Henry Ford Allegiance Health Emergency Department

Medical Student Orientation Guide

Welcome to the Henry Ford Allegiance ED!

Scheduling

● You will work 15 x 10 hour shifts. Please request no more than 4 days off. We will do our best to accommodate them, especially for interviews.
● Any requests for shift changes/trades must be approved by the clerkship coordinator

Orientation

Please contact Luella Rosencrants lrosenc1@hfhs.org to set up your orientation time and make sure you have all of your required paperwork in.

Contact William Bunzel, DO PGY-2 wbunzel1@hfhs.org to arrange your tour and orientation to the ED.

Please don’t hesitate to contact either with questions about your rotation or the program.

Lectures

● Resident didactics are at 8am on Wednesday mornings in the CAB Auditorium. You are expected to attend these unless you work an overnight shift the night before.
  ○ Once a month we attend the ED department meeting. This is in a separate room. I will try to include which Wednesday this is in your schedule. Feel free to ask any resident in the department where didactics are that week.
● Medical student didactics will occur every Wednesday at 7 or 1pm for 1 hour in the CAB auditorium
On Shift

- Wear scrubs and your white coat
- Please be 10-15 minutes early for your shift. Introduce yourself to the resident you will be working with. For most shifts you and your resident will start an hour before your attending. (The attending and resident for each shift should be included on your schedule)
- If you are going to be late call 517-205-4811 and let the department clerk know.
  - Reasons for being late or missing a shift: Car is totaled, a bear is mauling your leg, you are dead, you are so sick that you are in the ED
- Introduce yourself to the resident(s) and attending you’re working with.
- Computers are a hot commodity when it gets busy in the ED. In the likely chance that you won’t have your own. Let your resident or attending know when you’re ready to see a patient. Make sure to take note of the **age**, **vital signs**, **chief complaint**, and **nurse’s notes** first. This will give you perspective before walking into the room.
- When seeing a patient, introduce yourself, tell them WHO YOU ARE, inform them that you are a **STUDENT DOCTOR**, and that the **RESIDENT** or **ATTENDING** WILL BE SEEING THEM SOON AFTER
  - Sit down to talk to them.
- Be nice to the nurses and techs. Ask if they need any help. Most of them enjoy teaching, and learning skills like IV placement, EKG lead placement, placing foleys, NG tube placement can be very useful.
- Learn to recognize sick and not sick patients. If you feel overwhelmed or the patient looks quite ill, come and get anyone for help right away.
- Go back and see your patients after you treat them, check in on them. Let your resident or attending know about any changes or responses to treatment.
- Bring your lunch to the ER, you may eat in the physician area. There is also a cafeteria on the second floor
- You are welcome to observe any codes, traumas, critical or interesting patients that come in (traumas are called overhead prior to arrival). Please let your resident or attending know before you go.
  - For most of these you will likely just be observing (in codes you are welcome to jump in and help with compressions). Stand in the periphery out of the way. We will let you know if there is anything for you to do.
- If you are interested in doing procedures let your resident/attending know when there is a patient who will need one. Performing laceration repairs is especially helpful. For other procedures such as intubations, central lines, chest tubes etc. you likely will assist/observe but there are occasionally opportunities for students to perform these.
- At the end of your shift make sure to get feedback on your performance from your attending and resident. Ask what they thought you did well, and what you need to work on and read up on.

- Room / Location Guide
  - Main ED rooms are numbered from 1- 60
    - Rooms 1-16
      - Lower - Moderate Acuity (Level 3’s)
      - Supplies are in the Hall
    - Rooms 17-31
      - Moderate – High Acuity (Level 2’s / 3’s)
      - Supplies in room
    - Rooms 32 - 35
      - Highest Acuity (Level 1’s / 2’s)
      - TRAUMA / Resuscitation Bays
    - Rooms 36 – 40
      - Moderate – High Acuity (Level 2’s / 3’s)
      - Supplies in room and Hall
    - Rooms 41-50
      - Secure Unit (Needs Badge Access)
    - Rooms 51-60
      - Low acuity (Level 4’s / 5’s)
      - Usually staffed with a PA
Directions and Map

- Parking is allowed at any of the locations with the yellow stars. If you are parking in the ramp, park at level 3 or above.
- The ED is the green circle. Your badge will get you in the front door.
- Didactics occur in the new education building which isn’t on the map. The Anderson building is the blue circle. Go in here and take the elevator to the second floor. Turn right when you get off and walk through the doors to GME (the GME offices are immediately to your left, Luella’s office is here). Go straight until the wall and follow the hallway as it turns right. There will be a lecture room on your left.
**Things you should review/high yield EM topics**

**EKG changes for acute MI (door to balloon time ~ 90mins)**

<table>
<thead>
<tr>
<th></th>
<th>Leads</th>
<th>Coronary Artery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Septal</td>
<td>V1 – V2</td>
<td>LCA → LAD → septal</td>
</tr>
<tr>
<td>Anterior</td>
<td>V3 – V4</td>
<td>LCA → LAD → diagonal</td>
</tr>
<tr>
<td>Lateral</td>
<td>I, aVL, V5, V6</td>
<td>LCA → circumflex</td>
</tr>
<tr>
<td>Inferior</td>
<td>II, III, aVF</td>
<td>RCA (90%)</td>
</tr>
</tbody>
</table>

**Sgarbossa Criteria** (STEMI with LBBB)  

ST elevation > 1mm concordant in leads with a positive QRS (5 points)

ST depression >1mm concordant in V1, V2, V3 (3 points)

ST elevation > 5 mm discordant with a negative QRS (2 points)

Need a score of 3 for specificity of 90% in diagnosis myocardial infarction.

