

ACS Rotation Orientation

Welcome to the ACS rotation. We, the ACS attendings, would like to thank you in advance for your hard work and dedication to our patients and our service. We hope you will enjoy your rotation with us and learn more about the challenges of caring for acutely ill surgical patients and trauma patients. We know this will be a challenging month with a lot of patients, consults, traumas, etc. We hope this information helps you navigate the ACS service, helps you manage surgical patients, and helps you learn some skills to take with you on your journey. This packet will be updated as the service changes and grows

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- **Team organization**

- a. **Schedule**

- i. **ACS shifts** are from 6:30am to 7:00pm with a 30min sign-out period from 6:30pm to 7pm. You are required to be here at 6:30am (or 6:30pm if covering nights) to assume responsibility for the trauma and floor pagers. There is a group sign-out every morning (Morning Report) at 6:45am in the Trauma/ED Nursing Staff Conference Room located right next to the patient's elevators on A-level. The door is often locked and you will need to wait for your attending to open the door. Morning report on Wednesday mornings will occur at 8:30am after M&M in the A-level amphitheater. PM sign-out is from 6:30 to 7pm and is done in the call room on the 8th floor. This sign-out may be quicker than the AM sign-out but is just as important.
- ii. **Multi-Disciplinary rounds:** Tuesday morning at 9:00am in the 8th floor day room. Be ready to give a 1minute overview of your patients with an emphasis on needs pertaining to case management, discharge, speech therapy, physical therapy, occupational therapy, and social work.
- iii. **Morbidity and Mortality conference (M&M):** Every Wednesday morning from 6am to 8:30am. Lecture for the 1st and 2nd years is in the A-Level amphitheater from 6-7am followed by M&M from 7am to 8:30am. M&M is immediately followed by Morning report in the A-level amphitheater so do not leave the room at the end of M&Ms. Attendance for non-surgical residents is not mandatory but highly encouraged. If you are not in M&M (with the exception of ED residents who are at mandatory department educational conferences) make plans to be present at 8:30am for morning report.
- iv. **Weekend schedule:** shift hours are identical and morning report will continue as well. The only difference is the complement of residents on the team will decrease. There may be a floating resident assigned to your team. Please check with your senior every Friday to clarify rounding plans and team members for the weekend.
- v. **Trauma Conference:** Every Friday at 12:00 there is a trauma conference in Coleman room 21009. This is the main educational conference for the rotation. Journal articles, trauma subject reviews, research updates and other educational content will be covered on a rotating basis. You may be required to present a paper or topic. Please check with your senior resident for the schedule of presentations and papers. Most Fridays there is food that is provided however occasionally there is not. The team should receive a page prior to conference to inform everyone if there is food provided.

- vi. **ACS clinic:** The team that is not on call on Wednesday (an occasionally Friday mornings) will be required to help in ACS clinic at 13:00 at the FMO suite 2100. Ask an MA which station ACS clinic is at. Usually it is at the very last station. Your Senior resident will let you know if you are needed to be in clinic on Friday morning.

Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
06:30- shift start 06:45 - Morning Report 18:30 - PM sign-out	06:30- shift start 06:45 - Morning Report 09:00- Multi-disciplinary rounds 18:30 - PM sign-out	06:00-Lecture 07:00 -M&M 08:30 - Morning Report 13:00- ACS Clinic 18:30 - PM sign-out	06:30 - shift start 06:45- Morning Report 18:30 - PM sign-out	06:30- shift start 06:45 - Morning Report 08:00- ACS clinic 12:00- Trauma Conference 18:30 - PM sign-out	06:30- shift start 06:45- Morning Report 18:30 - PM sign-out	06:30 - shift start 06:45- Morning Report 18:30 - PM sign-out

b. Which team is admitting patients?

