

# OnlineMedEd

## Intern Guide



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## Finite and Infinite Games

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In your career to date you've been playing **finite games**. They have a start time, a stop time, rules on how to play, and rules on how to win. That was the shelf, the USMLE Step 2, the grade, and graduation. When playing finite games you have a role and see others as playing their role. But people are not roles. They are people. They have feelings, emotions, and souls. Finite games crush people, and your "win" is often someone else's loss.

Hopefully you developed survival skills. You might have "beaten the game" by figuring out what had to be done to get the A, the honors. And that's great, because you survived. But now, more importantly than any point in your career, it's time stop playing finite games and start playing infinite ones. The grade doesn't matter. People matter.

Yes, residency has a start and end point, a set of rules, and a test to wrap it up - **JUST LIKE WHAT YOU'VE DONE YOUR WHOLE LIFE**. Yes, you can continue to play a finite game and "win." Pass the test, get through residency, and check the box.

You'll see people still in that mindset. They're the ones avoiding consults, writing crap notes, and treating people poorly. They'll do the bare minimum to "win." They'll focus on MKSAP17 and only care about what's "on the boards."

You **don't want to be this person**. They WON'T be effective. And they will be miserable.

In **infinite games** there are no end points, no winners, and no losers. These games don't have roles - they have people. It's the game you must now learn to play. If you haven't played this way before, yes it will be challenging. But, it's a transition you must make.

Never again will you have as much support, supervision, and feedback as in residency. You will develop more in these three years than you have in your entire life so far. Never again will you grow this much. You get a taste of autonomy. Your signature matures. Your notes carry weight. **YOU** matter. You will be forced to learn things you never wanted to learn. You will take care of people you don't want to take care of. But you'll grow.

**THIS IS THE TIME TO LEARN** and become **EFFECTIVE**. This game lasts the rest of your life. Now can't be a time in life that you, "just get through to see the other side."

- See people as people with emotions, souls, egos, and fears. You'll be effective.
- See patients as people with emotions, souls, egos, and fears. You'll be effective.
- See learners as people with emotions, souls, egos, and fears. You'll be effective.

The more effective you become during training, the more effective you will be in life. You won't rise to some superhuman ability upon graduation; you'll be reduced to your basest form of training. The further you rise, the more you learn, the better you are and the more effective you become now, the better you'll be for the rest of your life.

There is no winning or losing in residency- there's only effectiveness in patient care.

## Time Management: Data Tracking

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The Data Tracker is a means of taking every new patient from the ED to discharge. It makes daily rounding super easy. It lets H&Ps and Discharge Summaries flow. No more clicking through 15 tabs while sitting there on the phone all confused. Move on from empty Epic templates with meaningless information that no one wants or cares to see. Look like AND know what you're doing.

Find ours on the resources tab of the dashboard at [onlinemeded.org](http://onlinemeded.org) (free, just register).

### Types of Data

There are two things you want on your data tracker: the static and the daily.

The **static data** is the information that won't change. Some of it should be obvious (name, date of birth, MRN, acct number, PmHx, PsHx, Soc Hx, All, FamHx, Home Meds), but some may not. The major categories in the H&P form should go in the static data. But you also want to include the big tests: major diagnostics, procedures, and past information. That's going to change depending said diagnosis. This is where **culture data, CT scans / MRIs**, echo results, cath results, etc. are going to go. It's NOT part of the daily data (it will be for one day) but you want it easily accessible at all times. You put the **surgeries** and procedures here too. Finally, the **day of presentation** goes in the static data (the vitals, labs, and pertinent physical exam). This static data is the important info for the **H&P and Discharge Summary**.

The **daily data** are the points you want to track: vitals, labs, meds etc. You want to be able to track trends. It'll let you see what happened day to day, better or worse. This is where you're going to **present from daily**. Literally. On rounds, you will tell your story; you know what the subjective and what the plan is... but how do you remember all those labs and vitals? You don't. Since you know the gist of what's going on, you tell the story, then you look down at this tracker and read off the details, then continue the story. This is just to have the details written down to refer to later.

Whatever you choose, ideally **static data** is on **one side** while **daily data is on the other**. An example, "the notecard" is shown on the next page.

