Perelman School of Medicine
University of Pennsylvania

SURVIVAL GUIDE TO THE CLINICS

The Teaching Hospital "JULY EFFECT"

3rd year med student:
Now that I'm starting clinical rotations, I'll have to pretend I know what I'm doing.

Intern:
Now that I'm done with medical school, I'll have to pretend I know what I'm doing.

Resident:
Now that I'm a resident, I'll have to pretend I know what I'm doing.

Fellow:
Now that I'm a fellow, I'll have to pretend I know what they're doing.

Attending:
I can't wait to get back to my office to publish papers and books! It's a good thing my team of underlings look like they all know what they're doing.

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2019
•◆ Introduction ◆•

The transition from the basic sciences to the clinics is naturally intimidating. You’ll soon be immersed in an unfamiliar environment that will demand greater responsibility and commitment than anything you’ve previously encountered in medical school. But fear not! Taking care of patients is (hopefully) what you went to med school for in the first place. Over the coming year, you will learn innumerable lessons in practical diagnosis and treatment, evidence review and effective communication, initiative and teamwork.

While your clerkship year may often prove anxiety-provoking or exhausting, it will just as often - hopefully more often - be exhilarating, exciting, and fun. You’ll interact daily and influentially with patients, become a valuable member of medical and surgical teams, see the practical application of the things you’ve learned, and sense yourself beginning to develop into a clinician.

This guide is intended to help ease your transition into the clinics. Each rotation and each site has its own distinct flavor. What you do as a student will vary from one rotation to the next and from team to team. Rather than attempt to describe every detail of each rotation, this Survival Guide presents general objectives, opportunities, and responsibilities, as well as some helpful advice from previous students. Above all, your fellow classmates and upperclassmen will be a tremendous resource throughout this core clinical year.

This booklet is formatted as a pocket reference to the clerkships. Part I contains general information that may be helpful to review at the beginning of the year, and periodically as you gain more experience. Part II contains clerkship-specific information for reference before and during each specific rotation. Part III contains a set of appendices with useful information on everything from note templates to attendance policy to support resources.

Enthusiasm, dedication, and flexibility are the keys to learning in the clinics. Throughout your clinical experience, you’ll interact with an incredibly diverse group of attendings, residents, and students in a variety of medical environments. If you can adjust to these different situations and maintain your enthusiasm, curiosity, integrity, and sense of purpose throughout, you will be on the way to fun and fulfilling year, as well as the development of a strong clinical identity.

We hope you find this guide helpful during your transition. You are not expected to know everything, only to learn a little more each day. Trust that your comfort, confidence, and abilities will increase with experience. Above all, don’t forget to relax and have fun. Good luck and have fun out there!
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Best of luck,
AOA Class of 2019
•◆ Part I: General Principles ◆•

•◆ Overall Advice ◆•

General Approach
• **Attitude:** Having a good attitude and being a team player are as important for patient care as a strong fund of knowledge. Often they are more important.
• **Respect:** Respect your residents and attendings. (But do not kiss up; insincerity is obvious.)
• **Humility:** Learn how to say “I don’t know”—tough questions aren’t necessarily intended to evaluate you as much as they are expected to provide a starting point for teaching. Don’t be afraid to be wrong, either — people are usually interested in understanding how you think through a problem rather than just on whether you’ve memorized an answer. No one expects you to know everything. That’s why you’re here.
• **Restraint:** Do not show up or undermine a classmate or resident.
• **Peer Teamwork:** Consult your classmates. They are your greatest resource.
• **Interdisciplinary Teamwork:** Be friendly and collaborative with nurses, clerks, and other staff—they can teach you a great deal about your patients and about how things are done in the hospital.
• **Feedback:** Ask for feedback at the end of every week from both attendings and residents to help you redirect your efforts if necessary and avoid surprises at the end of the rotation.
• **Unfair Evaluations:** Do not despair if you receive an unfair evaluation. Almost everyone gets at least one unexpected grade in the course of their clinical rotations.

Organization/Workflow
• **Timeliness:** Always be prepared and on time for rounds.
• **Organization:** Get organized. Stay organized. Ask your interns, residents, upperclassmen, and classmates for ideas on how they organize their patient information.
• **Chart Familiarity:** Take some time to learn your way around the different parts of the patient chart early on. Do the same with the computer systems. You can be a big asset to your team if you can perform an efficient “chart biopsy.”
• **Initiative:** As much as possible, try to anticipate the needs of your patients and your team. Be proactive. Don’t constantly repeat, “Is there anything I can do?” Pay attention on rounds – if it’s mentioned that someone needs to obtain old records or perform a Mini-Mental Status Exam, volunteer!

Developing Your Skills
• **Thinking Through:** Always brainstorm your own assessment and plan before asking your residents for theirs. You don’t have to be right, but thinking through your patients on your own first is a valuable learning experience that is regarded highly.
• **Thinking Ahead:** Anticipate attendings’ and residents’ questions about abnormal lab values or other findings for your patients, and think about some possible explanations. You don’t need to be right, but you need to show you noticed and are thinking.

• **Literature:** Don’t spend too much time on MedLine/OVID/Pubmed searching for the most recent articles. Concentrate on the basics, particularly through UpToDate. However, bringing in a relevant article once in a while related to a specific question the team had that week can be helpful.

• **Questions:** Don’t be afraid to ask for help. Don’t be afraid to ask questions. (However, better questions are ones that you couldn’t easily look up on your own.) Remember that no one expects you to know everything already; that’s why you are here.

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**♦ The Team ♦**

*The Physician Team*

**A note on names:** Interns and residents will definitely want you to call them by their first names, so feel free to do that from the start. Fellows will probably want you to call them by their first names too, but you could start with “Dr.” if you feel nervous. With attendings, always use “Dr.” unless otherwise instructed.

**Intern:** The intern, also known as a PGY-1 (post-graduate year 1), is in his/her first year as an MD/DO and has primary responsibility for the day-to-day needs of the patients. Being overworked and sleep-deprived, interns will often welcome any help provided by students; many interns will return the favor by talking you through how to accomplish routine tasks on the floor. Expect to spend much of your time with the intern. They can be an incredible source of information in caring for patients and preparing presentations. While on some rotations they do not directly evaluate medical students, on others they do, and residents and attendings often ask for their input at the end of the rotation.

**Resident:** Residents are also known as PGY-2s, -3s etc. or sometimes JARs and SARs (Junior and Senior Admitting Resident). They ensure that the team runs smoothly, make routine patient care decisions, and oversee the activities of the interns and medical students. Their responsibilities will vary depending on their level of training and specialty. Residents have had more years of experience, and they often have the most time and interest in teaching about various topics during your rotation. Teaching medical students is generally considered a core part of the residents’ responsibilities. They are also the ones who will most often provide you with direct instructions on which patients to follow, surgeries to attend, etc. The resident evaluation is a major component of the medical student grade.

**Chief Resident:** Depending on the specialty, chief residents are either residents in their senior year of residency (OB-GYN, Surgery) or residents spending an additional year before starting
fellowship or becoming an attending (Internal Medicine, Pediatrics). Their roles vary from specialty to specialty, but usually they are involved in scheduling and overseeing all the junior residents in the program. In some cases, they may act as “Junior Attendings” and be the attending physicians on a service.

**Fellow:** After having completed residency training in a general field, these individuals are pursuing specialty training as clinical fellows. For example, after completing five or seven years of training in general surgery, physicians may elect to spend three additional years of training as fellows in cardiothoracic surgery. The exact responsibilities of fellows depend on position and field of interest. While your contact with fellows as a clerkship student will be limited, you will undoubtedly encounter them when you consult subspecialty services, in the clinics, and in the operating room. If you are on a team with fellows, they are unlikely to evaluate you.

**House Staff:** All physicians in training are collectively referred to as house staff or house officers.

**Attending:** The attending physician has completed formal training. Attendings have titles such as Assistant Professor, Associate Professor, and Professor, depending on level of experience within the department. The attending is ultimately responsible for the care of patients on your service and accordingly will make all major decisions regarding patient management. He/she runs attending rounds and is the person to whom you will present your patients. The attending is often the person who asks you the most questions. While you should try to spend as much time with your attending as possible on the floor, in clinic, and in the OR, they are incredibly busy and often will not make themselves available for you; the degree to which your attending will teach you is very individual- and discipline-dependent. The attending is usually responsible for writing your primary evaluation.

**Sub-Intern (Sub-I):** A senior medical student who is taking an advanced course in which they take on many of the responsibilities of an intern. Depending on the rotation, the Sub-I or Extern will either take the place of an intern or function in addition to existing interns.

**{ The Interdisciplinary Team }**

Allied health professionals are essential in the care of patients and can be extremely helpful to the novice medical student. They deserve your utmost respect. Many of the senior nurses, therapists, and clerks have been around for generations of students and residents. They have a wealth of knowledge to share, but they have also seen students make the same mistakes over and over again throughout the years; you may have to earn the benefit of the doubt with some. If you are respectful and patient with colleagues (even when you or other members of the team feel frustrated), it will help produce better care for patients and a smoother, more successful rotation for you.
**Nursing:** Registered Nurses (RNs) wear **Navy Blue** scrubs, and Certified Nursing Assistants (CNAs) wear **Maroon** scrubs. Nurses are in charge of overseeing the routine, vital aspects of patient care. Among other things, they administer medications, administer other orders, monitor patient vital signs and activities, and provide supportive care. Some will insert IVs and perform routine phlebotomy. Charge nurses are nurses that supervise individual floors. Scrub nurses run operating rooms and maintain the sanctity of the sterile field. Nurse Practitioners have advanced degrees and are able to perform some of the duties of a physician. CNAs assist nurses in obtaining vitals and executing routine patient care activities. It is always a good idea to build a pleasant and cooperative relationship with the nurses.

**Physician Assistants:** Physician Assistants (PAs) have bachelor’s degrees and then 2-3 years of graduate-level training, usually leading to a master’s degree. At HUP they work mostly on the surgical services and may be part of the team of residents and med students, helping to do floor work or seeing patients in clinic. They often act in similar roles to residents on these services, except they do not usually operate.

**Unit Clerk:** Generally, clerks wear **Khaki** scrubs. They handle floor administrative business: they answer phones, schedule tests, complete paperwork, and generally keep things running smoothly. They typically sit at the nurse’s station and are an excellent source of practical information (e.g., printing, transport, etc.). They may also help with obtaining outside hospital records for your patients. A friendly relationship with unit clerks, in addition to making walks past the nursing station more pleasant, can help you accomplish some of the logistical nitty-gritty crucial to the care of your patients.

**Patient Care Observers:** Wear **Brown** scrubs. These staff, sometimes colloquially called “1-to-1’s”, provide individual and continual observation for patients. They are not clinically trained and provide no nursing care. They are ordered by the physician for patients who are a risk to themselves (either overtly suicidal or, more commonly, delirious and pulling at lines and getting out of bed). They will usually stay in the room when you interview the patient, but **you can ask them to step out** if you want to have a private conversation or exam. (If you do so, however, make sure you have thought through safety considerations for both yourself and the patient.)

**Physical Therapy:** Physical Therapists (PTs) and Occupational Therapists (OTs) often wear **blue Good Shepherd** scrubs. Physical therapists evaluate and treat patients suffering from physical dysfunction and pain resulting from illness. They emphasize motor rehabilitation training in order to help patients regain joint mobility, strength, and coordination. (Think of them as dealing with gross or macro motor function.) They also evaluate patients’ level of functioning and make recommendations for what level of care or rehabilitation a patient will need when he/she is discharged. Their recommendations often play a major role in patients’ “disposition” - the target endpoint of their hospitalization (back to home, to a rehabilitation facility, etc.).

**Occupational Therapy:** OTs also deal with physical dysfunction, but their goal is to help patients achieve independence in daily activities through exercise, fine motor skill repetition,
and family education. (Think of them as dealing with micro motion.) They, too, can play a role in
determining patients’ destinations after hospitalization.

**Respiratory Therapy:** Respiratory therapists (RTs) administer nebulizer treatments, perform
bedside pulmonary function tests (PFTs), and adjust ventilator settings in the Intensive Care
Units (ICUs).

**Social Work:** Social workers act as liaisons between the patient and the patient’s care
providers, both within the hospital and out in the community. They assess the patient’s care
network outside the hospital, arrange for nursing home or chronic care placement as needed,
and participate in family education and support. Coordination with them can often prove the
most critical step in getting a patient safely discharged and having the interventions of a
hospital stay translate into longer-term wellbeing.

**Clinical Resource Management:** Clinical resource managers coordinate
care for patients who
will be returning to their homes after discharge. They ensure that patients have needed
equipment (such as CPAP machines, oxygen, and mobility equipment) when they leave the
hospital for home. Again, their work is often the most important in ensuring that the
stabilization or improvement achieved during hospitalization continues on the outside.

**Nutrition:** A service staffed by both physicians and registered dietitians (RDs), nutrition staff
address patient care issues such as intravenous nutrition, special diets, cachexia, etc.

**Chaplaincy:** This service provides inpatients with worship services and spiritual counseling.

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**Work**

While your responsibilities and opportunities in patient care will vary a great deal from month
to month depending on the clinical rotation and your team, the basic structure and general
principles that direct your activities are consistent throughout the clerkships.

Your ability to get organized and stay organized will be very important in your future as a
student, a resident, and eventually as an attending physician. Regardless of your rotation
schedule, you should test out and refine a personal system for recording and accessing patient
information. Even though you will likely only be assigned 1-3 patients to follow closely and
present on, having access to some information for all of the patients on your team will be
helpful. This will allow you to follow along on rounds and write down any tasks that you can
help out with later in the day. It will also demonstrate that you are interested in helping to care
for everyone on the team, not just your own patients.
Most students and residents use printed copies of the day’s sign-out (a list of patients on the service with a one-liner, test results, active medications, etc.), accessed from Carelign or EPIC, to take notes on pertinent information for the patients they are following as well as keep a list of to-dos. Ask your interns and residents how to print the sign-out, and try out the different formats available to find which one you like best. Some carry a clipboard with a separate sheet for each patient, while others manage with loose, jumbled scraps of paper. Some students even opt to create their own sheets with pre-printed patient information templates. (Sample “scutsheets” that you might start with can be found on the “Downloads” page of the MedFools website, http://www.medfools.com/downloads.php, and in Part III below.)

{ Rounds }

Regardless of the specialty, all of your inpatient rotations will entail rounds. Rounds provide structure for the interaction between the patient and the health care team, and among members of the health care team itself. For some of your clinical rotations, you will be responsible for individual patients whom you “pick up”. You will be most involved in the care of these patients throughout their hospitalization, and these will be the patients you present every day during rounds. Alternatively, on your surgical rotations, you may make small contributions to the care of all of the patients on your service as a team member and may not necessarily follow individual patients. Again, while your specific responsibilities will vary, most of your clinical experiences will involve rounds.

{ Pre-Rounds }

This section applies primarily to rotations in which you will follow individual patients, such as in medicine and pediatrics, but the general principles apply to the majority of clerkships.

On most services, you will begin a typical day by “pre-rounding” on your patients. The goal is to find out what happened with the patient since you left the night before so that you can update the team on the patient’s progress and incrementally advance the plan of care. Here’s what information (generally speaking) you are expected to gather and where to find it:

- **Signout:** When you start a new rotation, you should check with the intern to see if they would like you to get signout from the overnight team or if they want to do it themselves. Signout is a process in which patient responsibilities are handed off from providers who are leaving to providers who are entering the team. Signout is key in getting overnight updates on your patients, but the intern may prefer doing all their signouts at once and then passing the information on to you.

- **Vital signs:** Temperature at the time (Tcurrent) and maximum temperature overnight or over the past 24 hours (Tmax), BP, heart rate, respiratory rate, and pulse ox (always record the level of oxygenation – e.g., “2L nasal cannula”), total intake and output (I/Os) over the previous 24 hours, weight if appropriate, drainage from any surgical drains/chest tubes, etc. In the electronic medical record, this information can be found
in multiple different places and displayed in multiple different formats. If vitals ever look wrong or unexpected, definitely check them again yourself and look for trends. Vitals are often presented as the range of values over the past 24 hours, and sometimes it is useful to note when any abnormal values occurred.

- **Results:** Check for new results, including lab values and radiology reads. Medview and Carelign may serve as helpful adjunctive tools for checking and confirming results. It is usually helpful to record not only today’s results, but also the trend since yesterday (or since admission).

- **New notes/orders:** Review any new progress and consultant notes. Consultants and attendings will often round after you’ve left for the night, and you’ll want to be up-to-date on what they’ve recommended for the patient. Also look for notes or updates written by the on-call resident overnight in both the EMR and in Carelign. Review orders to see if there have been any major changes or if any consultant recommendations have been implemented.

- **Nursing check:** Quickly checking in with your patient’s nurse can be a great way to get the inside scoop on any issues with the patient overnight. Of course, don’t interrupt the nurses’ signout!

- **Subjective assessment:** How your patient has been doing since the previous day in their own words. For example, how has their chief complaint been doing? If they were admitted for a COPD exacerbation, is their shortness of breath better or worse since they’ve been started on medications? You’ll want to ask if they have any new complaints or concerns as well.
  - A note on waking patients up: Many medical students feel anxious (naturally) about waking patients up in the wee hours of the morning. However, it is expected that you will have spoken to your patient before rounds begin, so it is best to just go for it and empathize with your patient about how tired they must be. The only exception to this is on your pediatrics rotation, where it may be acceptable to just talk to the patient’s family members without waking a child from sleep. You can also try to mitigate the problem by going in with a nurse or other care provider who will be waking the patient anyway.

- **Brief, directed physical exam:** This always includes four basic systems (heart, lungs, abdomen, extremities) as well as relevant systems for that patient (e.g. surgical wounds).

- **Intern info:** Don’t be surprised if the intern knows things that you don’t: they were either the one there all night, or they got a quick morning report from the on-call intern. (Try to ask the intern if there is anything you should know about your patient before rounds so that you can present the information to the attending instead of having the intern report the updates. But don’t be offended if the intern forgets to touch base with you before rounds. They’re just busy and are not trying to make you look bad.)

Don’t be discouraged if you miss information early in your rotations. You’ll get better and faster over time. Early on, be sure to leave yourself about half an hour per patient. Since each patient is also the intern’s responsibility, he/she will usually also pre-round on your patients, and your resident might, too.
On surgical rotations, expect to pre-round on more patients, but in MUCH less depth. Your intern and residents will let you know exactly what information they like to hear on rounds.

{ Work Rounds }

On surgical rotations, the housestaff team (usually without attendings) will review each patient’s progress and plan basic care for the day immediately after pre-rounding. (On non-surgical services, there generally aren’t separate work rounds, just one set of rounds with the attending.) Work rounds are usually done as “walk rounds” or “bedside rounds,” where the entire team moves from room to room to see each patient. Occasionally teams may have “sit-down rounds” in a conference room prior to seeing the patients.

When the team gets to one of your patients, briefly summarize the pertinent data from your pre-rounding, including your ideas for a daily plan. Use the SOAP format (subjective, objective, assessment, plan) that you will also use for the written progress note (see sample presentation in Part III for more details). Presentations should be concise but complete, noting patient name, age, current problems, vitals, pertinent exam findings, study results and assessment/plan.

Work rounds are highly chief resident- or fellow-dependent, and you may be expected to mold your presentations to her/his preferences. The amount of teaching you will receive during work rounds is variable, depending on the style of the resident and the number of patients on the service, as well as their level of acuity and complexity.

With practice you will likely start work rounds with a mostly pre-written daily progress note/SOAP note for each of your patients that you can complete as your team agrees on an assessment and plan. Again, this will vary. Occasionally you may be directed to have signed the note in the chart before rounds. However, these notes are very brief and get much easier to write with practice.

{ Attending Rounds }

Attending rounds are generally held soon after work rounds, but again, this varies with the service. On non-surgical services, there generally aren’t work rounds, and everyone rounds together with the attending after pre-rounding. Attending rounds provide an opportunity for the team to present and discuss old and new patients with the attending.

Admission (H&P) presentations: If you have admitted a patient the day before, this is the time when you will give the entire formal history and physical as a way of communicating the patient’s ailment to the whole team. You will likely have discussed your patient with the admitting resident the night before or in the morning before rounds. If there is time, many interns and residents will volunteer to listen to a practice presentation prior to attending
rounds - take them up on it! They will undoubtedly have invaluable advice on content and style, especially early in the rotation. Giving an effective presentation helps everyone get on the same page about how to move forward on a given patient. Moreover, this is often your only contact with the attending, and a well-rehearsed presentation will make a great impression. Don’t be upset if your attending or resident interrupts you to ask questions, add information, or discuss a teaching point – this is not a reflection on your presentation, but is meant to help the team learn and understand your patient better.

