variety in different fields and different cities and potentially collect reference letters from more of the programs you will be applying to. However, other students prefer to schedule longer electives pre-CaRMS to provide more continuity and develop stronger relationships with preceptors who can provide more detailed reference letters. Indeed, some electives work better in four weeks, providing more opportunity for follow-up and time to get to know the staff. Note that, for some electives (e.g. CTU), the preceptor may change every 1-2 weeks, which may allow students to get more than one reference from a single rotation, but does not encourage longer-term relationship building. Following CaRMS, choose rotations that you will enjoy and that will compliment your residency choice.

In- Or Out-of-province?

Out-of-province electives allow you to get a sense of what it would be like to live in other cities. Think of places you would consider ranking for CaRMS, and also consider areas in which you have friends, family, or other contacts. Out-of-province electives also provide an opportunity to learn about differences in health care and teaching across the country and to meet residents and staff in your programs of interest. However, do not feel that you must do an out-of-province elective – some students choose to do as many as possible and others do none at all; many students hoping to match in-province choose more in-province electives in their specialty of interest.

Sign up for out-of-province electives early, ideally before Christmas, as it can be difficult to find an elective you want if you are looking later in the year. UBC students often have an advantage in securing earlier out-of-province electives, as few other medical schools are in session during July and August, however elective offerings may be fewer as many preceptors are also on vacation. Consider applying for in-province electives as back-up in case your out-of-province electives do not work out. Note that out-of-province electives must still conform to UBC elective rules (e.g. 2- or 4-week duration, not crossing elective blocks, etc.).
Preparation And Studying

Most students find they spend less time studying in fourth year, but preparation for electives is still important. Good general resources include eMedicine, the little red/blue/green book, Year 3 clerkship notes, Toronto Notes, and BC Guidelines for Family Medicine. Blueprints and Recall books from third year are also helpful. Consider preparing for an elective the weekend before using a general resource, and then read around at least one case each day using a more detailed resource such as Up-to-Date. Keep in mind that you will be expected to know how to approach and manage “X” if you had a similar case the previous week. Time for studying is often limited during the day, especially on surgical electives, so efficiency is important. Some programs will suggest areas of focus if you ask ahead of time, and most preceptors and residents are happy to suggest specific resources in their area. Surgical electives are a good time to practice suturing on your own.

Accommodation For Out-of-town Electives

You can save money by staying with friends or family whenever possible. Check the housing sites specific for the school you are visiting and ask other students who have completed electives at the site to which you are travelling. Administration at each site is often very helpful in recommending places to stay. Consider hotels or rental apartments, depending on your preference and budget – often you may be able to share with other students. Preceptors may also have some ideas about where other students have stayed in the past. Consider your proximity to the hospital site, grocery stores, a kitchen, and gym or other workout options. Many students find food preparation difficult on out-of-town electives. Ask about the kitchen set-up in the place you’re staying, and research grocery stores and how to get there. Have some quick dinner recipes up your sleeve to get you started in a new place.

Elective Choices

The CFMS keeps an electives database with specific feedback on individual electives from past students.
Reference Letters

How To Ask For Reference Letters

Don’t be afraid to ask for a letter – most preceptors expect that you will, and if you work hard they are usually happy to write them. You can always choose not to use the letter, so err on the side of asking for too many as it is often more difficult to go back later to ask for a letter. If offered, accept a letter regardless of whether you intend to use it or not. During the CaRMS application process you will get to choose which reference letters you want to assign to different programs so having more letters to choose from gives you more choice and flexibility. You can ask for a general or specialty-specific letter in any specialty, regardless of your area of interest. If you choose to ask for a reference letter or are offered a letter from a Year 3 core rotation you have the option of sending a CaRMS early reference form to your referee before the CaRMS online platform opens. Applicants can request an early reference letter as early as one year prior to their match year opening on the CaRMS website. You fill out the early letter of reference form (available on the CaRMS website) and present it to your referee and once the early letter of reference form and letter of reference are complete you should request that your referee mail the documents to the CaRMS Document Centre. CaRMS will email you when the documents are received in the mail and you will be asked to request the letter of reference be uploaded to your CaRMS profile once the CaRMS portal for your match cycle opens. Finally, you will be required to reply to the CaRMS email address with a reference ID number once your request has been made in the CaRMS online portal to upload the early reference letter form and early letter of reference. The reference ID number should be emailed to documents@carms.ca. Full instructions regarding requesting and submitting early letters of reference can be found at www.carms.ca.