For meds you best get yourself a **pencil**. They change all the time. Every day you're going to sit in front of a computer. Every day you will run through the meds. Whatever you pick (I always liked separating scheduled from prn) the meds will be displayed in the same order every day. You just quickly go through and mark changes. And because medications change daily, you will either want to leave space and/or be able to erase meds or dosages.



*It's an awesome time saver to let autopopulating notes just autopopulate. They look stupid, which makes you look stupid. But it's ok to do it, because it does save time. Still, do this sparingly. Make your stuff look good. For billing, for communication. Make it look like you actually wrote it and didn't let a computer write it for you.*

## SAMPLE DAY

6:30am arrive at the hospital and sit down at a computer terminal. Fill out data tracker.

7:00am morning report.

8:00am *see patients.*

- Dying: barring a crashing patient or someone you identified to be in trouble based on labs and vitals, you should be able to round freely and geographically. It's about obtaining information at this point. If someone is in trouble, call your upper level immediately.

9:00am *the "other D's"*

- Diagnosis: put in orders NOW... aka early. Get ahead of the other resident teams who will wait until after attending rounds to put their orders in.
- Discharge: inform social workers, nurses, and patient families that the person might go home. If the plan yesterday was to discharge them today, activate that discharge.
- Discuss: talk to your upper level resident about the plan for the day. Make sure you're ready for rounds and that a plan has been developed AND enacted.

10:00am *Attending Rounds*

- The attending comes through and sees patients with you.
- Coaching happens.
- Plans are critiqued and uncertainties are laid to rest.

12:00pm *Work Time*

- Do what came up on Attending Rounds.
- Save lunch for when the lines are short and the space abundant (go at 1, not 12).

1:00 – 3:00pm *Procedures and Meetings*

- Set family discussions, paracenteses, thoracenteses, etc. for this time block.
- Use this time to start writing notes if there's nothing else to do.

3:00pm – 5:00pm *Notes and New Patients*

- Finish your notes by 4:00pm. The To-Do list should be mostly checked off.
- If you're on Short or Long call, here's where you'll start to pick up new patients from the ED. This time (1:00 – 5:00) can be sort of a jumble, depending on when patients come in.

5:00pm – 7:00pm Go home or finish off your call.



## H&P: Spoken Presentation

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**First Line:** State the name, age, gender, and the chief complaint.

- LEAVE OUT past medical history
- Do include radicals and game changers (HIV, Transplant)

**First Paragraph:** FAR COLDER

- Frequency, Associated Symptoms, Radiation, Character, Onset, Location, Duration, Exacerbating Factors, Relieving Factors
- Tell the attending the timing and characterization exactly as you have it. Give it unadulterated. Let the attending take a second crack at the complaint.

**Second Paragraph:** This is, by far, the hardest concept to master. Say only what's relevant.

**Third Paragraph:** What the ED did and what response it had. You may not need this, but if it helps with the differential diagnosis or the understanding of the treatment course, say it.

**Review of systems:** DO NOT say the words, "review of systems." DO NOT list anything in the review of systems. Anything you thought relevant from the review of systems goes in the second paragraph.

**The other stuff:**

- PMHx, PSHx, Meds, Allergies, Social, Family
- Get through this as fast as possible; we can look it up later. Refer to it when if asked
- SOMETIMES stuff in here is relevant (debility now, functional status, or you think colon cancer and they had a colonoscopy), but most of the time it's useless. Don't say it.

**Physical Exam**

- Vitals: Say the numbers. Not, "stable," or, "within normal limits."
  - If they changed, say what they were on presentation followed by what they were when you saw them.
  - If no change, just say what they were at the time you saw them. Again, no ranges during the H&P.
- Physical:
  - Go top down, BUT
    - Say only the things that alter the differential.
    - POSITIVE if there and should be.
    - NEGATIVE if not there and should be.
  - LEAVE OUT the diatribe of normal findings.
  - DO a thorough exam.
  - DOCUMENT said thorough exam.
  - SAY a relevant exam.