**Style:** Do not sacrifice completeness early on because you feel compelled not to read from your notes or because your presentations are longer than those of the interns. At this stage in training, you should focus on being thorough. Your attending will likely want to hear more detail from you than from the interns to make sure that you are obtaining all the relevant data and thinking through the differential clearly. Over time, try to do more of the presentation without notes. Start by delivering some of the HPI from memory and gradually add more and more components of the presentation. Feel free to ask your attending or resident about style preferences for the next presentation; most will tell you if they have something else in mind, so be flexible.

**Subsequent (SOAP) presentations:** For patients who have been in the hospital for a while or don’t have many active issues, the presentations can typically be brief. Try to adhere to the SOAP format as much as possible, however, and do not give the entire formal H&P unless asked – only touch on the new information (day before and overnight), even if this is first time you are presenting the patient. A great way to figure out what should be included in SOAP presentations is to spend your first day of rounds on a new rotation noting what the interns and residents include in their presentations.

**Thinking it through:** Every night, read about your patient medical issues - primarily for your own education and understanding, with some anticipation of likely questions that may come up; if you do this, you will be well prepared for most questions your attending or other team members may ask. Think about the little things as well. Try to be familiar with the patient’s medications and why they’re taking them, even if it is not relevant to their current presentation. Think about why a patient may have an abnormal lab value or physical exam finding, even if incidental to their current disease process. Often, especially on the medicine rotation, your resident will sit with you the night before to discuss the patient and prepare you for questions that the attending will likely ask. Remember, you are absolutely not expected to have an answer to every question. Attendings will often use a line of questioning to lead off a teaching session, and even the hardest questions of the morning are generally directed to the most junior person in the room first (typically you) before it trickles up to the chief resident. Look at it as a chance to show what you’ve learned, to have fun thinking on the fly, and, above all, to learn in the process.

**Variability:** Attending rounds are variable from specialty to specialty, and formal attending rounds may not exist on some of your rotations. Surgical attendings often walk round between or after cases with only the chief resident or fellow, or they may round with the entire team at
the end of the day. While you may have the opportunity to give bullet presentations on these rounds, you will likely not give lengthy H&Ps. Alternatively, you will have many opportunities to present new patients directly to the attending during clinic hours. While these presentations will be more directed, the usual style and general format apply.

**Call**

As a student, your call schedule and corresponding responsibilities will vary from rotation to rotation. On medicine and pediatric services, your primary objective will be to help admit one or two new patients that you can present to the attending the next morning. While waiting for an interesting admission to come to your service, you should help your resident with the more routine duties of patient management. Once your new patient has been admitted and settled for the night, you should get home to work on your presentation and do the appropriate relevant reading. Alternatively, on some surgical specialties (e.g., trauma), you may be expected to take some overnight call and/or be on call from home (e.g., transplant services). During your Ob/Gyn rotation, you may have a week of “night float” where you’ll work from approximately 7pm to 7am to have the ultimate middle-of-the-night labor and delivery experience.

Although tiring, call is usually an incredibly rewarding and exciting experience for students. Because you’re one of the few people in the hospital, you have greater responsibility and opportunity in the care of your patients. Furthermore, you get to see the initial presentation, work-up, and management of patients. The specific call responsibilities for each clerkship are detailed in the individual clerkship sections later in this guide.

**Filling Your White Coat**

The contents of your pockets will vary between rotations and with experience, but in general:

**For the minimalist:**

1. Stethoscope: Put your name on it with tape, a patient ID bracelet, or some other tag—and never let it out of your sight.
2. Reference handbook for current rotation, e.g. *Pocket Medicine* (useful for almost all rotations)!
3. Note cards, paper, or whatever else you feel comfortable using to keep patient information organized and easily accessible.
4. Several pens: Have lots, because you will probably lose them and/or lend them out.
5. Smartphone with access to medical apps (see below).

**Also useful:**

1. Maxwell Cards for quick reference for normal lab values, standard forms for notes, etc.
2. Clipboard. You can find a folding clipboard with useful lab values printed on it at mdpocket.com or on Amazon by searching for “White Coat Clipboard.”
3. Snacks: food is considered off-limits for providers on many hospital wards, but you may find moments during the daily journey for a granola bar or so. This may be frowned upon by some teams, so make sure to ask permission if you plan to eat conspicuously.

4. Anything else you find your team requesting often.

{ Topic Presentations }

During the course of a rotation, you will often be asked to give a brief prepared topic presentation to educate the entire team on some aspect of patient care. Seek advice from your residents about the length and degree of detail expected in these presentations. In general, focus on basic principles rather than minutiae, and remember that a concise and complete discussion of a focused topic is better than an exhaustive dissertation. If the attending specifies that he/she wants to hear a 5-minute presentation, be sure to keep it to 5 minutes. Some people find it helpful to practice the talk and time it the night before. A one-page handout can also be a nice touch, adding structure to the presentation and providing people with something they can file away for reference (if it’s really kept to the essential information).

A general outline for how to approach a topic presentation might include the following:

- **Choosing a topic:** Try to pick a topic relevant to either a patient you are following or another patient on the service. For instance ***
- **Narrowing the topic:** Narrow your topic as much as possible. For example, if you choose to do a presentation on heart failure, narrow it to a specific cause (e.g. amyloid cardiomyopathy) and then narrow it even further (e.g. heart transplant in amyloid cardiomyopathy).
- **EBM presentations:** One productive approach is It is often easiest to do an “Evidence-Based Medicine” presentation, discussing the evidence supporting a new therapy or diagnostic test, since the information is likely to be limited and easy to find. These presentations also tend to focus on new research, so you may be teaching your residents and attending something!
- **Disease-specific presentations:** For discussion of a disease entity, you will likely want to cover the basic epidemiology, pathophysiology, clinical presentation, and diagnosis.
- **Research - The basics:** For many topics, it may help to include a discussion of one or two relevant papers or review articles. You can find papers of interest by doing a PubMed search for your key terms (or via UpToDate – see below).
- **Research - UpToDate:** UpToDate is a great starting point for a presentation to orient you to the topic. The references at the end are also an excellent way to quickly pinpoint the most recent and relevant literature on a topic without having to sift through all the results on PubMed. However, many attendings will expect you to dig beyond what is covered in the UpToDate summary on a topic.
- **Handouts:** You may decide to put together a one-page handout to distribute to your team. Some people create a more detailed handout while researching the topic and then cut it down to the essentials for distribution to the team; it then becomes possible
to present off the more detailed version, so that there’s information added beyond
what people have in front of them. Your handout can draw team members’ attention to
the key references you used to generate the presentation content.

● **Case introduction:** It often helps ground the presentation to start with a 2-4 sentence
description of your patient case, if relevant.

**◆ The Chart and Charting ◆**

The chart records the details of the patient’s present encounter with care, archives their past
interaction with the healthcare system, and provides an interface for monitoring clinical status
and ordering new interventions. Familiarizing yourself with it will help you provide care with
maximal thoroughness and efficiency. Navigating patient charts is an essential skill that you’ll
develop with experience.

The exact organization of a patient’s charted medical record is dependent on the hospital and
ward in which that patient is located. It may be stored electronically, on paper at a central
nursing station, or in some combination thereof. Most rotations occur at HUP, Penn
Presbyterian, CHOP, and related outpatient facilities, where information is exclusively
disseminated through EPIC. Fortunately, the essential components of any patient chart are
consistent; they all contain sections for physician’s orders, administered medications, vitals,
progress notes, lab and radiology results, etc. You’ll quickly learn where best to look to find or
record information that is important to you. Ask residents, nurses, or the unit secretaries for
help early in the month.

The chart is an important medical and legal document, so everything you write should be
professional. Remember to have everything you write in the chart co-signed by a MD/DO,
usually your intern or resident. Always include some identifying title before each entry (e.g.
“MS-II Admit Note” or “Medical Student Progress Note”) and after your signature at the end of
the note, as well as a contact phone number or pager.

**{ The H&P }**

You have already had a great deal of experience learning how to perform and write a History
and Physical Exam. As time goes on, your H&P will change according to your individual style, the
rotation, and the patient. Generally, your write-ups will grow more concise over the course of
your clerkship year as you gain a better understanding of what is relevant and what is not
relevant. At most institutions, your H&P will be visible in the chart, complemented by an
addendum or, in some instances, an additional complete H&P written by the resident. Do not
be discouraged by this redundancy. It is often required by hospital policy. Look at your
admission note as an opportunity to organize your thoughts about the patient, to learn to be
concise and pertinent in your communication, and to demonstrate your understanding to the
attending (who will undoubtedly read most of what you contribute to the chart). A detailed
H&P format can be found in Part III. Note that EPIC provides a clickable or tabular view for many sections, such as the PMH. You will also be asked to submit formal, typed H&P write-ups for some clerkships.

\{ Progress Notes \}

In addition to the comprehensive H&P, every in-house patient you help admit and follow on a regular basis should have a daily progress note placed in the chart. In EPIC, which you will use most frequently, there will be a medical student progress note template that you can use to structure your notes. You don’t have to wait for all of the day’s data to come back before writing a daily progress note. In fact, the best strategies usually involve “pending” an incomplete note until the plan is agreed upon during rounds, or signing the note and writing an addendum later. A general SOAP note template can be found in Part III.

It is a good idea to include a list of the patient’s current medications with your SOAP note. Be sure to list any antibiotics that the patient is on, and the number of days they have been taking it.

Some EPIC note templates now feature the A/P at the top of the note. This intervention was made in order to improve communication between providers. Don’t let this dissuade you from using the SOAP process to think about your patients!

\{ Other Notes \}

There are several other types of hospital notes that you will encounter (and become comfortable with) during your clerkship year. Consulting doctors write Consult Notes, which are almost identical to H&Ps. Providers document procedures with a range of notes (e.g. Op Notes and Delivery Notes) formatted specially for their purposes. Physical therapists write PT notes, speech therapists write speech therapy notes, and so on. Every patient discharged from the hospital will have notes that summarize the admission for them and for their outpatient providers. If you are ever asked to write a note you have never used before, ask your resident how; they will be able to point you toward a template and explain the general purpose of and approach to the note.

\{ Orders \}

A physician must write an order for the patient to receive many interventions, including medication administration, consultation requests, lab tests, and diets. Orders must be entered electronically. You’ll be oriented to these systems and will be allowed to enter some orders, but all of your orders require the electronic signature approval of your intern/resident for activation. You’ll become more comfortable writing orders with experience. If you are ever asked to write a prescription for the patient to take home, your intern or resident will teach you how to do this.
Nursing orders are a formal communication with the nurse, and it’s always helpful (and nice!) to add a “Thank you!” to the end. Examples of nursing orders:

- Please bring commode to bedside.
- Please check orthostatics in the AM tomorrow (11/16) only.
- Please start IVF (intravenous fluids): D5 1/2NSS (normal saline solution) @ 125 cc/hr on arrival to floor.
- Please make patient NPO (nothing by mouth) past midnight. Thanks.

All patients need a standard set of orders when they are admitted or transferred between services and floors within the hospital. There are templates in EPIC for admission orders for medicine, so ask your resident to show you how to use these.

Remember: Your orders must be reviewed, approved and co-signed by a physician.

Electronic Medical Records and Other Technology

If you have any problems, call the IT Help Desk at 215-662-7474

Getting to Know the EMRs

There are a variety of EMRs that you will use during your clerkship: EPIC on outpatient and inpatient sites within UPHS and CHOP, CPRS at the VA, and possibly some other EMR on your outpatient pediatrics or medicine rotation, depending on where you are placed. You will receive training in each of these systems prior to starting the relevant clerkship, but most of the learning will be done “on the job,” as you attempt to find information and enter notes and orders during your time on the wards. Use your residents, interns, and sub-interns to help you navigate the various EMRs. If you have any trouble accessing or using any of these systems, call the IT Help Desk. Below is a brief overview of the different electronic systems you will be encountering throughout your clerkships:

EPIC – The most commonly used EMR nationally, EPIC is used at HUP, CHOP, Presby, and Pennsy. It is relatively easy to use, with “tabs” for multiple patients and for different parts of the chart. If you are writing notes in EPIC on your outpatient rotations, it is helpful to learn “Smart Phrases” to automatically pull medication lists and lab results into your notes.

CPRS – CPRS is the national VA EMR, accessible from any VA across the world. It is an older EMR but is incredibly useful, with a complete VA medical record detailing all interactions the patient had with the system at any VA hospital. It consolidates inpatient and outpatient information along with medications, notes, and lab results, making chart biopsies much easier.
**Medview** – Medview can be accessed from within PennChart or from the UPHS Intranet homepage. It consolidates all lab and radiology results, and allows you to view UPHS images and pathology notes that can be difficult to bring up in other formats. It also pulls in information from PennChart so you can view all of a patients’ UPHS inpatient and outpatient visits, PennChart medications, discharges, and more. If you access Medview via a web browser (rather than through another EMR), you can also view old UPHS inpatient paper medical records that were scanned into the computer through either eWebHealth (through 2011) or OnBase (since 2012).

**Carelign** – This is a more recent addition to the suite of EMR options on the UPHS menu. It is available online and in app form, which makes it a valuable resource for checking on patients and updating to-do lists on the go. It collects and displays lab values, vital signs, imaging and pathology reports, and more. Carelign also allows residents to create and modify to-do lists and signouts, so many services use this for the most up-to-date assessment and plan. From Carelign you can also print out signouts and progress notes with auto-populated vital signs and lab data. (Pro tip: using the computer’s native snipping tool allows you to copy images of lab values in pretty displays to your EPIC notes.)

**Amion** – Amion provides scheduling for many of the UPHS residency programs. ou can use it find out the call schedule for yourself and members of your team. You can access it through the UPHS Intranet homepage -- ask your team for the password for your team’s schedule (e.g. Medicine is “pennres”).

**Navicare** – Navicare shows where each patient is in the hospital in near-real time. It is also used in the ORs to track operations and show the stage of the operation (anesthesia, draping, incision, closing). There are a lot of icons that show various things about patients (contact precautions, one-to-one), but the most important thing for medical students is to learn how to use it to find where a patient is if they aren’t on the floor (in radiology, the OR, PT). Navicare is displayed on big TV screens near the nursing station on every inpatient ward, and you can use it to find patients as long as you return it to the same screen when you are done. It is also accessible on all computers. You can sign on with most floor names (i.e. “founders14”), the password being the same (“founders14”).

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**Accessing EMRs Remotely**

You can access PennChart and the UPHS extranet from outside networks using the Penn Med remote access portal (IE or Safari only, Chrome not supported): [https://pennmedaccess.uphs.upenn.edu](https://pennmedaccess.uphs.upenn.edu). Before using the portal for the first time, you will have to set up access according to the instructions on the UPHS network connection site: [http://www.uphs.upenn.edu/network/](http://www.uphs.upenn.edu/network/).
Mobile Devices

Make sure your team has a way to get in touch with you at all times in the hospital. It is also important to update your UPHS phonebook profile so that it has an up-to-date contact number. If you feel uncomfortable using your personal cell phone number for professional purposes, some students choose to set up a Google Voice account and forward that number to their cell phone.

In our experience, few students use iPads on the wards. They can be bulky to stuff into a white coat and can sometimes give the impression you are not paying attention to what is going on. The combination of computers-on-wheels (or nearby workstations) and smartphones is usually sufficient for managing patient information on the go.

That being said, there are a number of mobile apps that you may find helpful. One obvious one is EPIC. To get EPIC on a smartphone or tablet:

- Download Haiku (phone) or Canto (tablet)
- Go to the app’s settings
- Depending on the precise format of the settings, you may enter:
  - Server = ssproxy.pennhealth.com, Path = Haiku
  - Custom path = https://ssproxy.pennhealth.com/Haiku

Here are some others:

**Essential:**

1. UpToDate – Free for PSOM students. This is one of the most useful resources you can have on your phone. It offers up-to-date (get it?) information on diagnosis and treatment of essentially anything you might see on the wards. You can access UpToDate on your mobile device by first going to the UpToDate website from a UPHS computer. At the top right of the screen, you have the option to “register” for an account. Once you do that, you can access all that UpToDate has to offer from your phone without being remotely connected to UPHS.

2. Rolodoc - provides contact information for consult services at HUP. Your intern/resident should be able to help you with this.

**Optional:**


4. Dynamed – Free for PSOM students. Access it by following the instructions on this website: [https://dynamed.ebscohost.com/access/mobile](https://dynamed.ebscohost.com/access/mobile). Provides clinically organized summaries on more than 3,200 topics. CHOP now prefers Dynamed to UpToDate as a management resource.

7. QxMD Calculate (Free) – Clinical calculator
9. Micromedex (Free) – Essential resource for drug information and dosing
10. Wikipanion (Free) – The most important resource of all: Wikipedia!
11. AHRQ ePSS (Free) – From the U.S. Dept. of Health and Human Services, “to assist primary care clinicians identify the screening, counseling, and preventive medication services that are appropriate for their patients.” Great for Family Medicine.
12. Shots by STFM (Free) – Up-to-date immunization reference
13. Growth Charts (Free) – As the name implies, pediatric growth charts
14. Diagnosaurus ($1.99) – Free online. Differential diagnosis builder

◆◆ Study Aids for the Clinics ◆◆

There are many materials available for each clerkship. Below is a relatively exhaustive list of common choices, with a focus on what worked best for us. All of us learn differently, so you will see quite a bit of variation among recommendations. In general, choose your study materials early in a given rotation and stick with them! Don’t let other students make you doubt your choices. In our opinion, it is better to dive deeply into 1 or 2 learning materials than skim through 4. Perhaps most importantly, while you will want to spend a good deal of time reading and reviewing, we feel that practice questions are the best way to succeed on the clerkship exams.

Going from the classroom to the clerkships is a difficult transition for many. There is a lot of information to get through and less time to do it. It is natural to require some time to figure out which study methods will work best for you. A good approach early on is to use the same methods that you did for the pre-clerkship years, just adapted slightly for the increased volume of information. For example, if you were successful making flashcards before, stick with that plan when you start Mod 4. It will get easier as you get further into the year.

Specific recommendations for each rotation are provided in Part II. Here, we offer a general overview of the major series of review books/resources (with the caveat that almost everyone will use just a couple for any given rotation):

- USMLE World
  - This online question bank has become the central study tool for essentially every student on the clerkships.
We recommend doing as many questions as possible; however, you should be sure to use the questions you get wrong (and the incorrect answer choices in the ones you get right) as a jumping off point for your reading.

The question bank is expensive, but worth it to many people. Some people choose to buy yearlong subscriptions (you’ll want to get a subscription for the Step 2 CK bank). Some pairs or groups of people have shared subscriptions. You can reset all the questions ONCE during a one-year subscription.

The question bank can be downloaded and used on your smartphone or iPad. Good for efficient studying when you have down time.

- **OnlineMedEd.org**
  - Free 5-20 minute videos covering many topics relevant to all clerkships.

- **Emma Holliday Ramahi**
  - Per one of the most successful students in the school: “Emma Holliday Ramahi is a bomb-ass lady who created a series of high yield review lectures for the various shelf exams. They run about 2 hours and are accompanied by lecture slides. Her videos can be found at [http://som.uthscsa.edu/StudentAffairs/thirdyear.asp](http://som.uthscsa.edu/StudentAffairs/thirdyear.asp). Many consider this resource to be a good overview to watch before the shelf exam.”

- **First Aid**
  - This series generally provides a good overview, covering the basics of the important topics related to the clerkship.
  - Usually, however, these books are NOT detailed enough to be a sole study source.

- **Blueprints**
  - The books are fairly portable and can be read relatively quickly. For many of the clerkships, they are not complete enough (e.g. Surgery); however, in many cases they are useful as an overview early in the clerkship (OB, Neuro, Psych).
  - The practice tests are generally useful.
  - Blueprints makes a series of Q&A books as well as review books. These are a good source of practice questions if you run out.

- **NMS**
  - This series is written entirely in outline format. The books are dense and full of detailed information. They are generally much more complete than Blueprints.
  - If you like the outline format, these books are very complete and may be all you need to read.
  - Questions at the end of chapters are generally useful.

- **BRS (Board Review Series)**
  - This series is also written in outline format, but the books are usually less dense than NMS.
  - For some rotations, these books can act as your main review source (supplemented with questions, etc.), but some books in the series are not detailed enough to serve this purpose.

- **Case Files**
  - This book has cases and questions covering many of the important topics that you are expected to know. The cases are presented with explanations and answers following. Each case ends with a couple of review questions. The cases are
comprehensive, but the questions are sometimes a bit easier than shelf questions. Usually relatively fun to read!

- **PreTest**
  - These are question books that many of us found useful but don’t necessarily correspond in format with shelf questions. Questions are arranged via topic and explanations to questions are generally fairly complete, so doing the questions and analyzing the answers can help you learn the material.
  - Available as an app for your smartphone or iPad.

- **Kaplan Step 2 CK QBook**
  - This is a large question book geared towards the Step 2 CK exam, which happens to have questions that are nearly identical in format and difficulty to shelf exams. The book contains a couple of 50 question tests for each discipline and more for core rotations like medicine and surgery.

