

Handout for “Using Deliberate Practice to Teach Clinical Reasoning

1. **Generate Conditional Hypotheses** before and during data gathering.
2. Teach **Differential Diagnosis Strategies** – see Differential Dx strategies.pdf
3. **Abstract Problem Representation** (The Gist of the case) - see “Gist Statement rev 06-30-15.docx”.
 - a. Reinforce this with each patient. Whenever the learner presents a case or calls a consult they should present the “Gist of the case”. Give immediate feedback as appropriate.
4. **Illness scripts:** See, “Illness Script Instructions 10-26-17.docx”. This is the tape that runs in your head when someone says the name of a disease. At a minimum it contains Risk factors (epidemiology), inciting pathophysiology, and clinical consequences (history, physical exam findings, and lab findings).
 - a. Encourage students to write illness scripts and to use the compare and contrast tables when needed. Time constraints will not allow students to write these for every disease. When they seem to be struggling differentiating the causes of, for example, headaches, then encourage them to write the illness script for this differential.
5. **Activate Prior Knowledge:** Get students thinking about what they already know. This recalling of relevant information helps them make connections and enhances their ability to store new information in an organized way which, in turn, is more accessible.
 - a. **Practicing Recall** keeps the information “alive”.
6. **List Findings:** List the important findings. The goal here is to get the important information close together in a format that is easily read and reviewed. We want to separate the wheat from the chaff. With the information together, it is easier to make connections. Generally we only list the positive findings unless the negative findings are super important or unexpected.
7. **Group Findings:** Findings could be grouped temporally, by organ system, physiologically, etc. This encourages the clinician to make connections and also to categorize the data. Categorizing it makes it easier to manage.
8. **Make a Problem List:** This largely comes from the grouped findings. The following should be included on the problem list:
 - a. That which you want to diagnose.
 - b. That which you want to manage, for example, in a dehydrated patient with vomiting and diarrhea you would put dehydration on the problem list. You are not trying to generate the differential diagnosis for dehydration, rather, you need to manage it.
 - c. Risk factors. For example in a patient with chest pain you would put the cardiac risk factors that the patient has.
 - d. Things you do not want to forget, for example, allergy to penicillin.
9. **Encourage connections:** Use physiology, analogies, inferences, and predictions.