## Documentation: Saying it Right (for CMS)

What you mean to say	What you should write down
There's an infection	Sepsis
Urosepsis	Sepsis secondary to urinary tract infection
Altered Mental Status	Acute Encephalopathy
AKI	Acute Renal Failure
Nausea and Vomiting	Intractable nausea and vomiting
Pain	Intractable pain
Failure of outpatient therapy	Failure of outpatient therapy
The patient's getting better	Resolving
The patient's better	Resolved
The patient's getting worse	Worsening
The patient's probably going to die Any reason that they might need oxygen, in any way, at any time, for any reason. Nasal cannula, CPAP, Intubation, whatever	Grim prognosis  Acute hypoxemic respiratory failure Acute (or chronic) Hypercapnic respiratory failure
Retaining CO2	
They have a low albumin (<3)	Moderate protein calorie Malnutrition
They have a really low albumin (<2)	Severe protein calorie Malnutrition
The patient is weak	Debility
The patient is weak and from the ICU	Critical Illness Myopathy Acute or Chronic [HEART FAILURE] with / without exacerbation
CHF exacerbation	Systolic/Diastolic Ischemic/Nonischemic Cardiomyopathy with an Ejection Fraction of [EF] New York Heart Association Class [1-4]
Heart Failure	
The troponin elevated and you think it IS an NSTEMI	NSTEMI
The troponin elevated and you think it is NOT an NSTEMI	Demand Ischemia

Whatever you write in the discharge summary overrides and trumps everything you wrote, every day, for the entire stay.

\*\*\*\*\* If they have something on day one ("sepsis") they must have it on the discharge summary or they never had it at all \*\*\*\*\*

GET THE DISCHARGE SUMMARY RIGHT WITH THE RIGHT CMS LANGUAGE

## Meds: Top 50

Drug	Min	Route	Frequency	Type	Notes
Colace	100mg	PO	bid	Hospital	Constipation
Senna	8.6mg	PO	bid	Hospital	Constipation
Bisacodyl	10mg	Rectal	Daily	Hospital	Constipation
Lactulose	20g	PO	prn	Hospital	Constipation
Benadryl	25mg	PO	prn	Hospital	Itching
Zofran	4mg	IV	prn	Hospital	Nausea
Zofran	8mg	PO	prn	Hospital	Nausea
Morphine	2mg	IV	prn	Hospital	Pain
Dilaudid	1mg	IV	prn	Hospital	Pain
Norco	5mg	PO	prn	Hospital	Pain
Norco	10mg	PO	prn	Hospital	Pain
Labetalol	10mg	IV	prn	Hospital	HTN and HR > 90
Hydralazine	10mg	IV	prn	Hospital	HTN and HR < 90

Vancomycin	1g	IV	q12h	Antibiotic
Zosyn	3.375g	IV	q8h	Antibiotic
Cipro	400mg	IV	q12h	Antibiotic
Cipro	500mg	PO	q12h	Antibiotic
Ceftriaxone	1g	IV	Daily	Antibiotic
Metronidazole	500mg	IV	q8h	Antibiotic
Clindamycin	500mg	IV	q8h	Antibiotic
Azithromycin	500mh	IV	Daily	Antibiotic
Moxifloxacin	500mg	IV	Daily	Antibiotic
Nafcillin	1g	IV	q4h	Antibiotic

MEDS: TOP 50

Drug	Min	Route	Frequency	Type	Notes
Metoprolol	25mg	PO	bid	HTN Heart	25, 50, 100, 200
Toprol XL	25mg	PO	Daily	HTN Heart	25, 50, 100, 200
Carvedilol	3.125mg	PO	bid	HTN Heart	3.125, 6.25, 12.5
Lisinopril	40mg	PO	Daily	HTN Heart	2.5, 5, 10, 20, 40
Valsartan	320mg	PO	Daily	HTN Heart	40, 80, 160, 320
HCTZ	25mg	PO	Daily	HTN Heart	12.5, 25
Aspirin	81mg	PO	Daily	HTN Heart	81, 325
Plavix	75mg	PO	Daily	HTN Heart	-
Rosuvastatin	40mg	PO	qHs	HTN Heart	10, 20, 40
Atorvastatin	80mg	PO	qHs	HTN Heart	10, 20, 40, 80
Lasix	40mg	IV	bid	HTN Heart	-

Tiotropium	18mcg	Inh	Daily	Lungs	
Duoneb	2.5 / 0.5	Inh	q4h prn	Lungs	
ADVAIR	Disk	Inh	bid	Lungs	
PULMICORT	Disk	Inh	bid	Lungs	
Albuterol	90mcg	Inh	q4h prn	Lungs	
Prednisone	40mg	PO	Daily	Lungs	5mg
Guaifenesin	600mg	PO	bid	Lungs	