- **Appleton and Lange**
  - These are also question books. Each book has several complete practice tests, which are useful. Questions tend to be difficult, and several people noted that they could be damaging to confidence if done too close to the shelf.
  - This is a good book to read and helps you brush up on topics that you might not be comfortable with.

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**◆ A Note on Wellbeing ◆**

Clerkships can be an exhilarating time, as you practically apply the principles of patient care for the first time. They can also be stressful, depressing, anxiety-provoking, and otherwise difficult. If you find yourself experiencing mental, emotional, or physical challenges, know that you are not the only one, or even in the minority; most of us have been there. You will be more effective at caring for patients (and hence “doing well” in your development as a physician) if you are able to care for yourself. Remember to take care of your basic needs (food, sleep) to the best extent possible and also to keep alive the things (friendships, family relationships, exercise, hobbies, etc.) to the extent possible; though they may come under strain, they can be bent rather than broken.

If you are experiencing challenges that feel beyond your individual capacity to cope with, that’s also not abnormal. This is a difficult transition - a trial-by-fire at times, sometimes unfairly so. If you feel that you, your peers, patients, or others in the environment are being treated unfairly, you can and should inform the clerkship director, the medical school administration, or the institutional ombudsman; problematic happenings during rotations have often been addressed, leading to long-lasting change, through students speaking up. If you need more resources to ensure your wellbeing amidst this new mode of work, a variety of support channels are available; a detailed list can be found in Part III.

As always, keep talking to your peers, friends, family, trusted mentors, and anyone else who helps you process what is going on. And know that you are not alone.
Module 4 consists of four blocks, each of which combines different specialties that have some similarities in content and approach. The 12-week blocks include two or three separate clerkships and integrated didactic material. There are generally multiple locations at which the clerkships can be completed, and you will have an opportunity to select among these sites. When more than one site is offered, there is typically some variation in experience between them, and you will want to talk to other students to find out which site may best match your interests. Ultimately, however, there is central standardization by the course director in terms of requirements and grading. For most clerkships, regardless of your site, you will have a day (or partial day) of didactic lectures every week. Course specifics (such as weekly schedules, write-up requirements, lecture topics, and evaluation schemes have been excluded from the following discussion); these materials will be given to you on the first day of every rotation.

Grading for clerkships is based on evaluations written by your clinical team, your score on a standardized “shelf” exam, and other types of short write-ups and quizzes unique to each rotation. (or the most part the shelf exams last 2 hours and 45 minutes, with 15 minutes additional minutes allotted at the beginning for instructions. The only clerkships where this isn’t the case are those that don’t have an official NBME shelf exam, like emergency medicine, which is a 2-hour test.)

•◆ Internal Medicine/Family Medicine◆•

This 12-week block is broken down into 8 weeks of inpatient medicine and 4 weeks of family medicine. During inpatient medicine, you will have quite a bit of responsibility and will hopefully feel like you’re learning something from your patients each day. During the 4 outpatient weeks of family medicine, you may care for patients of all ages with a large variety of concerns (from children needing well-child care to pregnant patients to the elderly), depending on the scope of practice of your clinical site.
Sites

The 8 weeks of this clerkship are most often broken down into 4 weeks of “general” medicine, (HUP, VA, Pennsy, or Presby) and 4 weeks of sub-specialty medicine (primarily on services at HUP). However, it is possible that you will end up with only 2 weeks of sub-specialty medicine, or none at all. See the “Call” section below for more information on schedules and call.

Your Responsibilities

The goal of the medicine rotation is for you to become the primary point person for your patient’s general medical needs. It can take time to build up to this level of involvement and responsibility, but, if you carry out the activities described below with enthusiasm and integrity, you will eventually begin to feel as if you are capable of taking charge of your patients. As a part of your team, you will be responsible for carrying 1-4 patients. “Carrying” a patient implies that you “picked up” the patient during a call day (or occasionally picked up a patient who came in overnight and was seen by the night float team) and presented him/her on rounds the following day.

- **Picking up a patient:** Ideally, picking up a patient means that you are helping to admit that patient to the hospital: doing the initial intake, discussing admission orders/tests with your resident, and then presenting the H&P the next morning on rounds. Sometimes, however, timing is poor and instead you will be asked to pick up a patient who has already been admitted to your team by someone else. You will only be able to pick up a new patient on the days your team is on call; the frequency of this will vary depending on the service. You are often expected to pick up 1-2 patients per call day, depending on the admitting structure. Your JAR/SAR will tell you which patients you should help to admit. Depending on the preferences of your team, you will work with your intern and/or resident to admit patients. Before you go to see your patient, check in with your intern or and resident. Many interns prefer to go with you when you see the patient so that the patient doesn’t have to be seen twice, but others will tell you to go ahead by yourself. It is most courteous to ask first. Before seeing the patient, you should read through the chart, review ordered and current labs, radiological studies, and EKGs. Review EPIC and/or Carelign for past discharge summaries and/or labs. When you see the patient, take as complete a history as you can and do a complete physical exam. After you’ve seen the patient, write a complete admission note (HPI, past medical/surgical history, family history, social history, medications, allergies, review of systems, physical exam, labs/ studies, assessment and plan) and do your admission orders if your intern wants you to do them (you may want to start by watching your intern put them in and then progress to putting them in on your own after the first week or two). Methods of order writing will vary with your site, and your intern will show you how to enter orders.

- **Presenting your patient:** You will present your patient to your JAR/SAR during your call night, and he/she will help you develop your treatment plan. For practice, try to do this
presentation formally, as you will for your attending the following morning. The following day, you will present your new patients to your attending on rounds. This is a formal presentation that requires you to speak in front of your team – it is not meant to be intimidating, but it can be. The best way to handle this is to prepare WELL the night before. Think about it as your time to shine! A good history and physical will not go unnoticed by your attending, but the real place to shine is during the assessment and plan portion of your presentation. Try your best to advance your reasoning for the most likely diagnosis – it’s ok if you get it wrong! Talk to your intern/resident for help with this! It’s really ok to adopt the plan they give you. You shine by researching and learning about the plan once you go home. Many attendings also appreciate if once or twice on the rotation you bring in an article that may contribute to your patient’s care (note: this is not necessary for every patient); if you are paired with another medical student, it’s considerate to check with them before doing this so that you can both prepare something and no one looks bad. You should also reference any primary literature you found helpful in your research even if you don’t have time to present the article formally, as this shows that you are engaged with evidence-based medicine.

- **Daily patient care and note writing:** You will see your patients before rounds every day (“pre-rounding”). After pre-rounding and getting signout, write a note; you can use the progress note templates on EPIC and fill in overnight events, new physical exam findings, and a plan for the day in a SOAP note form. You should write the majority of your notes before rounds, but your assessment and plan may change after discussion with your attending, so leave some space for this. Once you sign your note, your attending will cosign it. Make sure your intern or resident reviews your progress note before you submit it. You are expected to complete your EPIC progress notes by 1:00 pm each day (unless your team is rounding late).

- **Patient contact:** Stop in to see your patients at least one additional time throughout the day, if not multiple times! This is your opportunity to begin to understand what it means to be a physician. The more involved with your patient (and their family, if they are around) you are, the better you will be able to help them with both their medical and social issues. Patients for the most part love having medical students around, and they feel better cared for when people from their medical team see them more frequently (and yes, that includes YOU!) Knowing your patient better will allow you to formulate better daily plans for them, will make you look better to your team, and will help provide better overall care for your patient.

- **Patient discharge:** Your team will decide when each patient is ready to be discharged, but you should start thinking about discharge relatively early on in the patient’s stay. Discharge planning is a great opportunity for you to be helpful as a medical student and think more broadly about your patient’s care! To be discharged, the patient will need good follow-up from a primary care provider and/or specialist. Patients may also need to follow-up with consultants seen in the hospital, and you will help arrange this. Decide with your resident what medicines the patient will go home on. However,
you are not allowed to do anything to the discharge document at all because physicians need to receive training to do so, and errors in the discharge document can result in adverse patient events. If a medical student creates or edits a discharge document, doing so is grounds for disciplinary action.

**Call Schedule**

The call schedules of the various services are constantly in flux, but you will be provided with accurate information at the start of your clerkship, and the clerkship directors are always available if you have questions. Generally speaking, you are expected to follow the schedule of your team, with the exception being that your resident and/or intern may stay overnight and you will not. Overnight call is no longer a required part of this rotation and you should NOT be staying overnight. Always look to the senior resident on your team for direction regarding when to show up and how late to stay.

If you are on a **sub-specialty service** (HUP: Solid Oncology, Cardiology, GI, or Heart Failure; PPMC: ICU; VA: ICU), your team will be on call every day or every other day, and your daily hours will generally be from 7am to 6pm, but you may stay later if you are admitting a patient. However, the latest you should be staying is 9:00 pm on any service, which is tolerated if it happens once during 2-week block, but if it happens more frequently, you should contact one of the clerkship directors so adjustments can be made. The decision to stay after 6 PM should be based on the number of patients you currently have on your census and the number of new patients you have admitted during your rotation (i.e. if the admissions have been few and far between, you may want to take one while you have the opportunity even if it means staying a little later.

If you are on the **Martin service** (general medicine service at HUP), your admissions will be distributed during days 1 through 4 of a 5-day call cycle. Since the call schedule is a little confusing, you will receive a thorough explanation of the schedule from either Dr. Bennett or Dr. Hamilton during orientation. Most admissions occur on day #1 (“medium” call day) where the team admits patients from 7am to 7pm. On days 2 and 3, you can pick up patients between 7 and 5pm. On day 4, you can pick up 2 nightfloat patients. On day 5, you do not pick up patients. All times listed above are rough estimates. You will receive information about your days off during orientation. You can usually leave earlier if work is complete, just make sure to check in with your team before leaving. Because the schedule is confusing and there are multiple admission days, you are expected to carry anywhere from 2 – 4 patients at a time (depending on what time of the year you are rotating on the medicine service). You do not have to admit a patient each day, but you should pick up patients regularly during the week.

If you are on a **non-Martin general medicine service** (PPMC ACE Unit and general services at the VA, PPMC, and PAH), your admissions will be on a 4-day cycle. Most admissions will be accepted on long- call days (day 1) when the team is in the hospital the longest. You can stay from 7 am to 9 pm, but you may be able to leave before 9 pm when you have admitted a patient or two and your work is done. Post-call days (day 2), you will leave by 3 pm (unless
there is mandatory teaching such as didactics, simulation, or physical exam rounds). No patients will be admitted on this day. On short-call days (day 3), you will generally stay from 7 am to 6 pm, and the team accepts some patients in the morning on this day. On “good days” (day 4), no patients are admitted and the team can leave when work is complete.

If you are on Cardiology at PPMC, your admissions will be on a 3-day cycle. Most admissions will be accepted on long-call days (day 1). Post-call days (day 2), you will leave by 5 PM, or sometimes earlier. Patients can also be admitted on short-call days (day 3).

**What to Wear**

Follow the lead of your intern and resident. On non-call days, most teams will wear "clinic clothes," typically a conservative skirt or dress, nice pants, blouse, and/or shirt and tie. Most teams will wear scrubs on call days and weekends, and often it will be permissible to ditch your white coat and wear a fleece or vest instead. You should wear your ID every day.

**What to Put in Your White Coat**

- Stethoscope
- Reflex Hammer
- Pen light
- More than one pen
- Pocket Medicine (very helpful for Medicine!)
- Some system of notes about your patients, either on the daily signout from EPIC/Carelign or your own notecard system
- SNACKS!

**Grading/Assignments**

The rotation is graded honors/high pass/pass/fail. The exam is an NBME shelf. Your final grade will be a combination of your shelf score (15%), evaluations from all of your residents and attendings (55% total), completion of required videos and cases (6%), the EKG quiz (6%), 2 patient write-ups you will submit to a small group preceptor (6%), completion of feedback cards (6%), and the standardized patient OSCE (6%). Your shelf exam grade is important, but your evaluations are very important. If you do an outstanding job with your clinical responsibilities, and this is reflected in your evaluations, you will most likely do well in the course. You will also have a series of assignments over the course of the rotation, including two formal, typed patient write-ups as above.

**Tips for Studying for the Shelf**

The biggest problem with the medicine shelf is finding time to study for it. Try to use your patients’ cases as learning examples for large blocks of information and use downtime in the hospital to study. Decide which resources you’re going to use to study (see later sections of this
guide), and then make a planned reading schedule starting the first week—it is really hard to cover all the material if you don’t stick to a schedule. You will need to study on most of your days off, so make sure to leave some time on those days to do work. Especially if it’s your first shelf, do as many practice questions as possible, as half the battle is learning to do the questions. (More on this in the later section, but most folks find the USMLEWorld questions to be the most representative of the shelf.) Students that do well on the shelf exam have done a lot of questions to supplement their reading throughout the clerkship. Time is an issue during the exam, so practice doing the questions quickly and efficiently (you will want to do timed sets of questions to get yourself ready).

**Study Aids**

One of the difficult parts of preparing for this exam is finding time to do it. Try to use your patients and the write-ups that you have to hand in to learn about large topic areas. Keep in mind that it is nearly impossible to read the entirety of any of the three general medicine books because they are very long and you simply won’t have enough time. Instead, we recommend that you prioritize UWorld questions and use the questions to direct your reading. Based on a 2017 MedEd Club survey, 100% of students recommended UWorld, 61% recommended Emma Holliday Ramahi, and 47% recommended Step Up to Medicine. Other resources were recommended by less than 15% of students.

- **QBank**: We highly recommend the online question bank UWorld for Step 2 CK when studying for the medicine shelf. The questions are very similar to the shelf style, you can time yourself, and the explanations are very thorough. Worth the money!! Especially if you do your medicine shelf early in the year, doing your best to get through as many of these as possible will really pay off. Each question has fantastic explanations that will teach you a lot of high-yield information.
  
  - Many successful students use this Qbank as their only resource when studying for the shelf. This is to say that it has all of the information you will need to do well on the shelf. However, realize that students who choose this route tend to take their time with the questions, reading each explanation thoroughly and usually taking notes on the high yield topics.

- **Review Book**: Very helpful for shelf exam review, and almost everyone refers to one of the ones listed below. One of these will serve well as a supplement to the Qbank.
  
  - **Step up to Medicine**: By far the most popular review book for the medicine clerkship. All the detail you need, and makes a great review for Step 2 as well. Most Penn students use Step Up and a question bank as their main study guides.
  
  - **NMS**: Dense, but detailed. Questions are good for practice.
  
  - **Blueprints**: This book is a good overview, but is not at all detailed enough for the shelf exam.
  
  - **First Aid for the Medicine Clerkship**: This covers most topics that you will need to do well on the shelf.
• **Questions:** If you need more questions than the 1000+ offered in UWorld (**most do not!**), these question books have been used by students in the past:
  - *MKSAP* for Students: There are several editions of these books, all with questions that are similar to those on the shelf in terms of length and content, although they are often more detailed and specific than many shelf questions.
  - *Kaplan QBook:* This book has multiple sample exams with questions that reflect the shelf exam very well.
  - *PreTest:* A great supplement to MKSAP.

• **Other resources:**
  - *Pocket Medicine* is commonly carried in the white coat. You can skim topics for the main points just before you know you’re going to be asked a question, and there is space for your own notes. However, many students forsake this resource and do well, preferring instead to use UpToDate on their phone as a reference, so no need to keep it around if it doesn’t mesh with your style.
  - *Pharmacopia* or *EPocrates* (PDA) for drug names, dosing, side effects.

### Tips for Succeeding

• **Attitude:** Be enthusiastic and always helpful. Smile, be nice to everyone (patients, clerks, nurses, consulting teams, etc.), and have fun. This is one of the more demanding clerkships, but hopefully you will find the opportunities for learning and patient interaction to be some of the more satisfying. It can be difficult to spend long hours in the hospital, but do your best to remain positive and a team player throughout the clerkship. Often, your work ethic, team spirit, and (above all) dedication to patient care are what stand out to your team more than your clinical acumen or fund of knowledge.

• **Thoroughness:** Know your patients well. You will not know everything about their medical issues, but if you know the answers to questions such as where the patient lives, his/her family history, his/her baseline hemoglobin, etc., your team will know that you care and that you’re on top of your patients’ care.

• **Caring:** For that matter, get to know your patients well. You have more time than anyone else on the team, and your patients are stuck in the hospital and could really use some friendly med student attention. If you have a good relationship with your patients, you will enjoy the rotation more, and you will provide an important service to the team.

• **Questions:** Follow up on questions. If you are asked a question that you don’t know the answer to, admit that you don’t know it and be sure to read up on it for next time – some attendings will ask the same question the next day to see if you looked it up!

• **Feedback:** Get frequent feedback on your performance from your residents and attendings.

• **Peer Collaboration:** If there is another med student on your team, treat him or her as a colleague. This person’s smiling face will be very nice to see during attending rounds each day. We all like to think that we are simply outstanding on our own, but the truth is that an attending is much more likely to remember how great the “med students” on a rotation were than to recall that you knew an answer that your colleague
didn’t. Making each other look good will definitely be good for both of you in the end!

- **Topic Presentations:** If you haven’t been asked to give a topic presentation by the end of your second week, mention it to your resident or attending to see if there is an appropriate time for you to talk to the team for 5-10 minutes. This provides a time for you to show off your knowledge. Topic presentations should not include PowerPoint unless explicitly requested.

- **Admin Requirements:** Keep up with your patient logs and evaluation cards. Otherwise, you will be scrambling at the end and may get overwhelmed and/or look disorganized.

- **E-mails:** Check your e-mail frequently, as room assignments or times for teaching sessions often change, and you want to make sure not to miss any of these.

### What Not to Do

- **Checking Out:** Never act uninterested to attendings or residents.

- **Concealing:** Never keep information from your team that you plan to mention on rounds. You should always report first to your intern/JAR/SAR, and then to your attending. Outside of rounds, you will probably not interact with your attending much, but your resident will. Your resident needs to have access to all information so that patients are well cared for.

- **Undermining:** Never go behind your intern’s back to give a patient information, examine a patient, etc. Be a team player and check in with him or her first. If you feel that you need or want more autonomy, just ask for it.

- **Sniping:** Never, never, never give a presentation on another medical student’s topic/patient. Your team will notice, and they won’t like you if you do this. Along the same lines, don’t jump in and answer a question posed to someone else, even if you did just read about it and know the answer by heart.

- **Disappearing:** Don’t disappear. It’s fine to study in a quiet area if you have free time, but make sure your team knows where you are and that your phone is on. Otherwise, you may miss out on patient care opportunities and come across as not caring.

### { Family Medicine }

#### Rotation Structure

During your month of family medicine, you will be at a site with anywhere from 0-4 other medical students. Although some of the physicians with whom you work will have an inpatient service, you will be working mainly in the outpatient setting. You will be seeing patients presenting for routine check-ups and screening, well-child visits, ob/gyn concerns, chronic disease visits, sick visits, injuries, psychiatric concerns, and everything else you can think of. Depending on your site, you may have formal teaching sessions each day or on specific days during the week.
Responsibilities

Seeing Patients: In the beginning of your rotation, you may shadow a resident or an attending; however, at most sites you will quickly start to see patients on your own. You will be given their chief complaint and should focus your history on this complaint; however, remember that family medicine is all about preventive care, and so you should not forget the rest of your history either and should do a pertinent physical exam. The exception to this is an “acute” clinic that some practices have. In these cases, your resident or attending may not want to hear an entire presentation.

Presenting: After you see your patient, you will be expected to present him or her to your attending, resident, or both. This type of presentation is different from those on inpatient medicine in that it is done immediately after you see the patient. You are thus not expected to know every answer about the patient’s needs or to have expertise on their complaints. You should try to get comfortable presenting, know everything you can about your patient (especially the interim history – what has happened since the last time the patient saw the PCP), and try to find time before presenting to organize your thoughts regarding possible interventions (though sometimes you will have only a minute or two, if that). Keep it brief and focused, and use the opportunity to practice presenting without detailed notes or planning.

It can, at first, be overwhelming to have to do a full presentation with little preparation. Do your best, and don’t forget the principles that hold for all good presentations: be as focused as possible during the HPI, present the exam fluidly, and try to put your money down during the plan. Even if the visit is just a checkup and the patient has no acute complaints, your plan can be along the lines of “continue all current medications, counseled on pertinent issues, refer for colonoscopy screening, and follow up again in 3-6 months”, etc. This is better than, “everything is fine, no active issues.” Ultimately, this is an opportunity for you to practice your clinical reasoning and communication.

Charting: Depending on the site, you may or may not be allowed to write in the chart. You should ask about this on your first day. If you are told not to, you may want to take notes on an extra sheet while you interview the patient so that you can refer to these when you present.

Schedule

On your first day, you should ask what time to report in the morning. You will usually be done seeing your patients between 4 and 6 pm, and you will have no on-call or weekend responsibilities. You will have required didactics on campus every Friday (usually all day), and you will lose points if you miss any, except in the case of extenuating circumstances.