- i. Based on the ACS call schedule the team on call will admit for a 24 hour period starting at 7am. The team on call is the team assigned to the attending that is listed first for that day. For example, the attendings for October 5th are listed as O’Bosky/Turay. This means that O’Bosky is on call and the team rounding with O’Bosky is accepting patients. The team rounding with Turay is the backup team and must be available to assist in emergencies if needed.
- ii. This schedule will often be altered over the weekend based on Attending and senior preferences. Most of the time the service who has the attending on call during the day will admit during the day and the other team will admit at night. Please clarify with your senior which team is accepting patients over the weekend.

c. We are one team – back each other up

- i. Although there are two teams (A and B) the service functions as one big team. What this means is that if you need help and your senior and attending are unavailable, you should ask the other team’s senior and/or attending for help. Also, if nurses call about a patient, don’t just say “that patient is on the other team” and hang up, you should ask what the issue is first. If it is an urgent/emergent issue such as chest pain or shortness of breath tell the nurse you are on the way, give any necessary verbal orders, and while you are going to see the patient you should page the other team to meet you bedside. If the issue is something non-urgent like medication clarification, lab value notification, etc. please provide the nurse with the pager number for the appropriate person.
- ii. Even though your team may not be on call for the day if the other team is very busy with OR cases, consults, traumas etc. you may be asked to help carry the load. Please help out

without complaint or hesitation. You may also be asked to go see consults at east campus or HSH. If this does occur, just make sure the other members of your team know where you have gone and that someone on your team knows about your patients and what to follow-up on.

- **Intern Duties**

- a. **Holding the pagers**

- i. The day your team is on call you will have a pager to hold. The senior has the senior pass around pager and the interns each have a pager that is either the ED pager (2430) or the Floor pager (1890). You are responsible for responding to the pages from your respective pager.

- 1. **Floor pager:** this is mainly used for consults from other services although nursing staff may page this number to get in touch with the ACS team. If it is a consult page you must speak to the requesting team in person. They are not allowed to just text page information about a patient and expect you to see them. Always get a call back number for the requesting team along with the patient's name, MR#, location, and reason for the consult. Prior to seeing the consult you should talk to your senior. The senior will help you triage consults, tell you what consults to see first, and occasionally clarify that a consult is not needed. If you talk to your senior they will prevent you from wasting your time. If the call is from a nurse and is asking about a floor patient that is not yours remember to deal with emergent issues and provide the appropriate contact number to the nurse if it is not an urgent issue.

- 2. **ED pager:** when holding this pager you will be responsible for responding to traumas and to consults from the ED. There are 3 levels of trauma activations: A, B, and C. Level A traumas are the most severe patients and require an immediate response. Your goal should be to get to the ED before the patient if at all possible. Level B activations may also be very sick patients and you should try to get to the ED prior to patient arrival if possible. Level C patients are essentially trauma consults. You have one hour to respond to these patients per guidelines however these patients often have issues that require more urgent attention so you should head down as soon as you can to see them. If a level C occurs at 06:30 or 18:30 go down and eyeball the patient to make sure they are stable and don't need anything urgently (like a chest tube) and make sure the

nurse records you were present. You may then sign out the trauma to the new team to complete the workup. ED consults have a 1 hour response time as well and a plan regarding admit or further work-up is required to be documented in the chart prior to 2 hours after a consult is called or the attending is notified. Do your best to see ED consults in a timely fashion. Please communicate with your senior and the ED attending responsible for the patient as soon as possible. Never leave the ED without telling the ED attending (not resident) the plan for the patient.

b. Updating team lists

- i. You are responsible for placing every new patient and consult on your team's lists (both on epic and in Microsoft Word). This job may be delegated to a student but it is your responsibility to ensure the patients are on the list and that the information is accurate. The lists should be updated prior to 06:30 and 18:30 for sign-out purposes. Any pending consults that the team has not been able to see in the few minutes prior to sign-out should also be placed on the list (at least the name, MR #, location, and reason for consult). **DO NOT REMOVE PATIENTS FROM THE LISTS WITHOUT PLACING ON THE DISCHARGE LIST!**
- ii. Discharge lists: the senior residents will create a discharge list. Please copy and paste patient information from the active Microsoft word list to the discharge list prior to deleting from the word list. This will ensure that important patient information is not lost and that if a team is called back about a patient the information is readily available. It is also helpful to track bounce-backs. Please ask your senior resident to show you the discharge lists.