Haldol	2mg	IM	prn	Agitation	
Ativan	2mg	IV	prn	Agitation	
Seroquel	50mg	PO	qHs	Agitation	
Zyprexa	10mg	SL	prn	Agitation	

Lovenox	40mg	SubQ	Daily	DVT	PPx
Lovenox	30mg	SubQ	Daily	DVT	PPx, renal
Lovenox	1mg/kg	SubQ	bid	DVT	Therapeutic
Heparin	5000 U	SubQ	q8h	DVT	PPx
Coumadin	5mg	PO	Daily	DVT	Treatment

# Syncope

	Hx + Px		Dx	Tx
<b>Waso Wagal</b> • visceral stim • baroreceptors • psychogenic	Recurrent ⊕ Prodrome ⊕ Stimulus	carotid massage Ses OP + so Asystole	Tilt Table	Beta Blockers
<b>Orthostatic</b> • Vol ↓ = D/D/O/H • ANS = DM, Age, Parkinsons	orthostatic		IVF	IVF... Steroids?... compression
<b>Mechanical cardiac</b>	Exertional	Murmur	Echo	Surgery
<b>Arrhythmia</b>	Sudden ⊕ prodrome	NONE	Holter	cath/CABG
<b>Neurogenic</b>	"	" (FND?)	Carotid v/r CTA	-
<b>Psych</b>	Faking It	Face-palm	-	-
<b>E-lytes</b>	-	-	BMP	Replete

## Who Gets Admitted?

1. Structural heart disease (CHF, MI, CAD)
  2. ECG = Arrhythmia
  3. Comorbid reasons (Risk Factors)
- OR
4. Repeat Offenders

Often we observe old people with orthostatics, "just to make sure," and that's ok. Old people may have coronary artery disease.

## Syncope And Seizure

Syncope		Seizure
Short, <30 seconds	Shaking	Prolonged > 30 seconds
Vagal Symptoms	Aura	Smell, Lights, Sounds
< 10 seconds to recovery	Post Ictal	> 30 seconds to recover

## What do you order when you admit?

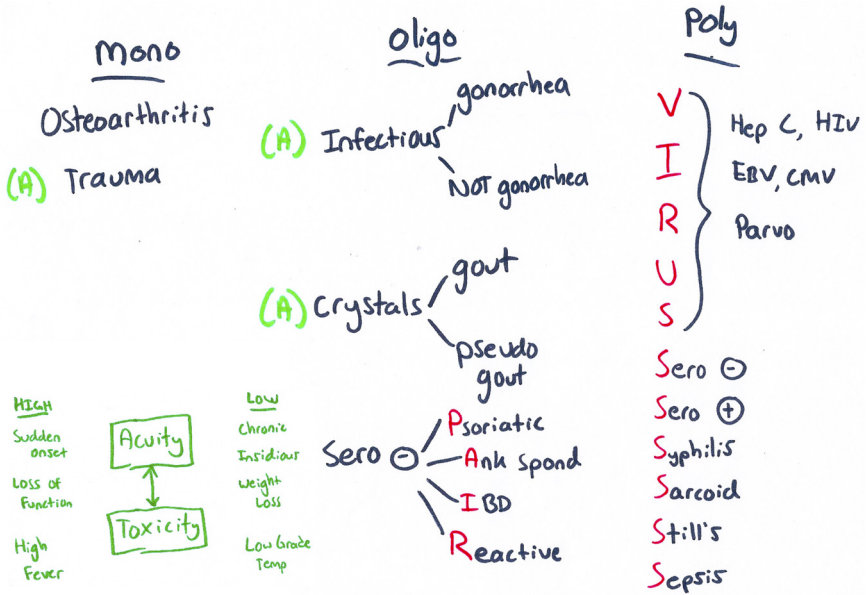
2D Echo  
Observation, ECG ("Holter Monitor")  
Trend troponins  
Carotid Ultrasound is NOT necessary

## What about Presyncope?

The run of vtach that caused them to get dizzy this time alerted you to the fact that they may have a slightly longer run of vtach that could cause them to pass out next time.

PRESYNCOPE = SYNCOPE

# Joint Pain



Determining the diagnosis of joint pain is multi-faceted.