What to Wear

"Clinic clothes" are typically a conservative skirt or dress, nice pants, blouse, and/or shirt and tie. Follow the lead of your intern and resident. Bring your white coat on the first day and ask
your supervising attending about whether to wear it.

What to Put in Your White Coat

- Stethoscope
- Pocket Medicine
- More than one pen
- Pen light
- Reflex hammer
- Pregnancy wheel (if your site sees OB patients) and Denver Development Milestones chart (if your site sees kids)
- Clerkship forms like feedback cards, OASIS log, etc.

Grading

The breakdown of grading is as follows: 50% of the grade is from the site evaluations, 20% from the exam, and 15% from the OSCE (Objective Structured Clinical Exam, a hands-on exam using standardized patients that will include both internal medicine and family medicine cases), 10% from the SOAP note assignment, and 5% Professionalism. The OSCE is a pass/fail exam; however, PSOM does calculate a numeric grade for each of the 4 cases that you’ll see, and the family medicine clerkship uses the average of the numeric grades from the 2 Family Medicine cases to give a percentage grade from this 15%.

The exam that you will take at the end of the block is not a shelf exam, but is a multiple choice exam which comes from the online cases that you are expected to work through during the clerkship. There is also a standardized patient portion of the exam where you will demonstrate a joint exam (usually the shoulder exam).

Most successful students take their time going through the online MedU cases, including reading them thoroughly and taking notes from the questions and PDFs that summarize the case. These are your best source of information from which to study. Be advised – do not blow off this exam! It tends to be a detailed-oriented exam and should be taken seriously. Don’t make the assumption that preparing for the medicine shelf will prepare you for the family medicine exam (people have failed this way in the past). If you have family medicine before you have pediatrics or ob/gyn, make sure to review these MedU cases in depth for the exam.

Study Aids

There is no longer a textbook for Family Medicine. You are expected to do the online FMCases as practice for the exam, and review your notes from the lectures. This is both necessary and sufficient!

Tips for Succeeding
• **Attitude:** Be enthusiastic and friendly. As is true in every rotation, these qualities are invaluable. Be courteous and respectful to EVERYONE in the office.

• **Understanding Efficiency:** Remember that you are working in a very busy office and that the faculty has invited you to learn there. On occasion, things may need to move quickly and you may not be given the opportunity to see your patient on your own or to give a full presentation. Just go with it and shadow your attending if necessary. If the schedule is backed up, offer to help room patients, assist patients in getting labs done, or help with other “patient flow” issues to keep things moving.

• **Tailoring:** If you are working with different preceptors, take a minute or two prior to the start of the clinic to ask their preferences about the following: amount of time spent in the room with the patient, whether or not to write a complete note, and whether the preceptor wants you to find them to present to them after you’ve seen the patient or if you should wait until they come get you.

• **Openness to Feedback:** Feedback will come in many different forms on this rotation: a preceptor telling you what she agrees and disagrees with after you present, a preceptor doing a physical exam and pointing to the location where she hears crackles on the lung exam so you can place your stethoscope there to listen, or a preceptor guiding your hand during a procedure.

• **References:** If you have a smartphone/tablet, put a couple of valuable programs on it before you start: Epocrates, ePSS (super helpful for preventive medicine and screening schedules), an antibiotic guide of some kind, and a guide to pediatric vaccination schedules. If you don’t have one (or don’t like using it), keep a medication guide and a pediatric vaccination schedule in your pocket. Being able to look things up quickly will make you a superstar. That said, if you use your mobile device to look something up in front of your preceptor and/or patient, make sure you explain this so that it doesn’t looking like you’re just checking out.

• **Studying Wisely:** Take advantage of the extra time to study for the medicine shelf, but don’t neglect studying for the family medicine exam.

**What NOT to Do**

• **Poor Behavior:** As usual, never backstab anyone, never act bored, never make jokes or act disrespectfully about a patient.

• **Leaving Early:** Never ask to leave before you and/or your attending have seen every patient on the schedule. If you have a valid reason to leave early, just mention it early in the day or week – for the most part, attendings are very understanding.

• **Tardiness:** Don’t be late for office hours. If you are at a distant site and get caught up in traffic they will understand once, but be sure to leave plenty of time to get to your site.
Pediatrics/Obstetrics and Gynecology

The 12-week block is divided equally between Ob/Gyn and Peds. Each individual discipline will have its own teaching curriculum with didactic sessions and problem-based learning.

{ Pediatrics }

Pediatrics is a 6-week course in which you will learn how to take care of common childhood illnesses. You will spend 3 weeks on one of the inpatient general pediatrics services at CHOP and 3 weeks in an outpatient pediatrics practice. This is a fun, though busy, rotation that most people enjoy, even if they are not planning a career in pediatrics.

Outpatient

On your 3 weeks of outpatient, you’ll be in clinic Monday to Thursday. Fridays are for didactics at CHOP. Your experience will vary depending on your site. (Beginning in January 2018, students will primarily be sent to CHOP primary care sites, with the possibility of a few other nearby private or CHOP Care Network sites.) At most practices you’ll have the opportunity to see both routine check-ups and sick visits, and you usually see 2-5 patients per half day. You will perform histories and physical exams and present your assessment and plan to the attending physician. You may be expected to write progress notes for each visit, depending on the site. You will also likely have the opportunity to assist with immunizations, hearing screens, visual testing, and other routine health checks. Some students may have the opportunity to spend a week in the Well Baby Nursery (depending on site). Make sure to try to incorporate yourself into the team and be friendly to everyone in the practice, including the receptionists, clerks, and nurses. Your day-to-day responsibilities during this part of the rotation are similar to those for Family Medicine, so take a look at the “Responsibilities” section for Family Med above.

Inpatient

The Team

You will be a member of one of the general floor services. Each service may cover a range of general pediatrics and subspecialty patients. The current floors for the clerkship students are: BLUE team (general pediatrics/complex care BLUE on 5 East), RED team (general pediatrics/hematology on 5West A, 8 South (general pediatrics/pulmonary), 9 South (general pediatrics/neurology), 4 West CSH (adolescent), and 7 West MHT (general pediatrics on a hospitalist only service).

Usually, you will have two different attendings (a generalist and a specialist) who will round separately in the morning. You will work most closely with the interns who, being tired, will
definitely appreciate any help you can provide (e.g., tracking down lab values, calling primary care doctors, etc.); unlike on other rotations, the Pediatrics interns will also have a role in your evaluation. In addition to your senior residents, you may encounter the teaching senior, a third-year resident whose entire role is to teach the med students on the rotation; he/she will lead special weekly didactic sessions during the inpatient rotation and grade your write-ups.

The only exception to the above description of the team is the MHT/7W team. This is the Medical Hospitalist Team, an attending-only service that covers General Pediatrics Patients. It tends to be busy and has high turnover, so there are lots of opportunities to see new admissions. As there are no residents, the attendings do a lot of teaching for the medical students.

**Chain of command**

Depending on the time of year you rotate in Pediatrics, it may be expected that you come up with your own assessment and plan before seeking guidance from your interns and residents. That said, if any issues arise with your patients, go to your intern first. If you find out something new about your patient, make sure to share it with the intern. Even though it is “your patient”, the intern is ultimately responsible, so never do anything behind his/her back. If the intern deems it necessary, he/she will go to the resident or attending to ask for help. As a 200 student, you will rarely call the attending directly with patient issues, but during rounds you should feel free to discuss your ideas with the attending. As most pediatrics floors include both a general pediatrics service and a specialty service, you will likely have a two attendings for each service at any time. These attendings will change every 1-2 weeks.

**Schedule**

- **6:30:** Interns get sign-out from the on-call intern at 6:30 am. You should be there so you know what happened with your patients overnight.

- **6:30-7:30:** Pre-round on all of your patients (including patients you admitted the night before if you were on call). Usually, this means looking on EPIC (the electronic medical record) to check each patient’s vital signs from overnight. This also means talking with the nurses and the on-call resident about any overnight events. Then, see all of your patients and perform a focused physical exam. Returning to the electronic medical record, continue to look up any new lab results and radiology studies. Check for notes from any consultations you may have called. Then, write your SOAP notes for each of your patients in the EPIC system. Some teams prefer that you print out your SOAP notes to present before rounds begin. Some will allow you to use the computer to present on rounds.

- **7:30-8:00:** Go to morning report (optional). Morning report is primarily geared towards senior residents, but you are invited to attend if you wish and have completed all your patient-related tasks.
**8:00-11:00**: Round with the team. You will present updates on all of your patients. If you admitted a new patient the day/night before, you will give a detailed presentation including HPI, PMH, birth history, developmental history, pertinent ROS, physical exam, and diagnostic studies. The most important part of your presentation is the assessment and plan where you will summarize the patient and give your differential diagnosis and plan for further management (you will get much better at this as the year progresses, but make sure that you double check the A/P with your intern or resident before attending rounds). When time allows, your attending or resident will often give a lecture on a pertinent topic or bring in articles for review.

**11-12**: Use this time to call any consults (check with your intern before calling consults), order tests, and follow up on anything you discussed during rounds.

**12-1**: Noon conference with all of the interns and med students.

**1-4**: Work on the floor or didactic sessions.

**4-5**: Interns sign out to intern on call. You should be present if possible, although if the day is slow, often interns and residents will send you home early. Make sure to check in with the senior resident before you leave for the day, even if the intern dismisses you home.

**What to wear**

Follow the lead of your intern and resident. On non-call days, most teams will wear "clinic clothes," typically a conservative skirt or dress, nice pants, blouse, and/or shirt and tie. Most teams will wear scrubs on call days and weekends. You should wear your ID every day. Most CHOP residents/attendings do not wear white coats or ties.

**What to carry with you**

- Stethoscope
- Pocket Medicine (less applicable to Peds than Medicine, but you may still use it)
- Denver Development Milestone chart (especially helpful for outpatient)
- A table listing normal vitals for each age group—it can be hard to keep track of what’s normal for kids! These are provided for you in orientation or can be found in Harriet Lane.
- Otoscope and tips (Otoscopes are often hard to come by on the floor, so if you have one, you might consider bringing it; if you don’t have one, don’t worry about buying one - most people don’t have one)
- Pens (always have an extra on hand!)
- Notecards/paper (you should keep all of your patients’ lab values close at hand)
- Penlight
- Optional: Gauze, tongue depressors, bandaids, **stickers (a huge hit!)**
Call

You will take call 4-5 times over the course of your rotation with two calls being on Saturday and Sunday. During weekday call, you will pick up a new admission or two and leave the hospital by 10 PM. You can leave by 3 PM on Saturday or Sunday after an admission. However, if you are there on a slow night, your resident may send you home early, and you can instead pick up a new patient on a non-call day during the day. We recommend not asking to leave if it’s a slow night and instead waiting for the senior resident to send you home.

How to “Pick Up” Patients

On pediatrics, all interns admit new patients on all days (on other rotations, like medicine, interns only admit when they are on call). So it is possible that you could “pick up” a new patient any day. However, usually you will pick up new patients when you take call. Generally you will carry around 2 patients on peds (and you may start with 1 for the first few days if you take peds early in the year). That way you can have an in-depth knowledge of all of your patients. Your residents will usually make sure you have enough patients to follow. However, if you don’t feel like you have enough patients, ask the senior residents if there are other interesting patients you can follow—residents like students who take initiative and don’t wait for work to be given to them. Whenever possible, it’s a good idea to make sure to pick up a mix of general peds and specialty patients, with an emphasis on the general peds patients. This way, you will get exposure to more of the “bread-and-butter” peds cases. It is ok to pick up patients that are admitted overnight (many of the admissions occur then).

Assignments

You will have to write 1 detailed history and physical write-up during your inpatient rotation, which is 5% of your grade. There is an option to complete a second write-up to improve your grade. Students also have to give case presentations to their classmates (5%), and complete a patient safety assignment (5%). Students will also complete an EBM assignment and an assigned Aquifer Pediatrics case during their outpatient rotation (5%). Students will complete a patient safety writing assignment and also participate in simulation sessions focusing on pediatric emergencies.

Didactics

You will have Friday didactic sessions on both inpatient and outpatient peds that start around 10:30. Inpatient students are expected to attend rounds first. On inpatient, you will also have didactic sessions during the week.
Grading

The rotation is graded honors/high pass/pass/fail. The assessment is a shelf exam and Observed Structured Clinical Examination (OSCE). Your final grade will be a combination of your shelf score (15%), OSCE (5%), evaluations from your inpatient (35%) and outpatient (30%) rotations, your inpatient write-up (5%), outpatient assignments (5%), and professionalism/participation (5%).

Tips for the Pediatric Presentation

- **Birth history and developmental history**: Include these, especially for younger children.
- **Feeding and voiding**: Don’t forget these; pediatricians are more interested in diet and stooling than the average physician.
- **Weight**: Everything is weight-based in peds.
- **Vaccines**: Make sure to keep a vaccine schedule handy so that you know what vaccines your patient should have had, particularly in the outpatient setting.
- **Input/Output**: You usually describe a child’s I’s and O’s based on their weight (mL/kg/day IN and mL/kg/hour OUT).
- **SHADSSS/HEADSS assessment**: Critical for adolescents.

Tips for Studying for the Shelf

The peds shelf is one of the most challenging shelf exams as the rotation is only 6 weeks, so you are required to learn an extraordinary amount of information in a very short period of time. It is imperative to begin studying for this shelf early (especially if this is your first shelf) and to do a lot of practice questions. Like other standardized tests you’ve taken (like the MCAT), half the battle is just learning how to answer the questions. There are a lot of tricks to answering the questions that you will see repeated on every shelf. The shelf exams usually test detailed knowledge, especially in peds, so it is usually not enough to only know general principles or basics. The majority of your energy should be focused on the rotation itself as your course evaluations from both inpatient and outpatient make up a substantial portion of your peds grade. However, do not neglect shelf studying, especially on outpatient peds when you will have slightly more spare time. This is not an easy exam.

Study Aids

This shelf exam is sometimes underestimated but it is a hard test. You also have only 6 weeks to study for it, as opposed to the 12 you have for medicine and surgery. Again, focus on UWorld and supplement with additional resources. Based on a 2017 MedEd Club survey, 97% of students recommended UWorld, 53% recommended BRS, 51% recommended Emma Holliday Ramahi, and 18% recommended PreTest. Other resources were recommended by less than 15% of students.
• **Board Review Series (BRS)** is the book that has been traditionally used for this course. It is a very complete review book, however, the 2004 version is out of date. More recently, “Step Up to Pediatrics”, edited by Dr. Ronan (one of the course directors) has been recommended.

• **Other Review Books:**
  - **First Aid for the Pediatrics Clerkship:** This is an excellent outline of everything you need to know for the shelf, but it is not complete enough to be a sole study source. If you decide to use First Aid, make sure to supplement with more comprehensive sources.
  - **Blueprints:** Although some people found this book to be all that they needed for the shelf exam, most felt that it was too basic. It may be useful in addition to another book, but in general, BRS is a much more helpful book.

• **Question Sources:** You can definitely get away with just UWorld, but one additional book may also be helpful:
  - **USMLEWorld:** Most popular.
  - **PreTest:** Highly recommended (most people use).
  - **Case Files:** Highly recommended (most people use).
  - **ExamGuru:** Some found this helpful.

**Tips for Succeeding**

• **Attitude:** ENTHUSIASM and FRIENDLINESS are key! Help out your interns in any way you can. Always ask if there is anything else you can do before you leave for the day. As always, it’s better to be specific and say, “I can do X job” rather than asking, “is there anything else I can do?”

• **Thoroughness:** Know what is going on with all of your patients at all times. Read about your patients’ issues. (Good resources are UpToDate and Dynamed, as well as your pediatrics books.)

• **Focus on Basics:** CHOP is one of the premiere children’s hospitals in the world. You will see things on the ward that only 10 or so people have ever been diagnosed with. DON’T get bogged down with these details or making the diagnosis – focusing on ‘bread and butter’ peds will serve you better for the shelf.

• **Efficiency:** When presenting your patients on rounds, stick to the pertinent information. You don’t need to give a detailed neurologic exam every day you present a patient who is admitted for asthma.

• **Preparation:** Be prepared for rounds. It is the one time in the day when the attending will be paying attention solely to you. Prepare your assessments and plans before you get there. Feel free to consult your intern before rounds and ask for suggestions after you’ve come up with your own backbone for an assessment and plan. On peds more than other rotations, attendings appreciate it when students memorize parts of the presentation. This may be challenging if it is an early rotation, but start by memorizing the one-liner, then work your way up to the whole HPI and the assessment statement.

• **Parental Contact:** Make sure to talk with parents as well as the children.
• **Feedback:** Ask for feedback halfway through the rotation. It is often intimidating to approach your residents and attendings to get constructive criticism, but it is an important part of being a successful student. Most pediatricians are really nice, so it makes them easier to approach. However, they may shy away from giving criticism to your face. To avoid this, asking specific questions are key! Some examples: Was my assessment accurate, how could I make the presentation more focused, was there unnecessary information that I included, etc. Some people think they have done a great job and then are surprised when they read their evaluations.

• **Humility:** Remember that you are a student, and that you are there to learn. You are not expected to know the answer to every question, so it is ok to say “I don’t know” if you really have no idea. But you should go home that night and learn about the issue so if you are ever asked again, you will know the answer.

• **Topic Presentation:** Once or twice during the rotation, bring in an article or prepare a brief presentation on a pertinent topic. Always inform your fellow students the day before about what you will be talking about so they can read up on the subject. An attending (or sometimes a resident) may assign or suggest topics and/or days for you to present, but sometimes you can pick your own topics/days. Ask a resident if you’re not sure what to do about the presentation by the middle of the rotation.

### Common Peds Abbreviations

(Credit: [https://tinyurl.com/y6v7xrmu](https://tinyurl.com/y6v7xrmu))

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>AA</td>
<td>Alcoholics Anonymous</td>
</tr>
<tr>
<td>AA</td>
<td>aplastic anemia</td>
</tr>
<tr>
<td>AAP</td>
<td>American Academy of Pediatrics</td>
</tr>
<tr>
<td>AACAP</td>
<td>American Academy of Child and Adolescent Psychiatry</td>
</tr>
<tr>
<td>ABG</td>
<td>arterial blood gas</td>
</tr>
<tr>
<td>ABR</td>
<td>auditory brainstem response</td>
</tr>
<tr>
<td>ACIP</td>
<td>Advisory Committee on Immunization Practices</td>
</tr>
<tr>
<td>ADHD</td>
<td>attention-deficit/hyperactivity disorder</td>
</tr>
<tr>
<td>AGA</td>
<td>appropriate for gestational age</td>
</tr>
<tr>
<td>AIDS</td>
<td>acquired immunodeficiency syndrome</td>
</tr>
<tr>
<td>ALD</td>
<td>adrenoleukodystrophy</td>
</tr>
<tr>
<td>ALL</td>
<td>acute lymphoblastic leukemia</td>
</tr>
<tr>
<td>ALT</td>
<td>alanine aminotransferase</td>
</tr>
<tr>
<td>AMN</td>
<td>adrenomyeloneuropathy</td>
</tr>
<tr>
<td>ANLL</td>
<td>acute nonlymphocytic leukemia</td>
</tr>
<tr>
<td>AOM</td>
<td>acute otitis media</td>
</tr>
<tr>
<td>APLS</td>
<td>advanced pediatric life support</td>
</tr>
<tr>
<td>ARA</td>
<td>arachidonic acid</td>
</tr>
<tr>
<td>ARDS</td>
<td>acute respiratory distress syndrome</td>
</tr>
<tr>
<td>ARF</td>
<td>acute rheumatic fever</td>
</tr>
<tr>
<td>ASD</td>
<td>autism spectrum disorder</td>
</tr>
<tr>
<td>ASO</td>
<td>antistreptolysin O</td>
</tr>
<tr>
<td>AST</td>
<td>aspartate aminotransferase</td>
</tr>
<tr>
<td>BCG</td>
<td>bacillus Camille-Guerin</td>
</tr>
<tr>
<td>BiPAP</td>
<td>bilevel positive airway pressure</td>
</tr>
<tr>
<td>BMI</td>
<td>body mass index</td>
</tr>
<tr>
<td>BP</td>
<td>blood pressure</td>
</tr>
<tr>
<td>BPA</td>
<td>Bisphenol A</td>
</tr>
<tr>
<td>BPD</td>
<td>bronchopulmonary dysplasia</td>
</tr>
<tr>
<td>BSA</td>
<td>body surface area</td>
</tr>
<tr>
<td>BUN</td>
<td>blood urea nitrogen</td>
</tr>
<tr>
<td>CAM</td>
<td>complementary and alternative medicine</td>
</tr>
<tr>
<td>CBC</td>
<td>complete blood count</td>
</tr>
<tr>
<td>CBT</td>
<td>cognitive behavioral therapy</td>
</tr>
<tr>
<td>CD</td>
<td>Crohn disease</td>
</tr>
<tr>
<td>CD4</td>
<td>a glycoprotein on the surface of T helper cells</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
</tr>
<tr>
<td>CDP</td>
<td>constitutional delayed puberty</td>
</tr>
<tr>
<td>CF</td>
<td>cystic fibrosis</td>
</tr>
<tr>
<td>CHL</td>
<td>conductive hearing loss</td>
</tr>
<tr>
<td>CLD</td>
<td>chronic lung disease</td>
</tr>
<tr>
<td>CLL</td>
<td>chronic lymphocytic leukemia</td>
</tr>
<tr>
<td>CML</td>
<td>chronic myelogenous leukemia</td>
</tr>
<tr>
<td>CNS</td>
<td>central nervous system</td>
</tr>
<tr>
<td>CO</td>
<td>cardiac output</td>
</tr>
<tr>
<td>CP</td>
<td>cerebral palsy</td>
</tr>
<tr>
<td>CPAP</td>
<td>continuous positive airway pressure</td>
</tr>
<tr>
<td>CPK</td>
<td>creatine phosphokinase</td>
</tr>
<tr>
<td>CPSC</td>
<td>Consumer Product Safety Commission</td>
</tr>
<tr>
<td>CSF</td>
<td>cerebrospinal fluid</td>
</tr>
</tbody>
</table>
OB/Gyn is a 6-week rotation where you will have experiences in delivering babies, working in obstetric and gynecology clinics, and assisting in gynecologic surgeries.