• **Admit/Consult documentation:**

- a. H&Ps: there are two H&P notes for the ACS service. One is the trauma H&P and one is the ACS H&P.
- b. **Trauma H&P:** can be found by creating a note in note writer, selecting note type as H&P then choosing Adult Trauma H&P Template (see Appendix A Trauma H&P for screen shots).
 - i. The text in green is instructions and should be deleted prior to signing the note. Please pay attention to what the instructions are asking and make sure that portion of the note is appropriate.
 - ii. Please draw all injuries on the outline of the man. You can choose a pencil and draw and/or use the # sign which will bring up a box and create a key to label injuries. (please see appendix B)

- iii. For compliance with the American College of Surgeons and for billing purposes, no section can be left blank. Please do not sign the note until you have gathered the information to fill it in. You need to do a complete review of systems which includes 10 systems. If you cannot complete that please state why i.e.: patient intubated and sedated. Please wait to sign the note after all the preliminary reports for CT scans have been posted so that you can update the smart-link button and bring in all the reports. Please make sure to fill out the results of the ETOH and Tox screens. You can always addendum a note before the attending signs it.
- iv. The yellow box at the end of the note is to organize the list of injuries by systems so that injuries do not get missed. It is not the place to repeat your physical exam findings or copy and paste CT scan reads. This is a list of problems that like those you would put in the patient's problem list.
 - 1. Examples of Acceptable problems: Right temporal subdural hemorrhage, concussion with loss of consciousness less than 30 min, left pneumothorax, 15cm x 30cm abrasion left arm, cervical spine tenderness,
 - 2. Examples of Unacceptable problems: Abdomen: NT, ND, no abrasions, Right temporal extra-axial fluid collection extending from the proximal temporal region to the occiput with 3mm midline shift and right ventricular effacement, Anything phrase containing the words clinical correlation advised.
 - 3. If there are no injuries in a system, simply state no injuries identified.
 - 4. The last box labeled Non-Trauma/Chronic Ongoing Medical Problems: should be used to put medical problems that will need to be managed as an inpatient such as diabetes, hypertension, COPD, chronic alcohol abuse. It should also be where electrolyte abnormalities, pre-existing infections such as UTIs and acute drug or alcohol intoxication is documented.
- c. Once the trauma H&P is complete it is imperative that the problem list and the hospital certification be entered immediately.
 - i. **Problem List:** The yellow box at the end of the trauma H&P is the template for building a problem list for the patient. Any problem listed in the yellow box should have a corresponding problem entered into the problem list. (See the end of Appendix A)
 - ii. **Hospital Certification:** every patient admitted to inpatient or observation status must have a hospital certification completed at the time the H&P is completed. Please create a

hospital certification by creating a new note and choosing hospital certification as the note type or by clicking on the hospital certification tab on the left sidebar of your screen and creating a new note under that tab. You must choose a hospital certification note that matches the type of admit; either inpatient or observation. This note should have the same cosigner as the trauma H&P.

- d. **The Acute Care Surgery H&P** should be used for all patients being admitted under ACS as a primary service that are not trauma patients.
 - i. It can be found in the same place as the Adult Trauma H&P. Click the “Create in Note Writer” button and select H&P as the note type then choose Acute Care Surgery H&P Template (see the first picture in Appendix A and Appendix C)
 - ii. Once again the text in green is instructions on how to complete important sections of the note. Please pay attention to the instructions then delete the instructions prior to signing the note.
 - iii. If using “dot” phrases you may not leave any section that says “Not on file” you must also complete every section. You cannot put “none” for family history. You must actually ask the patient then put the accurate information in or choose that the information was unobtainable and explain why.
 - iv. Once again the note will automatically update imaging and lab reports. Please wait to sign the note until preliminary reads are available and refresh the smart-links prior to signing the note.
 - v. Once your Assessment is completed in your note including the chronic ongoing medical problems that require management during hospitalization please complete a corresponding problem list. This is found under the “Problem List” tab on the left side bar. Every problem listed in your assessment should be included in the problem list.
 - vi. Create a hospital certification note (either inpatient or outpatient) and assign it to the attending that will cosign the H&P note.
- e. **The ACS Consult note:** should be used for all non-trauma consults. It is not found in note writer (our current version of EPIC does not support note writer for consults). It can be found by opening a new note. Select consult as note type and Acute Care Surgery as service. In the text bar by the editing tools type in “acs”. You will then choose the Acute Care Surgery Consult. (see appendix D)
 - i. The ACS consult note is almost the same as the ACS H&P except for 3 items.
 1. There are boxes at the top of the note that must be completed. The boxes contain places for the referring provider, service, and reason for consult as well as documentation the information contained in the consult