The first consideration is the **number of joints involved**; it's the basis for the organizer. Not that infectious arthropathies or crystal arthropathies CAN'T be monoarticular, it's just that they're likely to present with multiple joints. If it's not multiple joints at THIS presentation, it eventually will be over the course of the patient's disease and show in more than one joint.

The second is **toxicity and acuity**, which parallel each other. The more toxic a disease, the more acute it will be. Toxic and acute diseases cause loss of function, painful swollen joints with deformity, and a high fever. The patient will seek your attention. The less toxic disease (and the more insidious ones) will present with weight loss, night sweats, low grade fevers, and possibly a barely problematic joint. Knowing which diseases present in which way can help you separate them.

The third is **which joint is involved**. This helps the least, but there are some diseases that have a predilection for certain joints. For example, RA attacks little joints like the hands and feet, OA affects the large weight bearing joints, and Ank Spond attacks the spine. You have to know the details of each disease to use this information, which is why it's the least useful of the three.

# Pulmonary Embolism

## Making the Diagnosis

Patients with PEs that matter will have either Tachycardia or Hypoxemia. The absence of both rules out an acute (but not chronic) Pulmonary Embolism.

## Well's Criteria and Diagnostic Decisions

### Well's Criteria – Calculating The Score

ZOMFG I DONT KNOW	3
DVT	3
HR > 100	1.5
Immobilization (Leg Fx, Travel)	1.5
Surgery w/i 4 weeks	1.5
h/o DVT or PE	1.5
Hemoptysis	1
Malignancy	1

### V/Q And D-Dimer Interpretation

Score < 2	Score 2-6	Score > 6
Low Prob	Med Prob	High Prob
D-Dimer	V/Q	V/Q OK
VQ OK	Useless	

### Do I Do A CT Scan?

Score < 4 Don't Do it	Score > 4 Do it
-----------------------	-----------------

**CT PE Protocol** when you want a confirmatory answer and the kidneys are good.

**V/Q scan** when you can't do a CT PE protocol AND the lungs are normal. This is also useful in the "rule out" category.

**D-Dimer** never inpatient. It's used in the outpatient setting to rule out a PE. Don't do a CT scan for a positive D-Dimer.

The 3 points on the top of the chart really mean, "I have no idea why they have shortness of breath. Just scan them to find out."

## Treating a PE

**Warfarin** should be started the day of diagnosis. It must be **bridged with heparin**. Goal is INR 2-3. They must be on it for 5 days or when the INR is 2-3, whichever is LATER.

**LMWH** (Fragmin, Lovenox, Arixtra) is just as good as Unfractionated heparin, but more convenient (can be done at home,

with ↓ length of stays); they don't mandate frequent PTT checking. But, they all have a **longer half-life** and, being smaller, **can't be reversed** with protamine.

**Unfractionated Heparin** is the "heparin drip," a weight based dose of about 80units/kg with a protocol for adjusting the drip based on the PTT every 6 hours OR the Xa levels. It's **easily reversed** with protamine. It's indicated in **submassive PE**.

**tPA** is indicated in **massive PE**. There's a high bleeding risk.

**Thrombectomy** is considered only in Chronic Thromboembolic Pulmonary Hypertension. Specifically, in the **chronic condition** and never in the acute setting.

**Vena Cava Filter**. If the patient 1) has a DVT, 2) can't be anticoagulated, and 3) the next PE will kill them... then, and only then is it ok.

Diagnosis	Sxs	Strain	Shock	Tx	Dispo
Asymptomatic PE	No	No	No	LMWH	Home
Symptomatic PE	Yes	No	No	LWMH	Floor
Submassive PE	Yes	Yes	No	Heparin gt	Unit
Massive PE	Yes	Yes	Yes	tPA	Unit
CTEPH		Thrombectomy			

# Cardiology

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## Coronary Artery Disease

*See Common Medical Problems*

1. Diamond Classification
  - a. Exertional
  - b. Left sided, substernal
  - c. Relieved with nitro
2. Associated Symptoms
  - a. (Pre)Syncope
  - b. Diaphoresis
  - c. Dyspnea
3. Risk Factors
  - a. HTN
  - b. DM
  - c. HLD
  - d. Obesity
  - e. Smoking
4. Diagnosis
  - a. ECG changes, 12-lead q6H → STEMI
  - b. Troponins q6 H → NSTEMI (above 1.0 “counts”)
  - c. Stress test
  - d. Cath
5. Treatment
  - a. Every patient: ASA, Statin, BB, Ace-inhibitor
  - b. Every true MI: Morphine, Oxxygen, Nitrates, Aspirin, Beta-Blocker, Ace-I, Statins, Heparin
    - i. Full dose Lovenox or Heparin gtt
    - ii. Plavix load 300mg x1 then 75 daily
  - c. Call cards