{ Obstetrics & Gynecology }

The Team
- **Interns**: First-year residents who are responsible for the majority of the daily work on all of the inpatients.
- **Residents**: Generally have a more supervisory role and spend more time in the operating room and on advanced rotations. Third-years and chiefs (fourth-year residents) generally take the most active teaching roles. Do not expect second-years to teach as much—they are the busiest of all.
- **Fellows**: Depending on your site, you may have fellows in Gyn Oncology, Reproductive Endocrine and Infertility, Family Planning, Urogyn, and Maternal-Fetal Medicine (high risk OB).
- **Attendings**: At some locations you will work with private attendings, who are doctors in the community who admit patients at that hospital. Otherwise, your attendings will be university teaching faculty.

**Sites**

For this rotation, students will be placed at HUP or Pennsylvania Hospital.

**Schedule**

The schedule varies greatly depending on your site and your rotation. In general, you will spend two weeks on labor and delivery (one week of days and one week of nights), two weeks on a surgical service, one week with a subspecialty of your choice, and one week in outpatient clinic.

In 2018, didactics for this rotation were held Friday afternoons, as well as during orientation and on the final Thursday of the rotation. Each week the students meet as a group with the site directors at each site (Dr. Pamela Levin at PAH, Dr. Holly Cummings and Dr. DaCarla Albright at HUP). Each student will be asked to give a presentation during the weekly meetings, with topics to be discussed at the start of the rotation. There are two written assignments: an H&P and an EBM topic; each assignment has two parts.

**Breakdown of the rotation**

At most sites, you will spend approximately 2 weeks on each on the following rotations:

- **Labor and Delivery**: This is the most exciting part of OB for many students. During this rotation you will be expected to assist in vaginal deliveries as well as C-sections. You will care for laboring patients by doing frequent cervical checks (or, more likely, accompanying a resident who will do the checks), reviewing maternal vital signs and fetal heart tracings, and writing progress notes. You will assist the attending and/or resident in the actual delivery (you will often be in charge of delivering the placenta, but will hopefully get to deliver some babies as well) and then might write the
delivery note. Maxwell’s has a good outline of a delivery note. To prepare for your first day, read about normal labor—know the stages, how long is normal for each stage, etc. Some other high yield topics: pre-term labor, preeclampsia/HELLP syndrome, placental abnormalities (abruption, previa, etc.), signs of placental separation, post-partum hemorrhage, grading of vaginal/perineal tears.

- Clinic/Subspecialty: You will care for pregnant patients who are coming in for routine checks as well as gynecology patients who are coming in for yearly pelvic exams or acute visits. Generally you will see the patient first, perform a history and general physical exam, and then present your assessment and plan to the resident or attending. You should not do the pelvic exam without supervision by a resident, nurse, or attending. In some clinics, you may spend more time shadowing attendings or residents. High yield topics: size of uterus at various gestational ages, grading of gestational diabetes, mammogram guidelines, Pap smear guidelines/pathology grading, diagnosis of PID, diagnosis of preeclampsia, amenorrhea, etc.

- Gyn Surgery: This rotation is similar to the general surgery rotation. You will assist in surgeries like hysterectomies and tubal ligations, as well as oncology cases (at some sites, there is the possibility of being assigned to the Gyn Onc service, in which case you will only see oncology cases). Your chief resident will tell you which cases you should “scrub in” on. Like on general surgery, you will be an extra pair of hands in the OR. You may be asked to prep the patient or assist the attending and resident in any way they need. If this is your first rotation and you have not done surgery yet, be sure to let your resident know. He/she will teach you how to scrub in, prep the patient, staple, and tie sutures. Sterile technique and scrubbing will also be reviewed during orientation on the first day of the course, and you will have a chance to participate in simulation sessions for Foley insertion and suturing during the first week of the rotation. Try to read about each patient’s problems and planned surgery prior to going to the OR. At some sites, you may also pre-round on pre-op or post-op patients and participate in rounds. High yield topics: pelvic anatomy (make sure you know the vessels and the ligaments they run in), complications of various surgeries, cancer staging/treatments/etc.

What to Wear

Scrubs on L+D and surgery. For clinic, standard business casual with closed-toed shoes is appropriate.

Additional Assignments

Each student will present on a relevant or interesting topic of his/her choice at one of the weekly clerkship meetings. You will also be asked to submit an H&P and Evidence Based
Medicine (EBM) report online. In addition, you will be asked to comment on 2 other students’ H&Ps as well as 2 other students’ EBM exercises. These assignments are due the third week (H&P) and fifth week (EBM) of the rotation, respectively.

**Grading**

The rotation is graded honors/high pass/pass/fail. The exam is the NBME shelf. The minimum score to pass is set as the 10% national score; in 2018, this was a 67. In 2018, the final grade consisted of a combination of your shelf score (20%), evaluations of your clinical performance (60%), assignments (10%), and citizenship (10%). There is currently no minimum shelf score required to receive honors.

**Tips for Studying for the Shelf**

General tips for success on the shelf are to start reading early in the rotation and do a lot of practice questions. You will have access to an online tool called UWISE, which is a bank of practice questions with immediate feedback about correct answers as well as practice tests. You should try to answer as many of these UWISE questions as you can.

**Study Aids**

Based on a 2017 MedEd Club survey, 95% of students recommended UWorld, 67% recommended UWise, and 39% recommended Blueprints. Other resources were recommended by less than 15% of students.

- **Books:** Most of us recommended using one book for an overview in this course. Consider choosing one of the following:
  - **Blueprints:** The Ob/Gyn part of this series is more detailed than most of the other Blueprints books are. The majority of people felt that this was sufficient for the shelf exam, with the addition of a question source.
  - **First Aid for the OB/GYN Clerkship:** Once again, an excellent outline of all the topics you need to know for the shelf, but not comprehensive enough as a sole study source.
  - **Beckmann:** This book is produced by ACoG. It corresponds to the UWise questions directly. It has fewer errors than Blueprints, but it is longer.

- **Question sources:**
  - **UWISE:** This resource is extremely high-yield for the shelf. You will get access info and password on the first day of the clerkship. Reportedly written by the same people who write the shelf. Relevance varies from test to test, but the questions are generally reflective of the exam and often extremely helpful. Do as many as you can. Do the questions you got incorrect again.
  - **USMLE World:** Again, widely used.
Case Files: Useful for doing well on this shelf, as most of the cases are identical to those you will see on the shelf.

PreTest: A good number of the questions in this book are not pertinent or are incorrect, but some people use this book.

Blueprints Q&A/Blueprints Cases: Both of these give more practice with solving clinical cases as you have to do on the shelf.

What to put in your white coat

- Stethoscope
- Penlight
- Reflex hammer (the neurological exam is important in pregnant and/or laboring patients)
- Pens
- Notecards/paper
- Pregnancy wheel
- Optional: Maxwell’s cards (have a great outline of a postpartum note, etc.), tape measure to measure size of gravid uterus during prenatal visits, “Obstetrics, Gynecology, and Infertility” (a red pocket book—definitely not necessary, but a great quick reference for most everything you’ll see).

Tips for Succeeding

- Attitude and Helpfulness: Like all rotations, enthusiasm, teamwork, and initiative go very far. The residents are very busy and may not go out of their way to include you, so try to anticipate how you can be helpful ahead of time. Try to offer to do specific things (like “I’ll check her labs and write them in the chart” or “I can prep the patient if it would be helpful” or “Can I grab gloves for you?”). Be on time and keep your presentations succinct.

- Respect: Be respectful of your patients. Before you jump in on a delivery, you should get to know the patient by going in throughout her labor and talking to her and her family. It’s not fair to only do the delivery without putting in the time first.

- Practicing: Don’t be nervous about doing a pelvic exam—you will have another standardized patient experience on the first day of the rotation to refresh your skills. And don’t turn down a chance to do a speculum exam or cervical check—even if you don’t feel totally comfortable, the only way you will get better is by practicing. You will have to do pelvic exams outside of this rotation (in EM, family medicine, peds if you have adolescents, etc.), so it’s important to get the practice when you have the chance!

- Appreciate the Magic: Have fun! Delivering babies is a truly wonderful experience that, unless you go into OB, you will likely never have after this rotation!

- Humility: Remember that you are a student, and that you are there to learn. You are not expected to know the answer to every question, but you should always look up the answer to things you don’t know in case the same issue comes up again.
What Not to Do

- **Checking Out**: Act uninterested or insulting to residents and attendings. Also do not sit around reading on a busy floor—if the residents are busy caring for patients, you should get involved however you can. This can be really difficult, particularly on L&D, but if there’s nothing happening on the floor, check out the PETU/PEEC.

- **Independent Pelvic Exams**: Perform a pelvic exam on your own—the rules will vary depending on the site, but at most places you will need to be accompanied by a nurse or a resident (or at least a medical assistant).

- **Sniping**: Swoop in and take a delivery of a patient that another student has been following.

- **Absenteeism**: Have multiple unapproved absences. Always contact the course coordinator if you will need to miss time for any reason.

**Common OB/GYN Abbreviations**

<table>
<thead>
<tr>
<th>AC</th>
<th>Abdominal circumference</th>
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<tbody>
<tr>
<td>AFI</td>
<td>Amniotic fluid index</td>
</tr>
<tr>
<td>AFP</td>
<td>Alfa fetoprotein</td>
</tr>
<tr>
<td>AMA</td>
<td>Advanced maternal age</td>
</tr>
<tr>
<td>AROM</td>
<td>Artificial rupture of membranes</td>
</tr>
<tr>
<td>BBOW</td>
<td>Bulging bag of water</td>
</tr>
<tr>
<td>BCP</td>
<td>Birth control pills</td>
</tr>
<tr>
<td>BOWI</td>
<td>Bag of water intact</td>
</tr>
<tr>
<td>BPD</td>
<td>Biparietal diameter</td>
</tr>
<tr>
<td>BSO</td>
<td>Bilateral salpingoophorectomy</td>
</tr>
<tr>
<td>BTL</td>
<td>Bilateral tubal ligation</td>
</tr>
<tr>
<td>CD</td>
<td>Caesarian delivery</td>
</tr>
<tr>
<td>C/S</td>
<td>Caesarian section</td>
</tr>
<tr>
<td>CST</td>
<td>Contraction stress test</td>
</tr>
<tr>
<td>Cx</td>
<td>Cervix</td>
</tr>
<tr>
<td>D&amp;C</td>
<td>Dilation and curettage</td>
</tr>
<tr>
<td>D&amp;E</td>
<td>Dilation and evacuation</td>
</tr>
<tr>
<td>DUB</td>
<td>Dysfunctional uterine bleeding</td>
</tr>
<tr>
<td>ECC</td>
<td>Endocervical curettage</td>
</tr>
<tr>
<td>EDC</td>
<td>Estimated date of confinement</td>
</tr>
<tr>
<td>EGA</td>
<td>Estimated gestational age</td>
</tr>
<tr>
<td>EMB</td>
<td>Endometrial biopsy</td>
</tr>
<tr>
<td>EP</td>
<td>Ectopic pregnancy</td>
</tr>
<tr>
<td>FH</td>
<td>Fundal height</td>
</tr>
<tr>
<td>FHR</td>
<td>Fetal heart rate</td>
</tr>
<tr>
<td>FHT</td>
<td>Fetal heart tones</td>
</tr>
<tr>
<td>FM</td>
<td>Fetal movements</td>
</tr>
<tr>
<td>FOB</td>
<td>Father of the baby</td>
</tr>
<tr>
<td>FSH</td>
<td>Follicle stimulating hormone</td>
</tr>
<tr>
<td>FTP</td>
<td>Failure to progress</td>
</tr>
<tr>
<td>GC</td>
<td>Gonococcus</td>
</tr>
<tr>
<td>H/C</td>
<td>Head circumference</td>
</tr>
<tr>
<td>LC</td>
<td>Last normal menstrual period</td>
</tr>
<tr>
<td>LOA</td>
<td>Left occiput anterior</td>
</tr>
<tr>
<td>LOF</td>
<td>Leakage/loss of fluid</td>
</tr>
<tr>
<td>LOP</td>
<td>Left occiput posterior</td>
</tr>
<tr>
<td>L/S</td>
<td>Lecithin / sphingomyelin ratio</td>
</tr>
<tr>
<td>LT C/S</td>
<td>Low transverse C section</td>
</tr>
<tr>
<td>OCP</td>
<td>Oral contraceptive pill</td>
</tr>
<tr>
<td>PID</td>
<td>Pelvic inflammatory disease</td>
</tr>
<tr>
<td>PIH</td>
<td>Pregnancy induced hypertension</td>
</tr>
<tr>
<td>PMDD</td>
<td>Premenstrual dysphoric disorder</td>
</tr>
<tr>
<td>PMS</td>
<td>Premenstrual syndrome</td>
</tr>
<tr>
<td>POC</td>
<td>Products of conception</td>
</tr>
<tr>
<td>PPROM</td>
<td>Preterm premature rupture of membranes</td>
</tr>
<tr>
<td>PROM</td>
<td>Premature rupture of membranes</td>
</tr>
<tr>
<td>PTL</td>
<td>Preterm labor</td>
</tr>
<tr>
<td>RDS</td>
<td>Respiratory distress syndrome</td>
</tr>
<tr>
<td>ROA</td>
<td>Right occiput anterior</td>
</tr>
<tr>
<td>ROP</td>
<td>Right occiput posterior</td>
</tr>
<tr>
<td>SAB</td>
<td>Spontaneous abortion</td>
</tr>
<tr>
<td>SROM</td>
<td>Spontaneous rupture of membrane</td>
</tr>
<tr>
<td>STD</td>
<td>Sexually transmitted disease</td>
</tr>
<tr>
<td>SUI</td>
<td>Stress urinary incontinence</td>
</tr>
<tr>
<td>SVD</td>
<td>Spontaneous vaginal delivery</td>
</tr>
<tr>
<td>TAH</td>
<td>Total abdominal hysterectomy</td>
</tr>
<tr>
<td>TOA</td>
<td>Tubal ovarian abscess</td>
</tr>
<tr>
<td>TOL</td>
<td>Trial of labor</td>
</tr>
<tr>
<td>TVH</td>
<td>Total vaginal hysterectomy</td>
</tr>
<tr>
<td>UC</td>
<td>Uterine contraction</td>
</tr>
<tr>
<td>US</td>
<td>Ultrasound</td>
</tr>
<tr>
<td>VB</td>
<td>Vaginal bleeding</td>
</tr>
<tr>
<td>VBAC</td>
<td>Vaginal birth after C-section</td>
</tr>
<tr>
<td>VTX</td>
<td>Vertex</td>
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</table>
**•♦ Neuro/Psych/Emergency Medicine ♦•**

This clinical block consists of 4 weeks of psychiatry, 4 weeks of neurology, and 4 weeks of emergency medicine. Both psychiatry and neurology end with an official shelf exam, and these rotations will be fast-paced with only a short time to learn a lot of material. EM is demanding as well, and is a great opportunity to learn how to determine the acuity of a patient’s presentation and how to present and act quickly.

**{ Neuro }**

The neurology block is a great opportunity to learn about the various major diseases involving the central and peripheral nervous system. The most important aspect of this course is to get comfortable performing a neurologic exam! This is an invaluable skill that will help you serve your patients well regardless of your ultimate specialty choice.

**Sites**

On the first day of the rotation, you will meet as a group with Dr. Pruitt and Dr. Becker to discuss which type of clinical experience you would like to have. Based on your interests, they will assign you to an inpatient site. In previous years, sites have included HUP Consults, HUP Stroke, HUP Ward, Pennsy, Presby, and CHOP. There will also be the possibility of doing half the rotation at one site and half at another. In addition to your time on the inpatient service, you will be assigned an outpatient clinic to attend once a week.

**Day to Day**

The inpatient experiences will be similar to the Medicine rotation in that you will help admit, work up, manage, and follow specific patients throughout the course of their admission. On a consult service, you will see how neurologic issues affect patients on other specialty services. Presentations and notes should follow the standard format, with the addition of a directed neurologic history, comprehensive neurologic exam, and underlying appreciation for relevant
neuroanatomy. Remember to carry the extra tools you need for the neuro exam in your white coat: penlight, toothpicks or wooden cotton swabs, reflex hammer, and tuning fork.

Didactics are held weekly on Thursday afternoons and cover much of the material you need for the shelf.

*Note for future pediatricians:* If you choose to do your rotation at CHOP, you may need to spend a little extra time mastering some of the adult neurological issues for the exam. With pediatric patients, keep in mind that at different ages some aspects of the neuro exam are not applicable or need to be approached in a different manner. You may want to get a copy of the Denver developmental milestones sheet to get an idea of what is appropriate behavior given a child’s age. A small finger puppet may be helpful when trying to assess a child’s extraocular eye movements.

**Assignments**

Near the end of the rotation you will be asked to give a 5-7 minute presentation on a topic of interest encountered during the rotation. If you need help selecting an appropriate topic, you can talk with the course directors.

**Grading**

This rotation is Honors/High Pass/Pass/Fail. The exam involves a shelf exam and an Objective Structured Clinical Examination (OSCE) where you will rotate through 3 stations (know how to do a good neuro exam and be able to counsel about common neurological complaints!).

**Tips for Studying for the Shelf**

The neurology shelf can be challenging, especially if encountered early in the year, as the clerkship is only four weeks long. Reviewing Dr. Pruitt’s material is essential, and it is also a good idea to check out other resources. You should definitely also complete the neurology questions from the USMLE question bank (over 200 questions in total).

**Study Aids**

Dr. Pruitt, the course director, will provide self-study materials that include the “Yellow Pages” (a packet of practice questions) and “Nanatomy” (a small book with core neuroanatomy review that is sufficient for the shelf). Pay attention to the “Yellow Pages” questions and know these concepts for the exam. Based on a 2017 MedEd Club survey, 92% of students recommended UWorld, 87% recommended the resources provided by Dr. Pruitt, and 30% recommended Blueprints. Other
resources were recommended by less than 15% of students. Many found that UWorld + provided course materials were sufficient, so we recommend prioritizing these resources and supplementing with a review book only if you have enough time and energy.

- **Yellow Pages:** Perhaps most importantly, spend time going over Dr. Pruitt’s review questions that she hands out in the beginning of the course, as well as her review session on high-yield topics. *Memorize these questions.*
- **Blueprints:** This book is very readable. It is especially helpful for the shelf exam, since you only have four weeks to study, and it covers many of the basic topics that will be on the exam.
- **Other books that may be useful:**
  - PreTest
  - High Yield Neurology
  - Clinical Neurology Made Ridiculously Simple
  - Neurology Recall
  - Neuroanatomy Made Ridiculously Simple: If you need some anatomy review this is a great resource. Includes a CD with localization cases for practice.