Communicate clearly and early regarding your learning goals and your intention to apply to your specialty of interest with your preceptors and residents. Most preceptors are eager to teach trainees to help them maximize their learning from clinical cases during electives. If possible, working with the same preceptor(s) for 1-2 weeks during electives will allow them to write a more personal reference letter. For electives closer to the CaRMS deadline, tell your preceptor early in the elective that you are hoping for a letter of reference, and offer to provide an updated CV and personal letter about yourself. Ask for regular feedback during your electives so that you understand what your preceptor knows about your skills and competencies and so your preceptor can identify any areas needing improvement so that you can address these learning points early on in the elective if needed. Near the end of the elective, ask if he/she can provide a strong reference letter (either a specialty-specific letter or general letter of reference). One strategy is to ask your preceptor to make some time for feedback at the end of your elective; this will ensure that they set aside some time for a one-on-one meeting. After hearing their feedback, you may have a good intuition about whether your preceptor will be able to write a strong letter before you ask! Ask for letters in person during the elective block, and then follow up by email with information documents and any other resources they may request. In my experience, referees asked for an up-to-date CV, headshot, and personal statement/statement of interest to aid them in writing a
more personalized reference letter. In your personal statement, you can include examples from your elective where you really shone, to remind them of specific anecdotes to include in your letter. In some instances a referee may not submit a reference letter until very close to the CaRMS submission deadline so it is very important to politely remind your referees of any pending deadlines and to stay connected with your referees throughout the application cycle. Online submission of reference letters to the CaRMS portal is easiest although if your referees prefer they can send the letter of reference to the CaRMS document centre by mail.

Who To Ask For Reference Letters
Ask anyone with whom you work well and establish a good rapport. This includes preceptors who are not necessarily in a specialty to which you intend to apply, although referees in your specialty and program of interest are excellent choices. Think about individuals from specific sites/programs, as well as those who might have worked closely with you in multiple areas and therefore have a reasonably accurate all-round picture of you, particularly if you feel that your time with that individual highlighted your strengths. Consider individuals who can speak to a particular skill set required for the specialty, and think about whether they would be well known to your programs of interest. On average most programs requested applicants to submit 3-5 reference letters (specialty-specific or general letters of reference). Requirements for who can write you a reference letter, specific instructions for the letters of reference and details of what a program looks for in strong candidates can be found in the “Program Descriptions” section of the CaRMS website for the R1 residency match. Assign letters based on your connection to the staff member and your experience in the clinical rotation – particularly if you felt that your strengths were highlighted when working with that particular individual. Select the people that are excited for you to work in that field – someone who will say great things about you and who is also enthusiastic about your clinical performance and who would be happy to have you on their team. In some specialities where you work with multiple preceptors it can be hard to work with the same preceptor(s) for an extended period of time. If you have a good experience on a clinical elective and feel that you would get a strong letter of reference it is possible to have multiple preceptors provide feedback and collaborate to write you a strong reference letter. For example, one could ask a primary preceptor with whom they worked for a supportive letter and then your preceptor can gather feedback about you from multiple attendings with whom you worked to compose a cohesive supportive letter of reference. This type of reference letter may be more common on rotations like Emergency Medicine and Anaesthesia where you may work with a different attending each day on service. Finally, try to capitalize on long periods of time spent with the same Attending(s) – for example, if you spend six weeks with a Psychiatry preceptor, they are likely to know you well enough to write a meaningful letter.
CaRMS Application

The most important advice is to start early, especially on the personal letters. If you start in September (as soon as you get your token to log in) and work on your application for a couple of hours each week, the process will be less stressful and you should not be too pressed for time. Taking the full two months will help ensure the work is manageable. You can get a head-start by looking at the program requirements and personal letter prompts during your break between third and fourth year on the CaRMS website. Many of the prompts don’t change much from year to year.