## Blood Products

<i>Product</i>	<i>Indications</i>
Blood	Low Hemoglobin, Symptomatic Anemia
Platelets	Thrombocytopenia <20,000 <50,000 and bleeding NOT in TTP / HUS
FFP	Reverse elevated INR
Cryo-precipitate	Decreased Fibrinogen
Massive Transfusion (>3 upRBC in 24 hours)	3 units blood 1 Unit FFP 1 6-pack platelets, monitor ionized Ca
Factors	Multiple factors are in FFP and Cryo. Don't learn them intern year. But white space is provided for you to write it in just in case you encounter a Factor VIII inhibitor patient

## Bleeding

1. Causes
  - a. Low platelets
  - b. Bad platelets
  - c. Low factors
  - d. Factor inhibitors
2. Workup
  - a. CBC (platelets)
  - b. PT, PTT, INR with inhibitor study
  - c. DON'T order factors (you will on heme, you won't on medicine)
3. Treatment
  - a. Low platelets → give platelets (NOT if TTP)
  - b. Bad platelets → dialysis (uremia), stop drugs (NSAIDs), ddAVP (vWD)
  - c. Low factors → FFP or Factor if known
  - d. Inhibitors → Steroids, IVIG, Cyclophosphamide
4. See methods section for more

# Who Goes to the Unit?

For some people it's OBVIOUS they need the unit. There's the guy who is frankly hypotensive already on pressors or the guy who already on the ventilator. That's not the point. That's obvious even to a medical student. You want to get a gestalt for who is and isn't sick. BUT, if something concrete can be used to start that process, ie some objective data, wouldn't that be cool?

## Pulmonary Embolism

<i>Diagnosis</i>	<i>Symptoms</i>	<i>Heart Strain</i>	<i>Vitals</i>	<i>Location</i>
Asymptomatic PE	No	No	Floor	Home
Symptomatic PE	Yes	No	Floor	Floor
Submassive PE	Yes	Yes	Unit	Unit
Massive PE	Yes	Yes	Unit	Unit

**GI Bleed:**  
 Who: Orthostatics  
 Why: Fluids, Blood, Nursing

## Sepsis/Septic Shock

**Stroke:**  
 tPA → Unit  
 worsening stroke → Unit  
 Hemorrhagic → Unit  
 Needs q1h neurocheck

<i>Diagnosis</i>	<i>How to make the call</i>	<i>Location</i>
Sepsis	2/4 SIRS criteria + a source	Home
Severe Sepsis	Hypotension responsive to fluid lactated clears. ~2Liters	Floor
Septic Shock	Hypotension Unresponsive to fluid. Lactate fails to clear. Pressors	Unit
Multiorgan Failure	All organs in dysfunction. This person is probably going to die.	Unit

## COPD / Asthma:

Rising CO2  
 Decreasing breath sounds  
 Inadequate response of FEV1

## DKA:

If there's D K and A go to the unit. Some can be handled on the floor. Why bother?

## Hepatic Encephalopathy

<i>Stage</i>	<i>Sxs</i>	<i>Asterixis</i>	<i>Dispo</i>
I	Mild cognitive impairment, memory	No	Floor
II	Altered, but still saying real words	Yes	Floor
III	Incomprehensible Sounds, Moaning	Yes	Unit
IV	Coma	No (can't)	Unit

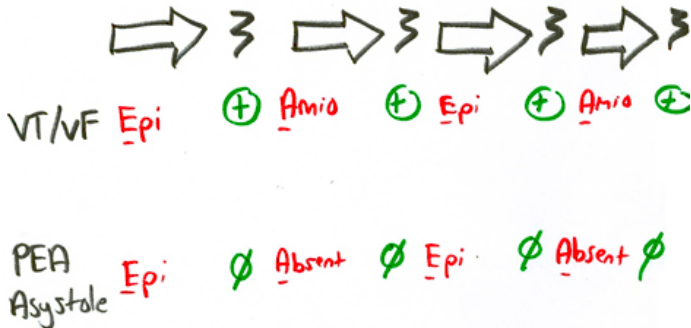
## In the ICU: Running a Code

Running a code is more about **herding cats** than it is medicine. Here, your goal as the doctor is to act as **team leader**. Act and speak with confidence. Assign roles. Control the team or they'll control you.