**Neurologic Exam**

Cranial Nerves:

I: Olfactory: Not generally tested
II: Optic: Can use the eye chart in Maxwell’s; remember to do visual fields; assess color vision with MS patients
III/IV/VI: Extraocular movement; light reflexes
V: Trigeminal: A variety of things, (corneal reflex, jaw opening, bite strength), but most just test facial sensation
VII: Facial: Eyebrow raise, eyelid close, smile, frown, pucker, taste
VIII: Vestibulocochlear: Hearing; Rinne, Weber, doll's eye, ear cold caloric stimulation
IX, X: Glossopharyngeal, Vagus: Gag reflex, swallowing, palate elevation
XI: Spinal Accessory: Lateral head rotation, neck flexion, shoulder shrug
XII: Hypoglossal: Tongue protrusion

Sensation: Pain, temperature, vibratory, proprioceptive, 2-point discrimination
Strength: Know the grading 0 to 5
Reflexes: Know the grading 0 to 4+
Cerebellum: Finger to nose, heal to shin, rapid alternating hand movements
Gait: Tandem, walking on heels and toes

Mental status exam (see the Psych section for details): Important for CNS disease

{ Psychiatry }
Psychiatry will be a unique component of your clinical experience because it focuses on human thought and behavior, examining the psychological and social dimensions of illness. As a 200 student, you’ll become very familiar with the psychiatric history and complete mental status examination. You’ll be challenged to formulate a reasonable differential diagnosis based on the DSM (The American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders). You will also be involved in the application of psycho- pharmacological agents and non-somatic modalities of care. Regardless of whether or not psychiatry is your career field of choice, this is a unique opportunity to strengthen interpersonal skills, interviewing skills, and psychological awareness that are crucial to caring for all kinds of patients.

The Team

The patient care team will vary slightly depending on your site. In general, though, the structure is similar to that of an inpatient medicine team with a few extra members:

- **Interns**: First-year residents responsible for the daily care of patients. Not all teams have an intern.
- **Residents**: May act as someone who oversees the intern, or may act alone without an intern. Regardless, is responsible for patient care and will be your primary contact person.
- **Attending**: Oversees all patient care on the ward.
- **Social Worker**: Most teams will have a social worker who will help in many aspects of patient care, particularly around discharge planning.

Sites

There are 5 sites at which you can rotate for psych: Pennsy 4 Spruce (emphasis on psychotic disorders), Pennsy 6 Spruce (emphasis on mood disorders), VA inpatient unit, Presby 5 Wright inpatient unit (emphasis on dual diagnosis population), and HUP consults. Students at all sites will spend 1 afternoon per week at the VA outpatient clinic.

Breakdown of the Rotation

Your psych experience will be similar to other rotations in that you will pick up new patients and care for them throughout the course of their admission to the hospital. In contrast to other services, during psych your team will often wait until the following morning to “admit” a patient (meaning interview them and discuss their diagnosis). This means that most afternoons you don’t have to worry about admitting new patients on top of your existing patient care tasks.

Each site has a different format and time at which rounds are held. Usually, you are expected to meet around 8:00 AM, when the team will interview patients as a group. For new patients, one person on the team is expected to “pick up” the patient and interview him or her during rounds. The remaining patients are seen at the discretion of the attending. After rounds, you write admission notes for the new patients you are following. You should also talk, spend time
with, and get to know your other patients and write progress notes on them. Often there are 
group activities on the inpatient wards, and you may participate in these as well. You will often 
be interviewing patients in front of your entire team, including other students and attendings. 
Students should become familiar with the Mental Status Exam, as it replaces the physical exam 
component of the patient interview and note.

More specific requirements, such as write-ups and presentations, will vary by institution and 
service.

Call

Call requirements for psych are 2 weekday nights and 1 weekend day. Call is spent at 
Pennsylvania Hospital’s Hall Mercer Crisis Response Center (CRC). On weekdays, you are 
expected to be at the CRC at 6 pm and to stay until your supervising resident dismisses you for 
the night (no later than 10 PM). On weekends, you are expected to be at the CRC by 3 PM and 
to stay until your supervising resident dismisses you for the night (no later than 10 PM). Unlike 
other rotations, there are opportunities to trade away your assigned call nights in exchange for 
participating in various enrichment activities. This policy will be thoroughly explained during 
clerkship orientation. These enrichment activities are usually very well received with students 
and include book club, going to a 12-step recovery meeting, and attending a weekly Narrative 
Medicine seminar.

What to Wear

You are expected to dress in business casual hospital attire, and most sites also expect students 
to wear a white coat. Be extra careful about dressing professionally on psychiatry; remember 
that inappropriate clothes might give the wrong signal to a confused, disinhibited, or manic 
patient.

Grading/Exams

Your grade in this course will be determined by the following:

- Clinical evaluations by attendings and residents you work with (50% of final grade).
- Final write-up following a live patient interview (15% of grade - you will learn more 
  about this during your orientation).
- Performance on the shelf exam (25% of final grade - there is no longer a cut-off for the 
  shelf in order to receive a final clerkship grade of honors).
- Two standardized interview assessments (called mini-MOCAs) completed by 
  attending/residents (10% of final grade).

Study Aids
Based on a 2017 MedEd Club survey, 90% of students recommended UWorld, 46% recommended First Aid, 34% recommended Emma Holliday Ramahi, and 18% recommended Appleton & Lange. Other resources were recommended by less than 15% of students.

- **Books:** Most people recommend using at least one of the following review books instead:
  - *First Aid for the Psychiatry Clerkship:* Great outline; all the topics you need to know for the shelf, highly recommended and very popular with Penn students.
  - *Blueprints:* Somewhat incomplete, but a very fast read. Some found the med lists useful. May be helpful to read with BRS or NMS to help you get the bigger picture. Notably light on the pediatric syndromes that are prominent on the shelf.
  - *BRS:* Readable and concise, but still detailed enough for the shelf if you supplement with PreTest. This or NMS would be an appropriate main review book (just choose whichever series you prefer).
  - *Andreasen’s Introduction to Psychiatry:* Recommended by the former course director. Although it is very informative, it is quite long and detailed; the majority of us did not use it.

- **Question sources:**
  - *USMLEWorld:* Likely the most widely-used question resource.
  - *A&L:* The best in the A&L series, highly recommended. Tough questions but important review.
  - *Kaplan QBook:* Recommended by some.

- **Medications:** The medications are one of the most difficult topics to master. A pocket book devoted to them may be helpful. The Blue *Pocket Medicine* book on Psychiatric Drugs was recommended by some. More useful will be the crash course on psychopharm handout you receive in didactics.

**Safety/Security**

Be sure to follow the guidelines of the inpatient wards. Do not put yourself in any potentially unsafe circumstances. During your first day of orientation, the course director and attendings will cover these issues with you. As a general rule, never put the patient between you and the door, never do anything that makes you feel uncomfortable, and always adhere to any guidelines that your residents and attendings create.

**A Helpful Hint**

One of the more challenging components of this rotation is the emotional burden of taking care of patients who struggle with helplessness, hopelessness or psychosis. Keep tabs on your own emotions and reactions during the rotation, and do not hesitate to talk about this with your resident or attending - they should be able to help you start to process your experience.
Mental Status Exam

The psych H&P is similar to the general H&P, but it is important to pay extra attention to the past psych history, family psych history, drug and alcohol history, and social history. In lieu of a physical exam, be sure to include the MSE. Note that this is different from the “mini-mental status exam,” which is a tool to assess one’s cognition and only comprises one part of the MSE.

Mnemonic for the MSE is ABC STAMP LICK
A = appearance
B = behavior
C = cooperation
S = speech
T = thought processes/thought content
A = affect
M = mood
P = perception
L = language
I = insight/judgment
C = cognition (mini-mental status exam)
K = knowledge

Appearance: Include gender/race, actual/apparent age, general appearance, attire, grooming/hygiene, body habitus, physical abnormalities/assistive devices, jewelry, tattoos/body piercings, scars, unusual patterns of hair loss, etc.

Behavior: Include gestures, abnormal or idiosyncratic movements (akathisia, automatisms, catatonia, choreoathetoid movements, compulsions, dystonias, tardive dyskinesia, tics, tremors, etc.), facial expressions, eye contact or lack thereof, impulse control, and psychomotor agitation or retardation.

Cooperation/reliability: Pay attention to patients’ cooperation/attentiveness to the interview and their attitude/demeanor.

Speech: Note rate, quantity, quality (volume, rhythm), and form, as well as any difficulty speaking (i.e. dysarthria, etc.).

Language: Note any language disorders such as aphasia or anomia.

Thought Process: This is the form or structure of the patient’s thinking as opposed to the actual content. Normative is logical and goal directed. Impaired thought processes include looseness of associations, flight of ideas, word salad, thought blocking (sudden interruption of thought and speech), racing, etc.
**Thought Content:** This refers to the actual things the patient is thinking about. Includes delusions, suicidal/homicidal ideation, paranoia, somatic or religious pre-occupation, other obsessions, grandiosity, helplessness, ideas of reference, ideas of thought control or thought broadcasting, thought insertion, beliefs of unusual powers, phobias, fears, feelings of worthlessness or guilt, and feelings of being punished.

**Affect:** This is the externally visible emotional state that YOU observe: such as depressed, anxious, flat, constricted, blunt, hostile, angry, suspicious, guarded, euphoric, labile, irritable, appropriate, and inappropriate. Think in terms of range (number of emotions—narrow/restricted vs. wide/expanded), intensity, stability, reactivity (how much external factors influence emotional expression), appropriateness, and mood congruence.

**Mood:** Usually given in the patient’s own words. This is the internal emotional state that you believe to be present—may not match the patient’s affect.

**Perception:** How patient processes environment and perceives the world. Describe any auditory, visual, olfactory, or tactile hallucinations or illusions.

**Insight/judgment:** Is the patient aware that he/she has a problem? Will he/she accept treatment? Can he/she appropriately weigh consequences of doing or not doing something?

**Cognitive functioning/sensorium/knowledge:** Orientated to time, place, person? Examine faculties of abstraction, calculation, recall. Use Mini-Mental Status Exam, if indicated.

### Mini-Mental Status Exam

<table>
<thead>
<tr>
<th>Task</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time? (Year, season, month, day, date)</td>
<td>5 pts</td>
</tr>
<tr>
<td>Location? (State, county, town, hospital, floor)</td>
<td>5 pts</td>
</tr>
<tr>
<td>As the patient to repeat 3 objects and to remember them</td>
<td>3 pts</td>
</tr>
<tr>
<td>Serial 7’s or spell WORLD backwards</td>
<td>5 pts</td>
</tr>
<tr>
<td>Ask for the 3 objects named above</td>
<td>3 pts</td>
</tr>
<tr>
<td>Point to 2 objects and have the patient name them</td>
<td>2 pts</td>
</tr>
<tr>
<td>Repeat “No ifs, ands, or buts”</td>
<td>1 pt</td>
</tr>
<tr>
<td>Follow command: “Take the paper in your right hand, fold it in half and put it on the floor.”</td>
<td>3 pts</td>
</tr>
<tr>
<td>Read and obey the following written words: “CLOSE YOUR EYES”</td>
<td>1 pt</td>
</tr>
<tr>
<td>Write a sentence</td>
<td>1 pt</td>
</tr>
</tbody>
</table>
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{ Emergency Medicine }

Before your first shift

If you haven’t done so recently, bone up on EKGs. Not a shift goes by that you don’t interpret an EKG. (Remember to look at the old EKG and assess for any changes.) Other than EKGs, just be prepared to be proactive, get involved, do anything, and see anything.

During the rotation

Emergency Medicine is a great opportunity to practice quickly assessing patients, thinking through a broad differential for certain signs and symptoms, and determining the most time-sensitive diagnostic and therapeutic interventions. The skills you practice here will help you evaluate patients efficiently whatever field you go into.

**High yield differentials to read up on** include headache, fainting/loss of consciousness, shortness of breath, chest pain, chronic/acute cough, abdominal pain, altered mental status, knee and joint pain, and complaints of early pregnancy.

Remember that the **most frequent question** asked of you in ED patient care is “What do you think is going on here?” Even if you have no idea, having a large fund of knowledge on the differential diagnosis will allow you to reason through the problem. That being said, your differential needn’t be entirely inclusive. To quote the course director: “Ideally, for each chief complaint, you should have in your mind the top 5 life threats before you walk in the room. They may not be applicable to your patient, but should be able to verbalize that you thought of one or two and either ruled them in or out through your H&P.”

Your presentations to the attendings and the residents, as well as your participation within the entire team, are opportunities to communicate how you are thinking about patients in the emergency setting; they are probably also where you will be graded the most. Presentations should incorporate relevant past medical history and be focused on the presenting complaint. While you may be comprehensive in your H&P, keep your presentation focused on the chief complaint. Then, if the attending or resident asks for more info, you can give it, but you haven’t overloaded them initially with irrelevant information. If the patient gives you a complaint/symptom and you aren’t sure if this could be related to the chief complaint, either ask or verbalize why you think it is related. While an attending is interested in your detailed physical exam findings, in the back of his/her mind he/she is thinking about what needs to be done for the patient and is focused on things that could be life-threatening. The ED is primarily about identifying acute, life-threatening illness – give the scariest diagnosis first, and then move onto the more likely diagnosis.
Gathering and synthesizing information quickly can be difficult early on, but a couple of tips are to look in Medview for previous visits and diagnoses as well as old EKGs.

This is also a great rotation to practice procedural skills. Students should try to put in IVs and do blood draws on their patients. Additionally students often get to suture or do LPs. A word of advice: be proactive about procedures. It is possible to go through this rotation without doing many procedures if you don’t ask.

**Schedule**

Students can go to HUP, Pennsy, Presby, the VA, CHOP, and Reading Hospital. Depending on your site, your shifts will vary but students generally work approximately 116-120 hours, including some nights and weekend hours, over the course of the rotation in addition to didactics. The course administration works hard to make sure that student hours are equitable between sites.

**Didactics**

Didactics are held Monday mornings from 8 AM to 12 PM. There have been some changes to the course in recent years – including a new course director – who is instituting a ‘flipped classroom’ model. This means that the lectures are being eliminated and students will learn the material ahead of time as ‘homework.’ The material will be provided as recorded lectures, videos and podcasts. The weekly didactics will feature case conferences: small group opportunities to apply knowledge. **The first case conferences will be during Orientation – so you will have materials to review before your first day!** Dr. Tsao, the course director, really wants to emphasize the important of coming prepared to the case conferences!

**Test**

Spend some time going over the assigned readings for EM. It is a separate, multiple-choice departmental (shelf-like) exam. Per the course director, the ‘homework material’ – lectures, podcasts and readings – will be key to doing well on the exam. You’ll be asked to apply knowledge like you’ll do in the didactic case conferences. This is a big change for the course, so please be prepared to be flexible and defer to anything you hear from the course faculty!

Again, this is not a shelf exam. It is written by the course director and other members of the department. Therefore, the questions will draw heavily from materials used in didactics and group sessions. Make sure to study the materials provided to you in packets, powerpoints, and websites, and you’ll do well. Past years have emphasized ultrasound and EKGS!

**Grading**

The course is graded Honors/High Pass/Pass/Fail. The final grade is based on Clinical (65%), Final Exam (20%), H&P (10%), On-line case discussion (5%). To qualify for honors students need to
receive greater than or equal to 91 on their overall course grade. If you get less than 70% on the shelf, you have to re-take the exam.

**Surgery/ Anesthesiology/ The “O”s**

These 12 weeks will focus on the perioperative and operative care of surgical patients. You will have the opportunity to rotate on a wide range of general surgery and subspecialty services, which provide routine and complex care. Even if you’re not interested in surgery, this is an opportunity to learn about surgical interventions and how to collaborate effectively with surgical colleagues. In addition to honing your history and physical examination skills, you will also learn to generate comprehensive differential diagnoses, interpret relevant lab and radiographic data, and sharpen decision-making skills. These skills will be useful no matter which specialty you ultimately choose for your career.

{ Surgery }

The Surgery Block is an 8-week period broken into 4 weeks of general surgery and two 2-week blocks of surgical subspecialty rotations (cardiac, thoracic, vascular, plastics, urology, etc.). The 4-week block of general surgery is graded Honors/High Pass/Pass/Fail. The two 2-week blocks of surgical subspecialty are also graded Honors/High Pass/Pass/Fail.

Please refer to the following website for up-to-date information about schedules, grading, and course logistics:
http://www.uphs.upenn.edu/surgery/Education/medical_students/medical_students_home.html

**The Team**

- **200-level Medical Students:** There are typically one to two medical students per team.
- **Sub-I:** This is a 3rd/4th year medical student doing an advanced elective in surgery. As such, he or she will be a great resource and mentor for clerkship students. Sub-Is are often given more responsibilities for patient care as they are aspiring surgeons and are preparing for internship, so do not be concerned if this is the case. Operative cases should be divided equally amongst Sub-Is and clerkships students by the site coordinator for the rotation.
- **Intern:** This is a first-year resident that is responsible for the patients on the service. You will have some interaction with the intern at the beginning and end of the day, but you will spend most days in the OR. If you have some downtime, offer to help the intern, as they can typically use it and you will have the opportunity to contribute to patient care.
- **Chief Resident:** Chief Residents are surgical residents who are in their final year of training. The chief resident is responsible for the day-to-day activities of the service. He
or she rounds in the morning with the team and again in the evening when the day’s cases are finished. He or she will be responsible for much of the didactic teaching throughout the rotation. The chief will also be in charge of assigning you to ORs and clinics, and they may play a role in your evaluations.

- **Fellows**: Certain services (cardiac, thoracic, vascular, pediatric, transplant, trauma) will have fellows who have already completed a general surgery residency program. There may not be a chief or senior resident on these services and in those cases the fellow is responsible for the service. He or she will round with the team in the morning and again in the evening, as would a chief resident.

- **Attendings**: These are faculty who oversee the care of all the patients on the service. Some attendings are more approachable than others, but on the whole, the attending surgeons are interested in teaching enthusiastic medical students. You will have opportunities to interact with attending surgeons on the floor, in the OR, and in clinic.

**Your Responsibilities**

The responsibilities of the medical student very service-specific. Accordingly, you should ask to sit down with your chief resident or fellow at the beginning of the rotation and sort out what the goals, objectives, and the expectations are for your time on service. Generally speaking you will have the following responsibilities:

**Pre-Rounds**

Prior to morning rounds, you may be responsible for pre-rounding on a number of patients on the service. Typically, pre-rounding involves gathering the numbers (vitals, I&O’s, labs) on the patients on your service, and our chief can tell you what specific information you should know for rounds. Some chiefs/fellows would like you to wake up the patient to talk and examine them while others may just want you to collect the patients’ data. If there is an outlier in any of these values, write down what time the abnormal vital was recorded and what the previous trends have been. Your sub-I will be a wonderful resource when it comes to navigating the EMR in an efficient manner. It will be very early in the morning and you may have a number of patients to see, so becoming facile at collecting data is extremely important. Most chiefs understand just how early it is and will only ask you to pre-round on 1 to 2 patients.

Depending on the service, you may also be asked to “print the list,” on which you write the vitals/I&O’s/labs. Once you are done, you will make copies and give them to the team when you meet up for rounds. Ask your intern if this is something that they want you to do, and if so, how to do it in the EMR system.

Typically while you (and the sub-I) are pre-rounding on the floor patients, the intern is seeing the ICU patients and getting signout from the person on call overnight.

**Rounds**

Your senior resident will walk around with you and the junior resident/intern to all of the patients’ rooms. Before you walk in to the room, either you or the junior resident/intern will
present the overnight numbers and significant events, as well as the plan for the day. You will have the opportunity to see how the process works before you are asked to present.

The “Scut Bucket”

The “scut bucket” is a pail full of supplies that some teams use while on rounds. If used by your service, you will likely be responsible for stocking the bucket before rounds as well as carrying the bucket around with you. Every evening make sure to stock the bucket and put it in a place (typically a call room) for safekeeping.

Some words of wisdom regarding the bucket:

- Don’t forget it in a patient’s room.
- Don’t bring it into patients’ rooms that are on Contact Precautions (the rooms where you have to put on a yellow gown and gloves before you go in).
- Stock it every night.

Each service has different “bucket needs”, but some good things to have in it:
- Rolls of tape (silk and paper)
- Medipore tape
- Kerlex gauze
- Safety pins
- Suture removal kit
- Staple removal kit
- Sterile water/gauze
- Sterile Q-tips
- 4x4 gauze
- ABDs

An important part of being a great surgery student is doing your best to assist the team. Scut bucket management is no exception. Your ability to anticipate needs will enhance or limit the team’s ability to get through rounds. For example, if you change a patient’s dressing every morning on rounds, try to have the appropriate materials ready when you enter the patient’s room. Thinking ahead does not go unnoticed on surgical services!

Operating Room Etiquette

(Note: you will learn how to scrub during orientation, so rest easy!)

- Getting acquainted: Whenever you walk into an operating room, introduce yourself to the staff. This includes the circulator, the OR nurse that deals with issues during a case, and the scrub nurse, the OR nurse assisting the surgeon. Tell them that you are a medical student, and offer to help them with anything they need. Always treat them with respect and ask for their advice, and they will help you in innumerable ways. It is a
good idea to write your name on the whiteboard. You may also fill out the names of the other members of the team in that OR if they aren’t written already.