Possible anginal equivalent’s – Dyspnea, Diaphoresis, Back Pain, neck pain, nausea, right sided chest pain

**Well’s Score for PE probability**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical symptoms of DVT</td>
<td>3</td>
</tr>
<tr>
<td>Other diagnosis less likely than PE</td>
<td>3</td>
</tr>
<tr>
<td>HR &gt;100</td>
<td>1.5</td>
</tr>
<tr>
<td>Recent immobilization or surgery within 4 weeks</td>
<td>1.5</td>
</tr>
<tr>
<td>Previous DVT/PE</td>
<td>1.5</td>
</tr>
<tr>
<td>Hemoptysis</td>
<td>1</td>
</tr>
<tr>
<td>Malignancy</td>
<td>1</td>
</tr>
</tbody>
</table>

Score > 4 = PE unlikely  
Score < 4 = PE likely
**Pulmonary Embolism Rule Out Criteria: PERC score (must be Well’s low risk!)**

- Age >50
- HR >100
- O2 Saturation on RA <95
- Prior h/o venous thromboembolic disease
- Trauma or surgery within 4 weeks
- Hemoptysis
- Exogenous estrogen
- Unilateral leg swelling

If any are positive cannot rule out PE by PERC rule.

**SEPSIS**

SIRS with a source:
1. Temp >38 or <36
2. HR >90 bpm,
3. RR > 20 or paCO2 < 32
4. WBC >12K or <4K or >10 bands

Fluid Bolus: 30cc/kg

Broad spectrum abx to cover suspected, known, unknown source – order sets in EPIC

Goal: Maintain MAP 65mmHg and to normalize lactate

**TPA / Ischemic Stroke Care**

**Document last known well**

**Document NIH stroke score**

BP lowered to MAP : 130. Keep systolic 160-180ish but not too low. Labetalol / nitroprusside are options that can be titrated.

TPA is still standard of care (within 3-4 hours of last known well)

Contraindications to TPA:
1. onset >4.5 hours, intracranial hemorrhage,
2. recent neurologic surgery/serious head trauma/stroke in past 3 months,
3. uncontrolled hypertension >185 SBP or >110 DBP,
4. h/o intracranial hemorrhage,
5. seizure at onset, suspected/confirmed endocarditis,
6. known bleeding diathesis, INR > 1.7, current use of direct thrombin inhibitors or direct factor Xa inhibitors,
7. glucose <50 or >400

Toxidromes

Anticholinergic: blind as a bat, mad as a hatter, hot as a hare, red as a beet, dry as a bone

Cholinergic: DUMBELS Defecation, Urination, Miosis, Bronchospasm, Emesis, Lacrimation, Salivation

Sympatheomimetic/adrenergic: tachycardia, hypertension, psychosis, hallucination, anxiety, seizure, mydriasis, hyperthermia, diaphoresis, n/v

Opiate: miosis, respiratory depression, ams

C spine clearance:

Nexus:

1. No posterior C spine tenderness
2. No intoxication
3. Normal mental status
4. No focal neurologic impairment
5. No distracting injury

Pediatric Pearls

Infant septic workup: under 2 months of age with fever. CXR, UA, Blood cultures, LP, antibiotics, admit.

Vomiting in a peds patient otherwise well appearing? Check a strep and a urine

Simple Febrile seizure: generalized, less than 15 minutes, only 1 in 24 hours.

Complex Febrile Seizure: any focality to seizure, greater than 15 minutes, multiple in 24 hr.

Rashes that kill: meningococcemia, RMSF, SSS, SJS/TENS/EM, Measles, Kawasaki, Nec Fasciitis, TSS

IV fluid Bolus: 20cc/kg Tylenol: 15mg/kg Ibuprofen: 10mg/kg

ET tube size: Uncuffed: (age/4) + 4 Cuffed: (age/4) +3

Use the Broslow tape if needed
Helpful EM RESOURCES

TEXT – Access Medicine Tintinelli’s Emergency Medicine

PODCASTS

EMBasic: “Bootcamp guide to emergency medicine” by Steve Carroll, DO. This podcast is full of great basic info and refreshers on common complaints. It can be a little dry but is a great source for med students, interns, and anyone looking for a quick refresher

ERCAST: Rob Orman, MD. Practical, up to date, useful podcast

EM:RAP: Reviews, New Changes, Research, Tips, Tricks. EM potpourri

WEBSITES

Life in the Fast Lane: http://lifeinthefastlane.com/

Dr. Smiths ECG Blog: http://hqmeded-ecg.blogspot.com/


EM Curious: http://www.emcurious.com/

EMRA site is quite useful: https://www.emra.org.

Link for presentations: https://www.emra.org/students/Educational-Resources/