Walk into the room and say out loud, "**who is in charge of this code?**" Then stare at the person you think is in charge. If no one responds, **take command**. "Dustyn for the code, Dr. Williams for the chart." If someone responds, ask them **if they need help**. Then either take over or step back and get out of their way. "Dr. Lee has control of the code."

**Assign roles** to everyone in the code. "I know you know how to run a code. Let me give you a role so you know what to do in THIS code."

**Speak out loud and plan the next 6 minutes**. People will be impressed. That gives them confidence in you. They'll listen to you. Loud, chaotic codes are your fault - not the nurses.



### The code:

A code is built upon **2 minute blocks of CPR**. Whether that's five cycles of 30 compressions to 2 ventilations or just 2 minutes of continuous compressions, all codes are blocked in 2 minute intervals.

Each 2 minute block = **1 medication, 1 pulse check, 1 rhythm check, and 1 shock if indicated**.

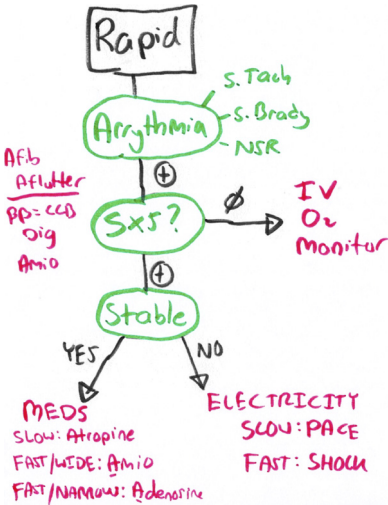
There are two types of rhythms, and so two types of codes:

1. Vtach / Vfib: use **epi** alternating with **amio** and you **can shock**
2. PEA / Asystole: use **epi** alternating with **nothing** and you **can't shock**

That's it. Go for **12 minutes**. Then **ask everyone** if they want to continue or have any ideas. Unless you know they're acidotic or have hyperkalemia, **DON'T GIVE BICARB**.

Compressions are more important than lines, intubations, and medications

# In the ICU: Running a Rapid



When the patient **has a pulse** things are a lot harder; it's far less algorithmic. Regardless of the complaint or the reason you were called, an approach to that problem is needed (see methods section). For this discussion, we're assuming there's a **cardiac rapid response**. In any rapid you have to act. But also be ok with thinking, with silence, and with asking for more information.

Begin by assessing **how sick they are**. If more resources are needed, a line has to be put in, or you have to intubate, do it. If the patient needs to be moved to the unit, ensure they're stable enough to do so. You have 5-7 people in a rapid in the room, 2 people in the elevator.

**Step 1: Is this a cardiac arrhythmia problem?** For the sake of this discussion the answer is yes. Sinus Tach, **Sinus Brady** and **Normal Sinus Rhythm** AREN'T ARRHYTHMIAS.

**Step 2: Are there symptoms?** If no symptoms, **start an IV** (in case you have to intervene), give them **Oxygen** (doesn't hurt acutely), and put them on tele, a **heart monitor**.

**Step 3: Are they stable?** No. **Stability** is defined by your comfort level. Some will consider anything not-dead (a code) to be stable. That isn't wrong. As you start, see the AHA definition of **MAP < 90**, or **AMS / CP / SOB** associated with onset of arrhythmia as unstable. From there, your comfort zone will subsequently grow.

In an unstable patient, there's no time to play. You must intervene **RIGHT NOW** or they'll die. That means **electricity**.

- a. **Unstable + Fast = Shock**
- b. **Unstable + Slow = Pace**

**Step 3: Are they stable?** Yes. Now there's time to stay and play. To get the IV access. To wait for meds from pharmacy. Something needs to be done but there are minutes of freedom.

- a. Stable + Slow = Atropine, prepare to pace
- b. Stable + Fast + Wide = Amiodarone
- c. Stable + Fast + Narrow = Adenosine
- d. Stable + Fast + Afib/Flutter = CCB or BB. Adenosine will not hurt (it won't help either)