note was communicated back to the referring physician. This information must be legally included in a consult note in order to bill for a consult.

2. Because Note Writer does not support consults yet we cannot use the click box lists for the review of systems and physical exam. For these you will need to use a drop down list and choose the systems you are documenting. It is imperative that you document 10 systems in the review of systems and 8 systems in the physical exam. Pin the physical exam please make note of any surgical scars on the abdomen as well as the remainder of the abdominal exam.
 3. When completing the assessment please remember to include chronic ongoing medical problems that will require attention while admitted.
 4. Please update the patient's problem list with new diagnosis stated in the assessment from the consult note. (do not delete diagnosis as another team is responsible for updating this list)
 5. When you are called for a consult please look to see if ACS has seen the patient before. If they have, you should write a daily progress note and not a consult note. The patient should also be placed on the list for the team that initially saw the patient unless instructed by your senior or attending.
- ii. **Documentation guidelines:** You **must read** this section in the appendix. This is educational not only for this rotation but for every rotation and for your future as a physician. See Appendix E
- **ACS Order Sets:** All admit/observation order sets can be found by searching for ACS (see appendix F)
 - a. Admission Orders: there are two order sets for all ACS patients (both trauma and acute general surgery) ACS ICU admission orders and ACS Intermediate/Observation orders. Chose the ICU order set if the patient is being admitted to the ICU and chose the Intermediate/Observation order set if the patient is being admitted to the floor. If the patient is post-op please choose the post-op order sets when admitting/readmitting to the floor.
 - b. DO NOT USE ADMISSION ORDER SETS FROM OTHER SERVICES
 - **How to get a patient to the OR:**
 - a. **From the Floor:** There are several items that must be completed to get a patient to the OR:
 - i. **Consent:** there are two consent forms. One is the Procedure Consent which is a yellow and white bi-fold form. The second is a white two-sided Informed Consent. Both these forms need to

be completed and double checked prior to a patient going to the OR. If it is not completed correctly there will be delays in getting to the OR. The procedure on both forms must match and you may not use abbreviations. If you need to add to, or correct the consent in any way you and the patient must initial the change as well as time and date it. If you do not know the risks and benefits of a procedure discuss the consent with your senior. If you are uncomfortable obtaining the consent let your senior know and they will help you.

1. **Procedure Consent:** The admitting physician is the physician on epic that is caring for the patient. The Surgeon is the name of the surgeon performing the surgery. Often there may be multiple surgeons or you are not sure who will do the case. You should always write out the names of all the ACS surgeons: (i.e.: Turay, Gaspard, O'Bosky, Mohr, Mukherjee, Catalano, Nguyen, Gomez, Solomon). Patient signature must be witnessed by an RN. If you need to do a phone consent you will need two nurses to confirm the procedure with the patient.
 2. **Informed Consent:** This consent must have the risks of the procedure written in the space provided. Always include the basic risks of surgery (bleeding, infection, damage to surrounding structures, need for further procedures, pain, scar, risks of anesthesia including cardiopulmonary failure, blood clot, stroke, and death) as well as any specific risks for that procedure.
 3. **Blood Consent:** this is located on the back side of the informed consent. You should always obtain a blood consent unless a blood consent has been obtained previously in the hospital stay (look through old consents beforehand). You must explain the risks of a blood transfusion which include transfusion reactions (including TRALI) and infections.
 4. **Emergency Consent:** is located on the back of the informed consent. It must be filed out by a licensed MD. Some people call this a two-physician consent.
- ii. There must be a **progress note signed** in the chart (does not need to be cosigned yet) from the day of surgery
 - iii. An **interval H&P** note should be entered. The interval H&P can be found by opening the surgical Navigator tab on the left of your epic screen. Click on update h&p then click add interval to the desired note. Complete the update note that appears below. (see appendix G). If the interval h&p is not completed the case will be delayed and the attending will be paged notifying them