- **Dropping gloves**: If you are going to scrub into a case, you will need to give the scrub nurse your gloves beforehand. First of all, ask them if you may give them your gloves. They may ask for information, like the size and type of glove, so they know which ones are yours. Once it’s clear for you to give the gloves to the scrub nurse, you must do so in a way that doesn’t contaminate the sterile table. The safest way to do this is to open the package without touching the gloves and allow the sterile scrub tech to reach in and remove them for you. Some scrub nurses prefer clerkship students to always provide their gloves this way. Eventually, you may be trusted to drop your gloves on the table in a sterile fashion.

- **Prepping**: Before scrubbing, make sure to assist your resident with positioning and prepping the patient. Always ask the resident and/or the OR nurse before touching anything unless you are sure you won’t be contaminating the sterile field. Easy and important jobs include having tape ready to pick up stray hairs from the patient’s body after your resident shaves them, cleaning the belly button with alcohol swabs prior to prepping, and pulling the pertinent scans up on the computer on the wall (not the computer that the nurses work on in the corner), if your sub-I has not already done so.

- **Maintaining sterility**: During a procedure, placing your hands gently on the draped part of the patient immediately in front of you can help you avoid contamination. Do not let your hands hang down once you are gowned. Anything beneath the level of the patient or the level of your abdomen is not considered sterile.

- **Contamination**: Everyone will contaminate himself or herself at some point. It is not a big deal. Step back from the field and do not touch anything. Discreetly let the circulator know and he or she will give you a new glove/sleeve/gown.

- **Looking over**: It’s okay to peek over someone’s shoulders, as it is sometimes very difficult to see what’s going on. Remember, however, that the back and shoulders are not sterile. It’s okay to politely ask the circulator for a step stool, but try to position one for yourself before scrubbing if you anticipate you might need it.

- **Instruments I**: Don’t ask for instruments, except possibly for suture scissors when someone ties a knot and you have been directed by your resident or attending to cut the sutures. Ask where (with respect to the knot) and how to cut suture the first couple of times you’re told to do this job. It is not intuitive and the surgeons are very particular about it being done properly.

- **Instruments II**: Don’t lean on or take instruments off of the scrub nurse’s table, or mayo stand. Do not try to pass instruments between the doctors and the scrub tech. There is a particular way to do it and you may accidentally get stuck in the process.

- **Questions**: You can ask questions, but try to ask them at appropriate times. For example, if a patient is bleeding briskly and the team appears concerned, it is best to hold your question until the bleeding has been managed.

- **Being present**: Be observant and mindful. You will quickly learn when it’s most appropriate to stand back and get out of the way. Even during these times, pay attention. You can learn quite a bit of functional anatomy in the OR. The surgeons will
notice if you are completely checked out, and you will enjoy your rotation much more if you’re engaged.

Call

All students will be required to take one night of overnight call with a consult resident. The date of call will be pre-determined and assigned at the beginning of the rotation. In general, students are not expected to round during the weekends, but all schedules are team specific, so be sure to check with your chief resident.

Schedule

The schedule varies greatly from the various services and sites. The clerkship director has worked hard to ensure your surgical experiences are varied and will have assigned you to OR & clinic days, as well as providers you should follow on specific days. This information is detailed on the surgery student website as well as the schedule you are given at Orientation.

In general, 200 medical students on the Surgery Clerkship are expected to work 12-hour days, from 6am to 6pm. Rounds typically last from around 6:00am-7:00am, depending on the team and number of patients. Most OR cases will end by about 5-6pm. Upon the completion of the day’s OR cases, the team often sits down to discuss the patients on the service. These evening rounds are usually brief, but can be prime time for teaching.

There will typically be 1-2 days per week during which you will be in clinic with the attending. This is a great opportunity to interact with attending surgeons and to ask questions regarding disease management (i.e. the stuff on the shelf exam). Attendings are often a bit less tense during office hours as compared to the OR, so clinic is a great time to chat with them about their lives as surgeons. Most surgeons are nice people. Don’t be afraid to talk with and learn from them.

Most of your Fridays will be reserved for didactics and Problem-Based Learning sessions, or PBLs. Some Fridays will be split between clinical duties and teaching sessions. Please refer to the Surgery Clerkship website for more information. The Friday schedule for the block will be posted there and you should check it every week to make sure you know which days have scheduled didactics and PBLs.

What to Wear and Hygiene

On operative days, you can wear scrubs, but you should still look washed and awake. Make sure to wear comfortable shoes, as you will be doing a lot of walking and standing. On clinic days you should wear professional attire. Don’t wear scrubs to clinic, as many attendings will not allow you to see patients. You should wear your white coat and ID every day. Your fingernails should be clipped short. Certain scrub techs will not let you scrub if you have your fingernails painted. (This is especially true at Pennsy.)
What to Put in Your White Coat

- Stethoscope. You may be the only member of the team with one on rounds. Your resident may occasionally ask to borrow it while assessing the patient.
- 4X4’s (at least five or six), Medipore tape, and disposable scissors (+/- the bucket).
- Penlight.
- Surgical Recall: This can be kind of bulky, so it is reasonable to store it somewhere accessible.
- Pens.
- Alcohol swabs.
- Snacks (i.e. granola bars, snack mixes, etc.) – Cases are often long and time is limited, so have something to eat in between cases should you not have the opportunity to go to the cafeteria.

Additional Requirements

- **PBL:** Each week, students will have PBL sessions taught by general surgery residents. You will have to facilitate one session during the rotation.
- **Write-Ups:** You will also need to turn in 4 write-ups during the course of the block. Two of the four write-ups are done with PBL leaders. These can be in any format, but need to be legible. Examples of different write-up types include acute consults, new patient visits, and post-op visits. They will be assessed for completion only and will not be assigned individual grades.
- **Topic Presentations:** You may be asked to do one or two topic presentations during each month, depending on the team. See the “Sample Documents” packet for an example of a surgery presentation.

Grading

The rotation is graded honors/high pass/pass/fail. The course exam is the Surgery shelf exam as well as an OSCE. Your final grade will be a combination of your general surgery clinical rotation grade, subspecialty grades, your PBL grade (given by your PBL resident), the OSCE score and the shelf score. There is no minimum shelf score required to qualify for Honors in the course. With respect to the surgical subspecialty rotations: if you show up on time, exhibit enthusiasm, and do what you are supposed to be doing, you will be more than fine. The attendings and residents just want you to be professional and have a good attitude. A great way to start out each rotation is to ask the site director and the chief resident what his or her expectations are for you during your time on his or her team. This will set you up to be successful and put you on the right track with your primary grader from the outset.

Tips for Studying for the Shelf

The surgery shelf examination is challenging and requires preparation, especially since there isn’t always continuity between what you are doing on service and what is tested on the shelf. Even budgeting 30 minutes per night for reading can be a huge help. Preparing for the PBL
sessions is a great way to study for the exam, as the topics selected for the PBL sessions are high yield. Reading prior to the sessions and participating in the group discussion will reinforce many of the important general surgery topics often tested on the shelf. See below for commonly used study materials.

Study Aids

As is true for the medicine shelf, time is an important factor here. Additionally, many of the questions on the Surgery shelf exam bear striking similarity to medicine questions. Focus on medical problems requiring surgical intervention, anatomy, post-operative management, and complications in your reading. Worry less about surgical techniques. This clerkship is a bit of a free-for-all as far as which references are most commonly used, and there aren’t enough questions in UWorld to use it as your sole source of information. Based on a 2017 MedEd Club survey, 93% of students recommended UWorld (focusing on surgery questions in addition to medicine questions in the areas of GI, endo, renal, cardio, pulm, and ophtho), 92% recommended Pestana, 59% recommended Emma Holliday Ramahi, 20% recommended ExamGuru, and 16% recommended Case Based Review. Other resources were recommended by less than 15% of students.

- **Question sources:**
  - **USMLE World:** Most widely used question source.
  - **ExamGuru:** This is a newer question bank that closely mimics the UWorld question bank format. A very good way to supplement the limited number of surgery questions on UWorld.
  - **Kaplan QBook:** Consider doing the medicine questions as well as the surgery questions as the content overlap between the two exams is quite high (60-80%).
  - **PreTest:** A few of the answers in the book are incorrect, so if you find a different answer elsewhere, don’t get stressed about it.

- **Pestana:** This short book quickly runs through many relevant diagnoses, with the goal of improving speedy recognition of common test problems. These questions are quite useful for the shelf but are in no way comprehensive. There is also an audio version of this book that you can find floating around Penn Dropbox.

- **Review books:**
  - **First Aid for the Surgery Clerkship:** Very helpful and manageable for mid-week reading.
  - **NMS:** As usual, dense and detailed. Questions were noted to be useful.
  - **Blueprints:** Not enough detail. Questions may be useful as they are similar in length to the questions on the shelf (i.e. LONG).

- **Surgical Recall:** This source should not be used as a comprehensive shelf exam study material, but may be very helpful for answering questions in the OR and understanding the treatment of the patients on certain services.

- **General surgery textbooks:**
  - **Lawrence *Essentials of General Surgery***
• Kreisel, Krupnick, Kaiser *The Surgical Review*

**Subspecialty-specific:**
- **Trauma:** Appleton & Lange for questions (there is a lot of Trauma on the shelf). Pestana is also good for Trauma.
- **Hand Plastics:** “The Hand”- a book that Dr. Chang will give you.
- **Transplant:** Review immunology and immunosuppressive drugs before starting (graft vs host, immunosuppression).

**Tips for Success**

- **Background:** Visit the Mod 4 surgery clerkship website and read the syllabus.
- **Attitude** Always be friendly and look for ways to be helpful, even for the little jobs. Your day will feel more productive and fulfilling when you’ve been able to contribute to patient care, even if it’s in a small way. Be kind and polite to EVERYONE, including and especially the OR staff and floor nurses. At the end of each day, ask your senior if there is anything you can help with. When your chief tells you to go home, it’s not a trick.. you really can go home!
- **Skills:** Ask your resident for silk ties to practice tying knots at home or during down time.
- **Preparation:** Always eat breakfast before an OR day. *Know about the patients and the procedure being done.* You can and should always ask your chief what cases you will be assigned to the next day. If you specifically mention that you’re asking so that you can be better prepared, your resident will be more inclined to take the time to figure out the schedule and give you a clear assignment. It is helpful to then read a little about what the operation entails the night before. YouTube can be really helpful, especially if it’s a laparoscopic case. You certainly don’t need to be an expert, but you will get much more out of being in the OR if you have a little context as to what’s going on. Also, this demonstrates interest to your residents and attendings.
- **Safety:** Be safe. Protect yourself. Go slowly so that you do not stick yourself with a needle. If you do, SCRUB OUT and follow needlestick protocol. Your attendings and residents will almost always alert you if the patient has known viral hepatitis or HIV and will take extra measures to protect everyone on the team. However, you can never be certain about which patients have blood borne illnesses and must always follow up a needlestick with the appropriate post exposure precautions.
- **Openness:** Go in with an open mind. Lots of students never think they will enter surgical fields and end up choosing surgical residencies. Whether you love or hate it, it is a formative experience. Make the most of it!

**What NOT to do**

- **Disrespect:** Be disrespectful towards the OR staff.
- **Sniping:** Jump in during other teammates’ presentations.
- **Checking out:** Seem obviously bored, uninterested, or insincere. Be the last to arrive and the first to leave (without consulting with your resident or fellow).
• **Interferences**: Ask questions at inappropriate times (i.e. patient bleeding out) or interfere with the efficiency of the service. (Try to learn about your team and know when to step up as well as when to take a step back.)

**First day suggestions**

• **Expectations**: Ask your resident or attending when they have a moment to go over what is expected of you for this rotation. Find out what time you are expected to arrive and how to best help in the morning. You should first ask your chief or fellow, but he or she will likely refer you to the intern.

• **Logistics**: Find out how to get the week’s OR schedule so you can read up on the cases. Find out where to put your personal things. For example, there is an on call room on Rhoads 4 immediately across from the visitor elevators. The Silver 12 workroom is a good choice, as well. Ask your residents for the codes (interns will be more helpful than seniors here).

**Halfway through your rotation on a service**

There is a mandatory feedback session with the clerkship directors halfway through the block. Also, ask your residents and fellows for feedback and incorporate any suggestions for improvement. This will show that you can appropriately respond to constructive criticism and gives you the opportunity to work on anything that might have been identified as a weak point in your performance. Specific questions are always better.

TRY TO HAVE FUN!! Be enthusiastic, read, ask questions, and help out in any way you can. If you are engaged, friendly, and ask for guidance, you should be absolutely fine. If you encounter a particularly challenging resident or attending (which is very unlikely!), your clerkship director is a great resource and can help you navigate the situation.

**{ Anesthesiology }**

The weeklong pass/fail clinical rotation in anesthesiology is a great experience for 200 level students. Over the course of the week, you will help with all aspects of pre-operative, intra-operative and post-operative patient management. You will spend two days in the main HUP operating rooms, working with a resident and an attending, and two days completing electives in subspecialties of anesthesiology, including cardiac anesthesia, pediatric anesthesia, obstetrical anesthesia, regional anesthesia, and pain medicine. Your experience will depend greatly on the residents you work with, the types of cases involved, and your interest level and motivation. In general, all of the residents are very excited about teaching medical students and clearly love their field. You can expect to learn a good deal about the induction of anesthesia, general anesthesia, local anesthesia, and the monitoring of physiologic functioning and how to respond to changes in those functions. You’ll also have great opportunities to practice IV insertion, mask ventilation, and endotracheal intubation. Clinical experience is supplemented.
by a highly regarded lecture series covering important topics including general and local anesthetics, pain management, critical care, hypotension, and obstetric anesthesia. Relevant readings will be provided and no textbook is necessary.

{ Ophthalmology }

The Ophthalmology week begins with an introductory session on the eye exam, use of the slit lamp, and looking at each other’s fundi. You may be asked if you are willing to have your eye dilated, so if you want to plan for that bring some sunglasses with you that day. The week consists of a mix of lectures and clinic time, and you also usually have the option of spending time in the OR. You will rotate through some combination of Scheie, HUP, VA, and CHOP, and your experience is up to how much you put into it. You will be loaned a book for the week that has a lot of pretty cool pictures. Be sure to look at these photographs as a good portion of the exam at the end of the week consists of slides from the book. The exam is relatively stress-free and is pass/fail.

{ Otorhinolaryngology }

ENT is a week consisting of a variety of clinical activities and lectures. You may be provided with a short textbook/pamphlet which contains a review of basic ENT topics. The test is pass/fail and is given on your last day—it is not intended to be stressful. You will have the opportunity to practice a complete head and neck exam on each other and see a laryngoscopy. Throughout the week you will have sessions on audiology, pediatric ENT, smell and taste, speech pathology, and head and neck cancers. You can spend time both in the OR and in the clinics.

{ Orthopedics }

This week-long course is composed of clinical sessions in the morning, a didactic session in the afternoon, and self-directed learning in the evening. There are no on-call duties. The course attempts to offer balanced assignments between the operating room and outpatient clinics, and between adult and pediatric conditions. Students who would like to be assigned to a particular service, or who would like to see orthopedic oncology or foot surgery (both based at Pennsylvania hospital, where students are not routinely assigned) are encouraged to contact the course director at least a week in advance, before the assignments are made. The self-study component of the course is directed to mastery of a set of questions and answers covering basic topics in musculoskeletal medicine.

The questions are posted at

http://www.orthopaedia.com/display/Clerkship/Penn+Med+Self+Study+Questions

An open-response examination is administered on the last day of the course, comprising 5 questions chosen from this set. The course is graded pass/no credit. To pass, students must
attend all clinical and didactic sessions (or be excused) and pass a minimum threshold on the examination.
Part III: Appendices

Templates

{ Detailed History and Physical }

H&P Format

Patient Name:  MR Number:
Date:  Time:
Source of Hx:  Patient, Family, Old Records, etc.

CC:  “In patient’s own words”

HPI:  Begin by listing all relevant major medical problems in your first sentence (i.e., Mr. M is a 45 y.o. WM with a hx of NIDDM, CAD, PVD, CKD who presents with ...). Describe all episodes and conditions leading up to and relevant to the reason for admission. Include pertinent positives and negatives from the review of systems. If multiple problems are present discuss them one at a time. Give attention to the duration, intensity, location, radiation, quality, onset, etc. of sx (symptoms). Include a brief synopsis of what was done in the ER, by the EMTs, at the OSH (outside hospital) prior to transfer etc. before the patient came to the floor, such as diagnostic tests and results, medications, fluids given and response. All PMH relevant to this admission should be detailed, including admissions, ongoing treatments, etc. A chronological structure to the HPI is preferred by most attendings, so try to organize things by when they happened.

PMH:  Describe major illnesses (childhood & adult) with a brief discussion of duration, treatment, and control: e.g., rheumatic fever, HTN x 10 yrs. well controlled with meds, s/p CVA ’91 w/ residual left sided weakness.
Hospitalizations: reason for admission, when, where, treatments?
Surgical procedures w/ dates: Indications?
Trauma/Injury: residual defects or limitations?
Immunizations (most relevant in peds)
Transfusions

**Meds:** Include dosage and duration. Does the patient actually take them? Don’t forget to include over-the-counter drugs and herbal meds. Look back to the PMH to see if the patient may have forgotten to mention a chronic illness indicated by the med list.

**All:** Record allergies and reactions to medications and foods, or NKDA (No Known Drug Allergies).

**FH:** Include inherited diseases: ex. diabetes, heart disease, HTN, cancer, mental illness in all immediate family members. e.g., (+) HTN in mother, (+) DM in mother and sister, otherwise (-) for heart dz, CA, mental illness.

**SH:** Occupation: mention of relevant exposures to asbestos, etc.

In older patients, note their functional status (ADLs, IADLs, etc.).
Marital status, Children, Living arrangements:
Education:
Tobacco hx: estimate total pack yrs, currently smoking? If not, when did they quit?
ETOH use: estimate frequency and quantity.
IV or other illicit drug use:
Sexual and OB history: are they sexually active? With whom? Do they use protection against STIs? Have they been pregnant before? If so, what were the outcomes?

**ROS:** Be complete for medicine. Pertinent positives and negatives should be in the HPI. On many rotations it will be entirely acceptable to write: “ROS as per HPI, otherwise negative.”

**PE:** Abbreviations are difficult at first, but are pretty much standardized, so you’ll see the same ones over and over again with time, to the point where you adopt most of them in your own notes. Below is a list of common abbreviations in a typical and fairly complete, benign PE.

General: B/L = bilateral; c/ = with; s/ = without; NT = non-tender.

<table>
<thead>
<tr>
<th>Write-up</th>
<th>Notes &amp; Translation</th>
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<tbody>
<tr>
<td><strong>VS:</strong> T: 98.6°F, RR: 12, HR: 65 BP: 120/80 (sitting), Pox 100% on RA.</td>
<td>VS = vital signs; Pox = pulse-ox; RA = room air (or O₂ @...); may also include supine BP/HR (orthostatics).</td>
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<tr>
<td><strong>General:</strong> WD/WN male in NAD, resting comfortably on exam, appears stated age, pleasant and cooperative, AAOx3.</td>
<td>WD/WN = well developed, well nourished; NAD = No acute distress; AAOx3 = awake, alert, oriented to person, place and time.</td>
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<td><strong>H:</strong> NC/AT; (-) temporal wasting.</td>
<td>H = head; NC/AT = normocephalic/ataumatic; note any lesions/rashes.</td>
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<tr>
<td><strong>E:</strong> Conjunctiva pale; (-) scleral</td>
<td>E = eyes; EOMI = extra-ocular muscles intact;</td>
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</table>
icterus; (-) injection; EOMI; PERRLA; fundi benign; acuity 20/20 B/L c glasses.

E: Acuity grossly intact; (-) cerumen; TM gray, translucent c good LR B/L; (-) erythema; (-) exudate or d/c.

E = ears; TM = tympanic membrane; LR = light reflex; d/c = discharge; B/L = bilateral.

N: Septum s deviation; (-) rhinorrhea; nares clear B/L; (-) polyps/masses; sinuses NT B/L.

N = nose; NT = non-tender; s = without.

T: MMM; pharynx s erythema; (-) thrush; (-) exudate; dentition good.

T = throat; MMM = moist mucous membranes.

Neck: Trachea midline; supple, good tone; full ROM; (-) masses; (–) LAD; (–) JVD; no thyromegaly, (–) nodules; (–) carotid bruit B/L.

ROM = range of motion;
LAD = lymphadenopathy (cervical); JVD = jugular venous distention.

Chest: CTA/P B/L all lobes; (-) W/R/R.

CTA/P = clear to auscultation & percussion; W/R/R = wheezes /rales/ronchi.

CV: RRR; nl S1/S2; (-) S3/S4; (–) M/R/G, PMI @ L 5th intercostal space.

RRR = regular rate & rhythm; S1, 2, etc. = 1st, 2nd heart sound; M/R/G = murmur/rubs/gallops; murmur should be characterized with intensity, location, radiation; PMI = point of maximum impulse.

