

# DYNAMIC LEARNING EXERCISE

## INSTRUCTOR KEY

### Differential Diagnosis: Cardiology and Respiratory Emergencies

This exercise will help students do several things, including differential diagnosis and initially focusing assessment efforts on the most relevant items. Many use this for AEMT and paramedic classes, but it has a place in helping EMTs assess more confidently and develop diagnosis-based treatment plans.

Some suggestions for use include:

- Using this as a replacement for some of the lecture during the secondary assessment topic in class.
- Using this as an exercise to give students meaningful work while they wait for other learning activities (e.g., if you have a class with five groups but two scenario stations, this is a great exercise to keep students learning rather than simply waiting).
- Use this as homework or an extra credit assignment.

Student copies of the tables are included below. Distribute the handout to your students with instructions like this (make them yours and fit your objectives).

**CLASS INSTRUCTIONS:** This exercise will help develop your differential diagnostic skills. Not all assessments and history questions are equal as far as value and relevance. When you watch experienced clinicians in your clinical experience, you will note that they ask the most important questions first. This exercise will ask you to think about what is most important. Assessment is dynamic, not rote like a skill sheet. Give careful thought to what elements of your assessment (history questions, medical history, and physical examination) would bring you the biggest yield.

This exercise will take about 30 minutes to complete, plus any discussion you facilitate. It is vital to have some follow-up after completion of this or any dynamic exercise. If students don't believe you value the activity or never collect, review, or call on students to tell their answers and reasoning, they won't complete them and time is wasted.

Remember that there may be more than one "correct" answer. Rather than grading right or wrong, ask the student why they chose what they chose. Then compare it to the responses of other students and discuss pros and cons. Multiple opinions and great discussion are beneficial for concepts like critical thinking, assessment, and diagnosis.

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Complete the table for each of the following patient presentations. Choose the three most important or significant assessment items that would lead you to your diagnosis.

1. You are called to a 65-year-old male who complains of shoulder discomfort after working out. He says his shoulder is "achy" and is because he worked out his upper body. His wife was a bit concerned because she heard shoulder pain may indicate a heart attack. The patient is overweight and smokes.

Direct Assessment Questions	History	Physical Examination
1.	1.	1.
2.	2.	2.
3.	3.	3.

2. You are called to a 65-year-old male who tells you he has indigestion. His wife actually called because he seemed to be in significant distress and became very sweaty at the onset. The patient has a history of NIDDM with a BG of 274.

Direct Assessment Questions	History	Physical Examination
1.	1.	1.
2.	2.	2.
3.	3.	3.

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3. You are called to a 43-year-old female with shortness of breath. She and her husband are paramedics. One believes it is a pneumothorax and the other believes it is pneumonia. Her oxygen saturation is 93%.

Direct Assessment Questions	History	Physical Examination
1.	1.	1.
2.	2.	2.
3.	3.	3.

4. A 72-year-old male complains of respiratory distress and says that he feels like there is a band around his chest. He has a history of hypertension and chronic bronchitis.

Direct Assessment Questions	History	Physical Examination
1.	1.	1.
2.	2.	2.
3.	3.	3.

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5. A 68-year-old man awoke with a slightly altered mental status. His wife says he isn't acting right. She observed that he is breathing faster than normal. He recently had a needle biopsy of his prostate but otherwise is in good health.

Direct Assessment Questions	History	Physical Examination
1.	1.	1.
2.	2.	2.
3.	3.	3.

6. A man grabbed his chest and fell to the ground. He is apneic and pulseless. While CPR is being performed you are tasked with interviewing his life partner and determining if there is any information that might help identify the cause of sudden cardiac arrest.

Direct Assessment Questions	History	Physical Examination
1.	1.	1.
2.	2.	2.
3.	3.	3.

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7. Create your own scenario to share with another group:

Direct Assessment Questions	History	Physical Examination
1.	1.	1.
2.	2.	2.
3.	3.	3.

8. Define "pertinent negative." Use one of the cases above and list three pertinent negatives.