that the interval has not been completed. (it's never good for the attendings to get paged for not having updates)

- iv. **Site Marked:** the site of surgery should be marked with your initials and an X with ink on the skin at the surgery site. Marking the patient should occur on the floor prior to going to Pre-op. If the patient is not marked there will be a delay in the case. You should keep an OR pen in your pocket for marking sites. (you can get pens from pre-op).
 - v. Don't forget to make the patient **NPO at midnight** the night before the procedure as well as start **maintenance fluids** while NPO if the patient doesn't already have fluids. Check with your senior to determine fluid type and rate.
 - b. **From the ED:** you will need to complete an h&p and it must be cosigned by the attending. This means the h&p must be completed ASAP and you should notify the attending that it is ready for a signature. Once it is signed you need to complete an h&p update. And mark the patient. Don't forget to update the problem list and complete the hospital certification.
 - c. **From the ED on an Emergent Patient:** the patient will likely be taken to the OR as fast as possible. Grab a consent form and write the procedure name in the emergency consent section and take it to the OR. Complete the h&p and update as soon as possible but OR will not be delayed if this is not completed.
- **Daily Care:**
 - a. **Progress notes:** please ask your senior or another intern to share the progress note template with you. At some point we will have new progress notes to use so do not be surprised if we ask you to start using a different note. Every patient needs a progress note every day with the exception of patients that are being discharged that day. The discharge summary will suffice as a progress note for that day. Please make sure you document all active medical problems including chronic ongoing medical problems that are being managed by the team.
 - b. **Case Management Tips:** Each floor has a case manager (or two) that help arrange the logistics of getting a patient home. Every day you need to speak with each case manager on the floors where ACS patients are being cared for and update them on the patient's status, projected length of stay, and anticipated home discharge needs. Appendix H contains a list of help-full tips for floor orders, home health, discharges etc. that has been compiled by a resident (Steven Kaspick) and is very helpful. If you come up with additional tips that would be helpful for the next group of people please write a "tip sheet" with screen shots and email it to kobosky@llu.edu and Dr. O'Bosky will add it to this document and give you the credit.

- c. **SICU Patients:** All patients on the SICU list must be followed daily while in the SICU. This means that they need a progress note daily. You should decide within the team who will see these patients. It is important to know the patients well because they will come out of the SICU onto the ACS service. When a patient is transferred to the SICU it is required to complete an SBAR (see the tips section in the appendix), talk to the SICU resident, and write transfer orders. The SBAR template can be found by opening a note and typing in “sbar” in the [Insert smart text] box. Occasionally it may be necessary to ask the senior or attending to call patient placement if you are told there are no beds. The SICU resident/team may come help manage the patient with you if they are not swamped (you cannot assume they are coming and must care for the patient until they are physically in the SICU). When patients are transferred out of the SICU the SICU team will also write an SBAR note as a transfer note. Please read the note and be familiar with the current problems and plans. Always discuss with the patients that SICU is asking to be transferred out of the unit with the senior and make sure the senior agrees they are safe for transfer. Occasionally the SICU team can jump the gun. You are responsible for writing transfer orders from the ICU to the floor. You should write the orders as soon as possible once you get the “OK to transfer” from the senior or attending. The SICU is always impacted and needs beds.
- d. **Discharges:** every patient needs a discharge summary. To write a discharge summary you should first update the problem list and make sure that all the problems addressed in the hospital stay is identified. Then you should check the box indicating which problem is the principal problem (usually the most life threatening problem on the list). Next you will open a note and type discharge summary in the note type. The discharge template will automatically appear. (see the tips in appendix H for additional help). It is not uncommon for a patient to be in the hospital for a long time and writing a d/c summary after an extended stay is an arduous task. In order to make this easier you can start a discharge summary and share the note with the others on the team and update it every day or every couple days. If you start a discharge note and update it daily it is important that you update the note dates, times, discharging attending, co-signing attending, and discharge exam prior to signing. You should also make sure that the patient has referrals or appointments for all services that require follow-up, all prescriptions are printed/e-prescribed, there are appropriate wound care instructions, and that the patient has the appropriate supplies.
- e. **Medical Students:** The medical students are on service to learn how to be interns therefore you should help include them in your daily work. Show them how to write orders, find medications doses, work