Abd: Soft, NT/ND; (-) HSM; (-) masses; (-) bruits (aortic or renal B); (+) BS; (-) CVA tenderness.

NT/ND = non-tender/non-distended; HSM = hepatosplenomegaly; BS = bowel sounds (listen for BS before palpation); CVA = costo-vertebral angle.

Ext: WWP; (-) C/C/E; 2+ radial, DP/PT pulses B/L; cap refill < 2 sec

WWP = warm and well-perfused; C/C/E = cyanosis, clubbing, or edema; DP/PT = dorsalis pedis/posterior tibialis; cap = capillary. Comment on joints, etc. if pertinent.

Skin: Clear; unbroken; (-) rashes; (-) hypo/hyperpigmented areas; nl turgor.

GU: (-) vaginal (penile) d/c; (-) rash/lesions; (-) testicular masses; (-) inguinal hernia

d/c = discharge. Much more complete female GU exam in GYN.

Rectal: Good sphincter tone; prostate NT, not enlarged; brown heme (-) stool; (-) polyps/masses

MS = mental status; CN = cranial nerve; RAM = rapid
MS: AAO x3
CN: CN II-XII grossly intact
Motor: See diagram below
Sensory: Grossly intact and equal to
light touch, pin prick, cold, vibration
Coordination: (−) Romberg; intact
RAM; (−) tremor
Gait: Normal gait; intact heel, toe,
heel-to-toe gaits.

MMSE results.

Alternating motion.

If indicated, perform and document a MMSE = minimal
status exam.

Abbreviated neuro exam can sometimes be
documented as “AAOx3, CN II-XII grossly intact; non-
focus exam.”

The arrows on the diagram indicate the direction of toe
movement during a Babinski test (up or down).

LABS: Chemistry, CBC, U/A etc.

Common abbreviated presentation of lab values:

BMP/Panel 7 / Lytes

C

B

CBC

DATA: EKGs, CXR, etc.

A/P: Start with a short summary of 3-4 sentences max. This should be very similar to the
bullet you would deliver if your attending wanted a quick summary of the patient’s
history and presentation. Follow by listing each active problem numerically with the
most important first. In the ICU, you will organize your assessment by organ system
(pulmonary, cardiovascular, endocrine, FEN-fluid/electrolytes/metabolism, ID, GU, GI,
etc.). Each of the problems you list requires an in-depth assessment (especially in
Medicine), which includes a detailed differential diagnosis. Support your thoughts with
elements of the patient’s history, physical findings, lab data and procedure results.
Conclude with a detailed treatment plan.

The last few problems on your H&P should always be:
# F/E/N (fluids, electrolytes, nutrition) – regular diet, NPO w/ IVF, cardiac diet, etc.
# PPx (Prophylaxis) – SQH (sub-cutaneous heparin), SCDs (sequential compression
devices), PPI (proton pump inhibitor if patient is on GI prophylaxis).
# Code Status
# Disposition – stable on floor, will need PT eval for possible SNF (skilled nursing
facility) placement, etc.

Don’t worry—your resident will almost always go over this with you the night before
P.D. is our 67 year-old gentleman with colon cancer, now post-op day #2 status post left hemicolectomy with end-colostomy. Yesterday he finished his course of peri-op antibiotics. He reports no new problems overnight, states he tolerated ice chips yesterday without any nausea or vomiting. He was afebrile with a Tmax of 99.6°, BPs ranging from 130s – 140s over 90s, heart rates in the 80s, respiration rates 14 -16, and pulse ox of 98% on room air. I’s and O’s yesterday 1500 cc/2000cc, with 100cc from his JP drain, for net 600cc negative. On exam, his incision is clean, dry, and intact, and the swelling and erythema around his ostomy stoma is decreased. Bowel sounds are now present. Plan is to advance his diet to clears, encourage ambulation, and follow-up on the heme/onc note.”
### Sample Patient Tracking Sheet

(Credit: Medfools.com)

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<thead>
<tr>
<th>PROBLEM LIST</th>
<th>MEDS</th>
<th>DOA:</th>
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**PE Notes:**

**PMHX/Psych:**

**Home Meds:**

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<table>
<thead>
<tr>
<th>LABS</th>
<th>TO DO</th>
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© www.medfools.com
The following are common abbreviations used in writing medication orders:

**Frequency**
- **qd:** once a day - this abbreviation is no longer allowed on charts and you should write out “daily” instead; however, you will often still see or hear it. qday is a permitted option
- **bid:** twice a day
- **tid:** three times a day
- **qid:** four times a day
- **q12h:** every 12 hours (not the same as bid: q12 means at midnight and noon, bid means approximately when you wake up and before going to bed)
- **qAM:** every morning
- **qHS:** every evening (HS = hora somni, or hour of sleep)
- **qAC:** before every meal
- **prn:** as needed

**Route**
- **PO:** By mouth
- **IV:** Intravenous
- **SQ:** Subcutaneous
- **IM:** Intramuscular
- **SL:** Sublingual
- **PR:** Per rectum

**Form**
- **tab:** Tablet
- **susp:** Liquid suspension
- **gtt:** Drops

**Examples:**
- *Begin Furosemide 40 mg PO BID.*
- *Ceftriaxone 1 g IV q12h x 14 doses—first dose STAT*
- *Prednisone 40 mg PO daily x 2 days, then 20 mg PO daily x 2 days.*
- *Maalox 30ml q4h PRN dyspepsia*
Many rotations will never require you to perform phlebotomy. If you are asked to draw blood, you can and should ask for help (and to watch first!) in the beginning.

If you are drawing blood, always have everything you’ll need for a given procedure with you when you go into the patient’s room. This makes you seem more professional and inspires confidence in your abilities.

**Before you do a blood draw:** Grab an emesis basin, water bucket or empty cardboard gauze box and fill it with the following:

- Gloves that fit (gloves that are too big increase the risk of sticks)
- Tourniquet, alcohol swabs, small gauze pad, and Band-Aid
- Vacutainer needles or butterfly needles (more than one, because nobody’s lucky *all* of the time)
- Vacutainer needle holder
- Appropriate specimen tubes (always bring extras) or blood culture bottles
- Specimen bags
- For blood cultures bring Betadine swabs (at least 6)
- Pre-stamped and completed labels and lab forms

**Selecting appropriate tubes:**

Tube color designations may vary from one hospital to another. If you ever have any questions, just call the Lab and ask. Commonly used tubes at HUP are as follows:

<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Tube color</th>
<th>Assays</th>
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<tbody>
<tr>
<td></td>
<td>2. Lavender</td>
<td>2. Direct Coombs</td>
</tr>
<tr>
<td>Chemistry</td>
<td>1. Red</td>
<td>1. Electrolytes</td>
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<tr>
<td></td>
<td>2. Lavender</td>
<td>2. Hgb A1C</td>
</tr>
<tr>
<td>Coagulation</td>
<td>1 &amp; 2 Blue</td>
<td>1. PT, PTT and other clotting assays</td>
</tr>
<tr>
<td>Hematology</td>
<td>1. Lavender</td>
<td>1. CBC</td>
</tr>
<tr>
<td></td>
<td>2. Green</td>
<td>2. Hgb electrophoresis</td>
</tr>
<tr>
<td>Immunology</td>
<td>1. Red</td>
<td>1. Specific serum Ab detection</td>
</tr>
<tr>
<td></td>
<td>2. Lavender</td>
<td>2. Cell surface phenotype</td>
</tr>
<tr>
<td></td>
<td>3. Green</td>
<td>3. HLA type</td>
</tr>
<tr>
<td>Molecular Dx</td>
<td>1. Lavender</td>
<td>1. PCR and DNA analysis</td>
</tr>
<tr>
<td>Toxicology /</td>
<td>1. Red</td>
<td>1. Drug/hormone levels</td>
</tr>
<tr>
<td>Endocrinology</td>
<td>2. Lavender</td>
<td>2. Cyclosporin Levels</td>
</tr>
</tbody>
</table>

**To prevent dangerous clerical errors, samples going to the blood bank for type and cross or screen of blood products require special pink labels for processing. Be sure to sign the pink label and the requisition slip carefully, and make sure the stamp on these labels is entirely legible. Otherwise, the samples will be discarded and you’ll have to draw them again. Be sure to ask your resident for help the first time you attempt this process.**
Have an intern or resident help you through the first few and then have a go at it alone when you feel ready (after checking with a resident or intern first). Ask for help if you’ve tried a couple of times without success (nurses can also be a huge help with this). No one will be upset with you, honestly, and you’ll learn from others’ approaches.

•♦ •♦ Exposure to Blood and Bodily Fluids •♦ •♦

You are probably aware of the proper procedures for Universal Precautions. Nonetheless, a few extra words of caution are warranted. It cannot be stated too strongly that you are in the clinics to learn! This means that you will be performing procedures for the first time. You may be nervous and feel inexperienced. Know that you are not required to put yourself at risk. If you feel uncomfortable about the circumstances surrounding a procedure (i.e. the patient is thrashing around on the bed as you try to draw blood), don’t do it! Additionally, you will sometimes encounter situations where residents or attendings are not following universal precautions (e.g. wearing one pair of gloves in the OR) and you will be tempted to follow their example so as not to draw attention to yourself. Don’t do it! You have an entire career ahead of you. This is no time to be taking undue risks. The below policy on potential blood and body fluid exposures can be found in every single syllabus.

Penn Med Policy Regarding Potential Exposures

Any medical student who sustains a needlestick or other wound resulting in exposure to blood or body fluids should follow the following protocol. Please keep in mind that drug prophylaxis following a high-risk exposure is time sensitive, therefore you must immediately seek help from the appropriate hospital department.

Immediately wash the affected area with soap and water and cover the area with a dressing if possible. For an ocular exposure, flush thoroughly with water. Inform the supervising resident and immediately report to the following areas:

At HUP and the VA

• Go directly to HUP’s Occupational Medicine Division.

• If they are closed, report to the HUP Emergency Department.

• Identify yourself as a medical student who has just sustained an exposure.

• You will see a health care provider who is trained in assessing the risk of the exposure. If you are seen in the Emergency Room, an occupational medicine doctor is on-call 24 hours a day to provide immediate consultation on post-exposure drug treatment and counseling. Do not hesitate to ask the physician treating you to page the Occupational Medicine doctor carrying the needlestick pager.
• You will be counseled and advised about postexposure prophylaxis, if necessary.

• If indicated, you will be given a starter pack of the prophylactic drugs which are recommended in accordance with the current guidelines of the Center for Disease Control.

• Baseline blood tests will be done on you.

• The physician at Occupational Health will contact the attending physician of the source patient to expedite the process of getting consent to test the source patient.

• Request a copy of your treatment plan including baseline lab work and medications ordered and source patient results.

• Call Student Health Service (SHS) at 215-746-3535 to schedule a non-urgent evaluation at SHS within 1 week from exposure if possible.

• Bring your treatment plan, baseline lab results, list of medications ordered and source patient results with you to SHS.

• You will be given a schedule as to when to return to Student Health for follow-up testing.

If you are at the following hospitals, please go to the place listed. You will be treated in accordance with the hospital’s needlestick policy for healthcare workers. All affiliated hospitals’ needlestick policies have been reviewed by the Director of Infection Control for HUP and meet established standards. All follow-up testing for the students is done at Student Health Service. Students should bring their records to Student Health Service so that appropriate follow-up testing can be scheduled.

Children’s Hospital of Philadelphia - Report to Occupational Health Service during weekdays or to the Nursing Supervisor on weekends and evenings.

Presbyterian Hospital – Report to Occupational Medicine or to the Emergency Room if they are closed.

Pennsylvania Hospital – Report to Employee Health or to the Emergency Room if they are closed.

Chestnut Hill Hospital – Report to the Emergency Department.

Chester County Hospital – Report to the Emergency Department.
Lancaster General Hospital – Report to the Emergency Department.

Reading Hospital – Report to the Emergency Department.

Outpatient Ambulatory Sites - Report to HUP Occupational Medicine or to its satellite at Radnor, whichever is a closer distance to your site.

Billing Procedures
The School of Medicine will pay for any charges not covered by the student’s insurance so the student does not incur any expense associated with the exposure. At the time of service, please provide your insurance information to the hospital. If you receive any invoice(s) for balance payments due, please bring these immediately to the Office of Student Affairs so the School of Medicine can pay these charges.

Additional Assistance
If you have difficulty getting the consent of the source patient, or any other problems associated with your needlestick, please contact Dr. Jon Morris, Associate Dean for Student Affairs, at 215-898-7190, 215-662-2131 or cell 215-313-6990.

•◆ Attendance Policy ◆•

The goals of the attendance policy are to insure that students have the ability to access medical care when needed and to minimize non-urgent absences from clinical educational activities. Clinical teams expect students to make every effort to attend clinical activities even when there are competing interests or pressures such as exam preparation. This is consistent with the expectations of physicians by their patients. On the other hand, the school acknowledges the legitimate need for student access to important family or personal events along with any required medical care; the latter must be available in a private and confidential manner. The following guidelines seek to balance these requirements:

- Attendance during clinical rotations is mandatory.
- Attendance will be tracked by the assigned clinical team.
- Students should seek permission 8 weeks in advance of any planned absences to facilitate arranging schedules of the clerkship.
- Permission for an absence for an acute illness or an acute exacerbation of a chronic illness or other unavoidable events such as an acutely ill family member or a death in the family should be requested from the clerkship directors as soon as possible and will routinely be granted.
● Students who are scheduled for ongoing recurring appointments or who have other ongoing medical issues during a clerkship should inform Carrie Renner, the Associate Director of Student Affairs, of their schedule. Ms. Renner will inform the clerkship directors of the student’s schedule and help accommodate the student’s needs while maintaining students’ privacy.
● Students should also inform Ms. Renner regarding any acute medical condition so that the Office of Student Affairs can help in securing medical care for students and for coordinating any scheduling issues that may arise.
● Other examples of possible acceptable reasons to request excused absences include
  ○ presentation of original research at national meetings for the actual presentation (not for the length of the entire meeting)
  ○ a family wedding or participation in a wedding party
  ○ ongoing need for medical care that cannot be arranged at more convenient times
● Examples of unexcused absences include traveling to spend time with friends or minimizing travel expenses by traveling during rotation time.
● If travel is appropriate and absence would typically be excused, students still must obtain permission from the appropriate clinical director prior to making travel plans and minimize any absence to as few days as possible.
● The clerkship director may require the student to make up missed time during the rotation.
● Absences during one week clerkships are discouraged. Any absences requested during the one week rotations must be approved in advance and made up by agreement with the course director(s) prior to the start of Module 5.
● Repeated or habitual absences will be brought to the attention of Drs. Goldfarb and Morris, and may result in a meeting before the Student Standards Committee.
● Any questions as to whether an absence is appropriate or excusable should be sent to Anna Delaney or Carrie Renner for consideration.

Note that the School of Medicine will be undertaking a review of the attendance policy in mid-2019, so changes to the above information may be imminent.

***In case of illness: please don't come in and infect your co-workers/patients if you are unwell (fever or vomiting mean stay home); HOWEVER, if it is a mild illness (such as a mild URI) you are usually expected to come in. In the past, absences perceived to be due to mild symptoms have been noted and unfavorably commented on by supervisors.

◆◆ Transportation ◆◆

School of Medicine Transportation System

The Office of Student Affairs has worked with the University Parking and Transportation Office to develop a safe, affordable way for students to get to various hospitals between the hours of
3:00 am and 7:00 am and home from the hospitals between 8:00 p.m. and 12:30 am. The system that has been established utilizes escort vans only available for medical students.

**Boundaries**

The shuttle service operates within the following boundaries:

**North**
- Spring Garden Street (Powelton Village)
- Market Street (West Philadelphia)
- Ben Franklin Parkway (Center City)

**South**
- Christian Street (Center City)
- Woodland Avenue (West Philadelphia)

**East**
- 8th Street

**West**
- 50th Street

**EARLY MORNING SHUTTLE SERVICE**

From 3:00 a.m. to 7:00 a.m., Penn Transit Services (PTS) will schedule special white 15 passenger vans marked "Univ. of Penn. Parking & Transportation", to transport medical students to and from HUP, CHOP, Presbyterian Hospital, Veterans Administration Hospital, Pennsylvania Hospital and their residences, seven (7) days a week. This service is now free and does not require vouchers.

**Scheduling a Pick-Up**

These trips should be booked the evening before but no later than midnight (12:00 am) of the same morning of the trip. PTS will maintain a fifteen (15) minute window from the actual scheduled pickup time. This may vary depending on weather and road conditions. Therefore you need to schedule the ride for 15 minutes earlier than you would ordinarily need to leave to allow for this 15 minute window. To schedule a pick-up time, please follow the instructions below.

1. **Call 215-898-Ride.** You will get voice mail which will give you two options
2. Option #1 is for recorded information. Option #2 is to speak to a live operator.
3. **After Option #2 is announced you must push 4 on your telephone. (This will not be announced.)** This will take you to a private mailbox where at the prompt, please leave your name, request day and date, pick-up time, pick-up address, destination and your telephone number on the Voice Mailbox.
4. Be ready to leave at your scheduled time (vans are only required to wait for three minutes after they arrive at your location).
5. Have your voucher ready to give to the Shuttle driver when you enter the van.
6. Should you experience any delays in pickup over thirty (30) minutes, please call 898RIDE (Please do not call this number unless it is an emergency).

Procedure for Canceling a Pick-Up

1. Pre-scheduled Cancellation between 7:00 am - 2:30 am, Monday through Sunday:
   a. Call 898-RIDE
   b. Press #4 after introductory message to reach the reservation line.
   c. Leave your message with name, address, date and time of pick-up.
   d. Your pick-up will be automatically canceled.
2. Emergency Cancellation between 12:00 am - 7:00 am, Monday through Sunday call 215-898-RIDE.

You must call to cancel a scheduled pickup or it will be considered a "no show". Two "no shows" in a 30-day period will result in a suspension of service for a 7-day period.

EVENING SHUTTLE SERVICE

To get home from campus or the hospitals between the hours of 8:00 pm and 12:30 am, Penn Transit Services has a special shuttle service just for medical students. This service will pick up students at the following stops: the Gates Pavilion, the Johnson Pavilion, Presbyterian Hospital and the VA Hospital and take them to their residences within the boundaries. To access this service please follow the instructions below.

2. Identify yourself as a Penn Medical Student.
3. Let the operator know at which stop you are located (Gates Pavilion, Johnson Pavilion, Presbyterian Hospital or the VA.)
4. The van will pick you up within 15 minutes from the time that you call.
5. Have your voucher ready to give to the driver when you enter the van.

PENN TRANSIT SERVICES (PTS)

You may call the PTS Idea Line (898-IDEA) at any time for any compliments, complaints, or new ideas on improving this service. Shuttle Service operates 7 days a week, year-round, with the exception of all holidays observed by the University of Pennsylvania.
Clerkship year can be stressful, but always remember that you are not alone!
Penn has many resources available to you:

Suite 100:

- Director of Student Affairs: Carrie Renner
- Registrar: Helene Weinberg
  - If you haven’t figured it out by now, Carrie and Helene are two of the most generous, helpful people that you will ever meet. Even if you think your question or concern has nothing to do with the Registrar or Student Affairs’ offices, these two amazing women will always give you the time of day and go out of their way to help you out. Never be shy!
- Dr. Jon Morris (aka JoMo): JoMo is one of your biggest advocates. For such a big boss, he’s easily accessible and he can be especially helpful for bigger picture concerns about performance in school and regarding residencies and beyond.
- Student Affairs Coordinator: Jessica Marcus
- Tutors: If in need of extra help on specifics like Shelf exams or writing H&P’s, there are often tutors available through Suite 100. Contact Carrie to set this up.

Organized counseling:

- Counseling: CAPS: http://www.vpul.upenn.edu/caps/: Over 3,200 students at the University of Pennsylvania use this every year. For a 9-7 pm (open until 7pm Wednesday and Friday, until 5pm other weekdays) appointment: 215-898-7021. For after hours/weekends: 215-349-5490.
- Therapists in the community (Carrie from Student Affairs can provide names and contact info)
- Paired mentoring: Join SNMA, LMSA, Elizabeth Blackwell Society for peer mentorship opportunity. Also, reach out to your house mentors. They are your advocates!

Other people to turn to:

- The Gold Humanism Society: Penn Chapter: You can reach out to Dr. Katie Margo, the faculty advisor or any of your peers in this group. Among the Gold Humanism Society’s many goals include supporting students throughout their clerkship year. They want to take an active role in improving the emotional and humanistic components of medical school (for both you and your patients), so please contact them with any specific concerns or ideas.
- Doctoring preceptors.
- Advisory deans.
- Clerkship directors (it’s really ok to talk to them!)
- Mentors you have connected with in pre-clinical years (through clinics, volunteering, etc).

Don’t forget how important friends and family are outside of medicine. Don’t exclude them from what can be a very busy, emotional but rewarding world. Share your good and bad days with them.