Curriculum Vitae

A well-rounded CV is important – allow it to accurately represent the breadth of interests and activities in which you have participated. Take some time to think about major strengths that might set you apart from others, and ensure these are highlighted in your CV. Include activities that are important to you, both within medicine and in a non-academic context. Focus on activities that demonstrate an interest in your specialty as well as on extra-curricular interests, research, and volunteering. You will likely be asked about much of what you put on your CV during your interviews. Ensure you edit your CV extensively.

The ‘Custom CV’ that many programs request is different from the CaRMS CV. The custom CV is one that you have written in a separate document, with formatting up to you. Most people limit their custom CV to 3 or 4 pages maximum, however this is not a strict rule. The CaRMS CV is a list of accomplishments entered directly into the CaRMS application portal and formatted uniformly for all candidates. Sample residency application CVs are typically available online on Entrada and from other Canadian medical schools.

Personal Statements

Keep in mind that personal letters may require significant time for reflection and editing. You can use the cover letter that you wrote for your referees as a good first draft. Helpful resources include program-specific information from websites, your own CV, previous applications, CanMEDs competencies, sample letters online and those provided by UBC, and discussions with advisors. Ensure that you carefully review and address the criteria for each program’s personal statement, as they can be quite different! They will get easier to write once you have a first letter for each specialty you are applying to, and can then tailor it to meet each school’s requirements. Make use of your family and friends as editors; have several people read them over to provide advice.
Preparation During Year 3

Keep your CV up to date, including all your clinical rotations with the number of weeks. Write a cover letter for your referees explaining why you are particularly suited to your specialty of interest.

Write down meaningful clinical experiences as you progress through third year. Start thinking about clinical vignettes from your own experience that will be helpful both for your letters and for interviews. Referees also often appreciate a list of key clinical experiences while you were working with them, which allows them to provide more anecdotes in their letters.
CaRMS Interviews

Preparing For Carms Interviews

CaRMS interviews require preparation and practice. You will need to quickly recall anecdotes and stories from clinical rotations that exemplify different aspects of the 7 CanMEDS traits. During your clerkship and electives it is useful to keep a journal or list of clinical cases where you learned something about yourself or clinical cases you encountered that highlight different skills or competencies. As you get closer to interviews, start going through a selection of available sample CaRMS interview questions and make notes on what you want to remember to say for a particular question. Having specific stories or examples in mind will help organize your thoughts and make it easier to answer questions in a structured and concise manner. Useful interview resources include the interview database on the CFMS website, the CFMS CaRMS Residency Guide, and specific program and interview information found under the “Program Descriptions” of the R1 residency match section on the CaRMS website. In addition, UBC Student Affairs and Doctors of BC typically offer small group CaRMS interview prep sessions 1-2 months ahead of interviews that are run by residents (who themselves recently went through the match), who will ask you practice questions and provide you with focused feedback on your answers to help you with your interview preparation.

Start thinking early about answers to common interview questions, especially why you are interested in a specific specialty/program and why you are well suited to the specialty to which you applied. Also think about common questions like, “Tell me more about yourself…” and have specific examples or anecdotes prepared which you can use to highlight answers to common questions. Most students who attend practice CaRMS interview sessions find them very helpful.

While it can be intimidating to sit in front of your peers and answer questions, this provides an excellent learning opportunity and much-needed practice. Don’t be afraid to look silly during practice – it is better in practice than at your interview! Interview practice also gives you valuable feedback on your answers and interview performance because residents running the sessions have been through the CaRMS process themselves and they provide very practical and useful tips! Also practice with family and friends to ensure you have a chance to practice telling stories, listen to your wording, practice timing when answering questions and receive feedback on your interview performance. Take time for self-reflection – know who you are and know your strengths and weaknesses. Think over clinical encounters that were difficult, challenging, or taught you something specific. Consider developing some key stories based on meaningful clinical experiences that highlight a variety of themes related to commonly asked questions (e.g. adversity, leadership, personal qualities). Also think about how to outline CanMEDS competencies with examples from your clinical training. Remember that this process is easier if you keep track of meaningful clinical and patient encounters throughout medical school.
Questions To Ask During Interviews And Social Events