up acute problems that occur on the floor (Chest pain, shortness of breath, a-fib, etc.), and have them see consults.

- i. **Consults:** If the consult is not an extremely sick patient that is crashing the students should be given 15-20min to see the patient and perform an h&p. They should write up the h&p on paper to be used as a reference for presenting the patient to the attending as well as for helping write the past medical history and Review of systems portion of the note for epic. You should have the student formally present these consults to you then you need to go see the patient and review the history with the patient and perform your own physical exam. You should then make a plan and discuss the patient with the senior. The student should get a chance to present these patients to the attending.
- ii. **Daily notes:** students should start the rotation seeing 1-2 patients daily but by the time they are at the end of the rotation they should see 3-4pts daily. The students should examine the patients and write a soap note on paper to be used for the patient presentation. Please quickly look at their notes to make sure they are completing soap notes correctly. The resident must also see every patient that a student is seeing and the resident is responsible for the daily soap note in EPIC.
- iii. **Operating Room:** it is your job to help students get to the OR for cases. If you know a patient went to the OR you should make sure there is a student in the OR with that patient. There should not be operations performed without a student if there are students on service that day. The OR is a priority over seeing consults or any other daily activities.
- iv. **Lectures:** students have lectures Friday mornings from 07:00 until noon. Students should come Friday morning to help the team with gathering vitals and updating lists and should attend morning report at 06:45. They can leave a couple minutes before 07:00 to make it to their lectures in the A-level amphitheater. Students are not expected to return to rounds on Friday afternoon. Students also occasionally have lectures on Monday and Tuesday afternoons at 4pm. They should tell you when they have lecture. Feel free to give the students a mini lecture on a topic that you feel knowledgeable on. The students really appreciate being taught.
- v. **Evaluations:** every Friday morning it is expected that all residents and attendings will fill out evaluation forms for the students at morning report. The evals will be brought to the resident call room on Thursday. The night team should bring the envelope to morning report. The evaluations can be filled out either Thursday night or Friday morning in morning report but they must be completed. If you worked with the same

student the week prior you should comment on their improvement or lack thereof.

- **Traumas:**

- a. **Roles:** the response to trauma consists of the trauma team (ACS attending, senior, junior, and medical student), ER attending and ER resident, Trauma Nurse (aka scribe), a procedure nurse, a medication nurse, a respiratory therapist and an ER tech. A level A response will bring the blood bank as well. When you arrive in the trauma bay show your badge to the trauma Nurse and tell them you are the ACS junior. This way your presence will be recorded.
 - i. The role of the ACS junior is to perform the primary and secondary surveys and to LOUDLY communicate the exam to the senior and the scribe. You may also be asked to perform procedures with supervision.
 - ii. The ACS senior is responsible for managing the trauma under the guidance of the ACS attending using ATLS principals and is called the Trauma Captain.
 - iii. Odd/Even days: the responsibility for running traumas alternated between the ED and the trauma team based on the day. Even days are ER lead days (E for ED) and Odd days are trauma team days (O for OR). On the days the ED is captain if the ED resident decides not to fulfill the role as captain the trauma team will assume this role automatically.
 - iv. From the time the trauma team arrives at a trauma you should care for the patient as if it is your patient. This means you are responsible for putting orders in, cleaning wounds (unless the ED would like to handle it), and watching that the patient remains stable. This means that you are continually checking on these patients. You do not forget them once you have written orders and left the ED. Level A and B traumas should not go to the CT scanner or IR without a member of the trauma team to ensure that the patient is stable. If there are multiple trauma activations at one time as your senior where you will be most effective.
- b. **Stoplight:** The stoplight is a protected 60-90 seconds of time that the EMS providers have to give an un-interrupted sign-out to the entire ED team. This is when you will hear the details of the accident/incident, the status of the patient, fluids and meds given en-route, IV access, and any additional pertinent information such as airbags, seatbelts, ejections etc. During the sign-out you should be listening, not trying to assess the patient. The ABCs can wait a few more seconds so that you know what you are dealing with. Once the EMS personnel finish their report and all any questions have been answered (feel free to ask if you have a question) you may start your assessment. Most EMS providers don't need more than about

