Writing up your "Paper Cases"

1. This is really a **strategy for solving difficult cases**. This is not the same as your write up for the chart. Although there are similarities, there are more steps here because we are breaking down the problem-solving task into all of its component parts. For all of your "paper case" assignments you should use this format. It not only enhances problem-solving but, if you get stuck it will show us where the problem is.
   a. **List the important findings** from the case. This can be in bullet form. Please note, there is a difference between what you write in your note and what you list as "important" findings. For example, pertinent negatives always must be in the note but usually do not need to be in the list of important findings. If you do not write down "vomiting" on your list, then that means there was not vomiting. This way you make a list where all the pertinent findings are close together in time and space.
   b. **Group the findings**: By grouping the findings you are organizing them. The idea here is to make connections. There are many possible ways of grouping findings depending on the case. The following are some examples:
      i. By temporal relationship (acute findings in one category and chronic symptoms in another). For example, if cough, fever, and rales all began around the same time they probably represent one process or disease and therefore could be lumped under the problem, "Cough". OR if you are confident that this is actually pneumonia, you would label this problem, "Pneumonia".
      ii. An anatomic approach (or systems).
      iii. Physiologically (JVD, hepatomegaly, and peripheral edema). You might label this grouping, "Cardiac" or even better, "CHF".
      iv. Risk factors (smoking, high cholesterol, hypertension).
   c. **Problem List**:
      i. Your group findings basically become your problem list. There are some exceptions to this. Think about your problem list as follows:
         (1) what do I need to "diagnose"?
         (2) What do I need to "treat or manage"?
         (3) What is too important to forget? For example, "allergic to penicillin".
   d. Write a **"gist" or "summary" statement** that is the "essence of the case". Make sure this has what is pertinent from the Hx, PE, as well as labs. This should be short. Use adjectives *(severe, acute, crampy* abdominal pain). Usually we do not include the negatives in this statement unless it is exceptionally important or changes the way you are thinking. If you find that doing the "gist" after your "think-aloud" would be better, that is fine.
   e. **Interpret** the findings – Hx, PE, labs. You are telling a story. Think this through out loud. You can literally say it out loud or say it to yourself as if you were speaking it out loud. You will be amazed that as you're talking this through you will be making more connections and more things will come to your mind. This is often called a "**think-aloud**". This is a verbal mediation strategy. Your problem-solving will be much more successful. By thinking aloud you not only make more connections but you are also trying out your ideas. You may find that some of them don't really make

any sense and therefore you would rethink them. For our purposes I want you to write this down as well. If you are doing your assessment in the chart part of your think aloud would be very appropriate because it would explain your thinking, however, you might not be as detailed in the chart as you should be here. This will help me understand your thinking.

i. What do the findings mean? What do they tell you about the patient? What do they tell you about the physiology or the pathophysiology?
ii. This would include a "story" about the patient. An explanation of what was going on. This is more at the physiology level than the diagnosis level, eg: "The pallor, tachycardia, and decreased perfusion likely represents compensated shock. He is pale because of shunting of blood away from the skin. This in turn may have caused a false lowering of the Pulse Ox especially since there are no pulmonary findings and the tongue is still pink."

f. **Differential Diagnosis:** Then discuss your differential. It should be consistent with the story you told above. It should be consistent with the pathophysiology you described above.
   i. We often memorize lists of things. For example, here is the list of things that cause cough. Here is a list of things that cause diarrhea, etc. If all we have are isolated lists in our brain it is difficult to problem solve. Rather, we want these lists to be interconnected. We also want to activate *relevant* lists. Usually your differential diagnosis will consist of roughly 3 to 6 diagnoses. However, this is just a rough guide. You do not need zebras on that list unless there is a reason to think that there is an unusual disease present.
   ii. Now consider dividing the "differential" part of the write-up into two components. The first is a broad view of what is going on. It is more of a discussion of what is going on at a 100 foot view. Sort of like an "impressionist painting". Not everything is completely in focus but we get the idea of what is going on. It's like first seeing the forest. Later we'll look at the trees. The second part is when we look at the trees. It is the "realist painting" where we bring everything into focus and cone down to the details that give us the specific diagnosis.
   iii. Let's look at this two part "Interpretation of the patient's presentation a little more closely:

(1) Discussion part of the write-up

(a) **T**his is an impressionist painting. It is a little out of focus but you know the subject of the painting. Here in the discussion, we want to bring the pieces of the puzzle together (hx, PE, labs) but at this point we're looking just to get

the “picture”. It does not have to be totally in focus yet. I just want to know what the “big picture” is. At this point it is not necessary to know exactly what the diagnosis is. This might be included in your “think-aloud”

(2) Differential Diagnosis part of the write-up

(a) This is a “realist” painting. It is almost like a photograph. It is certainly in focus and we see many more details than in the painting above. Here is where we get detailed and try to find the exact diagnosis if possible.

g. ***Prioritizing (ordering the differential):** This is definitely in the “realist” section. In order to prioritize you need to have facts (fund of knowledge):
   i. **Knowledge Needs**: Read about specific common conditions.
      (1) Know the classic presentations or the typical presentations.
      (2) Specifically read to learn how to distinguish between the conditions on the differential.
      (3) Learn enough of the pathophysiology so that you understand the condition and can therefore predict many of the lab findings, symptoms, and PE findings.
      (4) Write out charts or tables to help you distinguish among conditions
   ii. In the **write-up**, discuss the differential with *very specific reference to your patient*. Use the patient’s symptoms, signs, and labs to help you order the differential; to help you prioritize this differential. Make sure you explain yourself.

h. ***Writing the plan**: Keep in mind there are three aspects to a plan:
   i. What do I need to diagnose the problem?
   ii. What do I need to do to treat the problem?
   iii. What do I need to monitor in order to:
      (1) See if there is improvement
      (2) See if there are complications of the disease
      (3) See if there are complications of the treatment.