Always think about a few questions you could ask if given the opportunity during an interview or at a social event. These might cover topics such as training opportunities for residents locally, nationally and internationally, the extent to which residents feel prepared for independent practice when they finish, and what residents or staff might change about the residency training program if they could. Other common topics could include questions about the academic curriculum for the program, questions about the implementation of new competency-based medical education (CBME) and how the program plans to implement CBME, research opportunities for residents and other unique features about a training program. You can find information about the highlights and key features of a residency program on the “Program Descriptions” section of the CaRMS website and this information can help trainees to think about potential questions they may want to ask during their interviews or at social events. Keep the discussion pleasant and positive but ask about the program’s strengths and weaknesses. In short, use the opportunity to ask questions to learn about the program and to try to figure out whether it is a good fit for you. Ask about whatever genuinely interests you and will allow you to make a more informed decision about selecting your preferred residency training program.

If you already have all the information you need regarding the program, ask your interviewers about the sites they are from, their clinical practices, and their impressions of the clinical working environment. It is sometimes possible to ask about the interviewers’ backgrounds at the beginning of the interview, which can help to guide your answers. During social events, ask residents whether they are satisfied with their residency program and what they like and do not like about the program (in the absence of any faculty). Ask them about call schedules, group dynamics (both at work and outside work), the city, activities and things to do outside of work, and why they chose the program vs. other programs and other sites. Ask residents what they like best about the program, about its strengths and weaknesses, and whether Attendings are keen to mentor and teach trainees.

Travelling For Carms

With the current COVID-19 pandemic it appears as though CaRMS interviews for the Class of 2021 will be held virtually. This will greatly simplify CaRMS interview scheduling and the information below regarding booking interviews and travelling may not apply to you as it did for students in previous CaRMS match cycles.

Take care of yourself during this time; bring some runners and shorts in case your hotel has a gym, and remember that it is much colder in other parts of the country, so dress accordingly. Prioritize getting enough sleep and eating well during the CaRMS interview period. The process is a marathon and not a sprint and you need to look after yourself during this extremely stressful time! Consider a rolling suitcase or easy-to-carry garment bag, and stick to carry-on luggage to save time and stress at the airport. Try to give yourself lots of time between scheduled interviews, while allowing for unforeseen winter travel delays. Some people try to squeeze
interviews close together at the beginning of the interview tour in order to take a vacation at the end, but leaving time to recharge between interviews can help.

**How To Dress**

Pack your suit in a carry-on so that it is always with you, and try to travel light. Attire for interviews is typically business formal – suits are the standard. However, you can check the CaRMS website for program specific instructions regarding the interview, as some programs may have other dress guidelines. You may need to bring your luggage with you to an interview, and there is always a room in which you can store your belongings at interviews. You may want to take notes during the orientation/presentation sessions, but you do not need to bring anything into the interview. Most interview invitations will also tell you the dress code for social events. This is usually something close to business casual, although some events may be considerably more casual. You can consider bringing two outfits (one dressier and one more casual) if you are unsure about the venue and required dress code.
And with that concludes this unofficial guide to clerkship. Hopefully it’s been helpful to you in whatever way or form you’ve chosen to use it. Thanks and acknowledgements should go to all the great writers and editors of the guide - a huge applause and thank you for the Classes of 2020 and 2021 who worked tirelessly to make this revised edition. It is our hope that there will be continued revisions and additions to this resource over the years, so that it may continue to provide advice and guidance to the many 3rd years to come who are lost and confused in the chaos that is clerkship.

Regardless of the difficulties, obstacles, trials, and tribulations that each of us may encounter in our education and careers, never forget that medicine is a continuous learning process, and that we should always seek to grow as physicians, therapists, and advocates for our patients. Good luck to everyone in your future specialties!

Nancy Lum and Annette Ye
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