45seconds to complete their sign-out. If the patient is receiving CPR as they are brought in CPR should continue while the sign-out occurs but you should still listen and start your primary as soon as the EMS crew finishes giving information.

- c. **Personal Protective Equipment (PPEs):** many of our trauma patients have communicable diseases. In order to protect yourself from blood and body fluid exposure it is imperative that you wear PPEs. This includes a hair net, mask with face shield, blue impervious gown, and gloves. Shoe covers are also highly recommended if you don't want to get blood on your shoes. The use of PPEs in traumas is mandated by OSHA. If an OSHA site visitor sees you without PPEs you can personally be fined \$40,000 and the hospital will also be fined \$40,000. So unless you want to add to those already hefty student loans I suggest you cover up.
- d. **Primary Survey:** the purpose is to identify life threatening injuries immediately. It consists of evaluating the ABCs. The primary survey should take very little time 10-30 seconds and is followed by addressing life threatening injuries in a prioritized sequence so that the threat that poses the greatest threat to life is managed first. If you have not taken ATLS, I encourage you to read about the primary and secondary survey in the current ATLS manual and look up videos to see examples of what you will need to do. You should do this reading and watch videos prior to starting the rotation as it is very possible you will be required to perform a primary or secondary survey within minutes of starting the rotation. You are the link between the trauma captain and the patient. The trauma captain stands at the foot of the bed and orchestrates all the different rolls in the trauma bay so they cannot do the exam themselves. This means that you have to be the one to examine the patient and most importantly communicate that exam to the trauma captain and the trauma nurse who is documenting the exam. You will need to speak very loudly in order to make sure everyone hears your exam. Think of yourself as the quarterback calling plays – **you have to be loud!!!** The following list is not exhaustive by any means but may give you an idea of the things to quickly examine in the primary survey.
 - i. **Airway:** the easiest way to assess the airway is to ask the patient for their name. If they can reply the airway is clear and they are following commands. The ED physicians will manage the airway but you should quickly look to identify things that may compromise the airway such as an expanding neck hematoma, obvious facial fractures/severe facial trauma, GCS of 8 or less to name a few.
 - ii. **Breathing:** you should assess for bilateral breath sounds (or lack thereof), midline trachea, palpate the chest looking for crepitus or obvious chest wall deformities. The goal is to

