MODULE 5: PUBLIC HEALTH   LESSON 5.8

Differential Diagnosis

Obj. 5.8: Develop an evidence-based differential diagnosis for an illness.

DO NOW

What's This Rash?

You are a nurse practitioner (NP) and a patient comes in to your clinic with a bright red, streaky, bumpy rash the size of a deck of cards on his right forearm. The patient reports that the rash itches intensely. He just got back from vacation in the Upper Peninsula of Michigan, where he spent time fishing, hiking, and hunting.

1. What possible diseases might this patient have?

2. How would you, as an NP, determine the right diagnosis?

3. You have narrowed down the possibilities to poison ivy, shingles, or an allergic reaction. Which diagnosis do you think is correct? Why?

4. What additional data would you need to be more certain?

DISCUSS

Avoiding Medical Error

- How certain must a clinical health professional be before making a diagnosis?

- What are the potential consequences in the case of misdiagnosis?

NEW INFO

What is a Differential Diagnosis?

Differential diagnosis: A systematic method of information gathering used by clinical health professionals to determine the cause of illness when multiple alternatives are possible; the process focuses on eliminating diseases that are suspected in order to arrive at the correct diagnosis with as much objective evidence as possible.

DISCUSS

Horses or Zebras?

A common adage, *Occam's razor,* is taught in medical school. It states that *"When you hear hoofbeats, look for horses, not zebras."* How do you think this relates to differential diagnoses?

NEW INFO

Conducting the Differential Diagnosis

How do healthcare providers do differential diagnosis?
Generally, a health care provider will begin by considering the most common diagnosis first. For example, if a patient comes in with a stuffy nose and sore throat, the first thing you would suspect is a head cold, rather than meningitis, an inflammation of the protective membrane around the nervous system caused by a bacteria or virus. However, a step-wise process is important and should always be done even if the common cause is suspected.

Steps in Differential Diagnosis

Step 1. Review the symptoms reported in the Subjective patient interview and the data already collected in the Objective portion of the patient visit (or from medical records).
Step 2. Create a list of all possible causes of the symptoms and objective data.
Step 3. Prioritize the list based on the most urgently dangerous conditions first.
Step 4. Rule out (if possible) the most dangerous conditions first by conducting tests. If not possible to rule out and safe treatment can be given, treat the patient for the most urgent conditions first.

Steps applied to SOAP note process for patient case studies:

Assessment:	
Summary	**Step 1.** Review the symptoms reported in the Subjective patient interview and the data already collected in the Objective portion of the patient visit (or from medical records).
Differential Diagnoses	1. **Step 2.** Create a list of all possible causes of symptoms and objective data *(in the real world, this will often be more than 3!)* 2. **Step 3.** Prioritize the list based on the most urgently dangerous conditions first *(reassign numbers to keep track of priority)* 3. **Step 4.** Rule out the most dangerous conditions first by conducting tests. *(Indicate your logical elimination process in the Reasoning section)*
Final Diagnosis	Claim: Evidence: Reasoning:

READ

8 Ways to Help Your Health Care Professional

Read the article "8 Ways to Help Your Doctor Make the Right Diagnosis." In the table below, summarize why this tip will help lead increase a patient's chances of getting the right diagnosis.

Way to Help	Why it may help lead to the right diagnosis
Plan for your appointment with specialists	
Write down each symptom	
Know your medical history	
Bring in your medications	
Describe your symptoms, but don't conclude	
Be specific about your symptoms	
Ask your health practitioner what to expect	
Question, question, question	

DISCUSS

How Do Patients Stack Up?

1. Which one of the tips do you think the average patient is **most likely** already doing when visiting a clinical health professional?

2. Which tip is the average patient **least likely** to be already doing?

Which Disease?

THINK

Many illnesses can seem to be something else, confusing patients and sometimes even doctors. Often, delays in diagnosis result in more complications or even death. In the table below, write down the distinguishing features of each illness. Use credible sources online (ex: WebMD, CDC, NIH, MayoClinic) to find this information.

Disease	Evidence (symptoms or tests) to help diagnose...
Heart Attack **VS.** Heartburn	
Heartburn	
Influenza **VS.**	
Gastroenteritis ("stomach flu")	

Do You Know Your DD?

ASSESS

1. What is a differential diagnosis?

2. How does a clinical healthcare provider conduct a differential diagnosis?

HOME WORK

DD the Disease!

Choose **any** disease, syndrome, condition, or illness you are interested in. Research the disease carefully so you know the symptoms, tests used to diagnose, and other illnesses that may be similar. On a separate sheet of paper, answer the following:

1) Describe the illness including it's symptoms and tests to diagnose
2) List at least 3 (or more) diseases that would be most likely to appear on a differential diagnosis list, in order or priority from most urgent or dangerous to least urgent or dangerous.
3) For each differential diagnosis option, write at least one way you could "rule it out" based on a symptom or, more preferably, a test.