- identify tension pneumothorax, massive hemothorax, open pneumothorax and flail chest.
- iii. **Circulation:** you should listen to the heart for heart sounds, palpate carotid, femoral, radial and dorsalis pedis/posterior tibial pulses, identify and control obvious sources of hemorrhage, note skin color/pallor. The goal is to identify life threatening hemorrhage and its cause.
 - iv. **Disability:** you should assess the patient's GCS (if you don't know the GCS scale you should memorize it now), examine the pupils for size, and reactivity, identify that the patient has moved all extremities or not.
 - v. **Exposure/Environment:** help cut off the patient's clothes to expose the entire patient. You don't want to miss a life threatening injury because it is hidden under the patient's clothes. This means cutting off underwear as well. This should be followed by placing warm blankets on the patient.
- e. **Secondary Survey:** this begins once the primary survey is completed and resuscitative efforts are underway. Since you are not the trauma captain who is directing the team you should begin your secondary survey immediately after you finish the primary survey. The secondary survey is a head to toe examination of the patient identifying all injuries (even the small scratches) and obtaining a history and review of systems. You should call out all injuries that you identify along with estimated sizes. For example: "3cm laceration to the left forehead" the following is not an exhaustive list but included to give you an idea of what to examine. You should read about the secondary survey in the current ATLS manual and search for videos online. Some of the secondary survey can be completed after CT scans are obtained.
- i. **Head:** Examine the entire scalp and head looking for lacerations, hematomas, fractures. Examine the eyes looking at the pupils and conjunctiva for injuries, ask about visual acuity, and examine extra-ocular movements. Palpate the bones on the face, palpate for mobile maxilla, palpate the mandible, ask if the teeth come together like normal. Perform a cranial nerve exam. Look into the ears with an otoscope to evaluate for hemotympanum.
 - ii. **Neck:** palpate for hematomas, tenderness crepitus, laryngeal fractures, listen for carotid bruits, look for seat belt signs, lacerations on the neck and distended neck veins.
 - iii. **Chest:** palpate the entire chest including the clavicles and note tenderness or fractured areas, look for open wounds, lacerations, hematomas, etc.
 - iv. **Abdomen:** palpate the abdomen looking for tenderness and distention, look for abrasions, open wounds, lacerations, and seatbelt signs

- v. **Pelvis:** palpate the pelvis over the iliac crests looking for instability (this should only be done once by one provider – it can cause more bleeding)
 - vi. **Perineum:** look for open wounds, blood at the meatus, vaginal discharge (especially if pregnant). A manual vaginal exam should be performed in females with pelvic fractures to evaluate for vaginal lacerations
 - vii. **Rectal:** a rectal exam should be performed looking for blood, rectal tone (baseline and voluntary tone) and high riding prostate.
 - viii. **Extremities:** palpate the extremities looking for tenderness and deformities. Look for any signs that there may be an open fracture. Have the patient bend the knees and elbows, raise the arms above their head, bend the wrists, evaluate sensation, strength, and reflexes. If there is an obvious arm injury make sure you do a thorough hand exam testing motor, dexterity, and sensation in the various dermatomes.
 - ix. **History:** make sure to get your past medical history (medical/surgical/ family/social) and a complete review of systems. If these cannot be obtained you will need to document why.
- f. **Crowd and Noise Control:** if the room is getting too loud or there are extra people in the room that are not contributing to the evaluation of the patient, it is ok for any member of the team to quiet the crowd and ask non-essential personnel to step out of the room.
- g. **Imaging:** All trauma patients need a chest x-ray and a pelvis x-ray. They may also require further imaging depending on the mechanism and injuries identified by the secondary survey. See appendix I to see how to set up the ED Trauma order set to easily order images on trauma patients.
- h. **Labs:** all traumas are required to have a trauma panel which includes a CBC, CMP, lactate, PT/PTT/INR, UA, Urine drug screen, and serum ETOH. Unfortunately the ED does not like to order the urine drug screen and serum ETOH. These are both required for trauma patients by the American College of Surgeons for accreditation of trauma centers therefore we must make sure they have been ordered in the ED.
- i. **Bait Consults:** any trauma patient that tests positive for ETOH or has a urine drug screen that is positive for anything other than opioids needs to have a BAIT consult placed. BAIT stands for Brief Alcohol Intervention and Treatment. It is an evidence based intervention to help patients understand that alcohol (and drugs) is associated with trauma and the questions use will often help spur individuals to seeking help to stop drinking and using drugs. This is also a requirement from the American College of Surgeons that all trauma centers have this resource available and that patients that screen

positive for substances have this intervention. It can be ordered by searching for bait and is performed by the social workers and several other trained individuals in the hospital.

Thank you for learning about our service. We appreciate your hard work.

- ACS Attendings and Seniors