Chest Pain

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United Healthcare

Disclaimer

I have no actual or potential conflict of interest in relation to any product or service mentioned in this program or presentation.

Learning Objectives

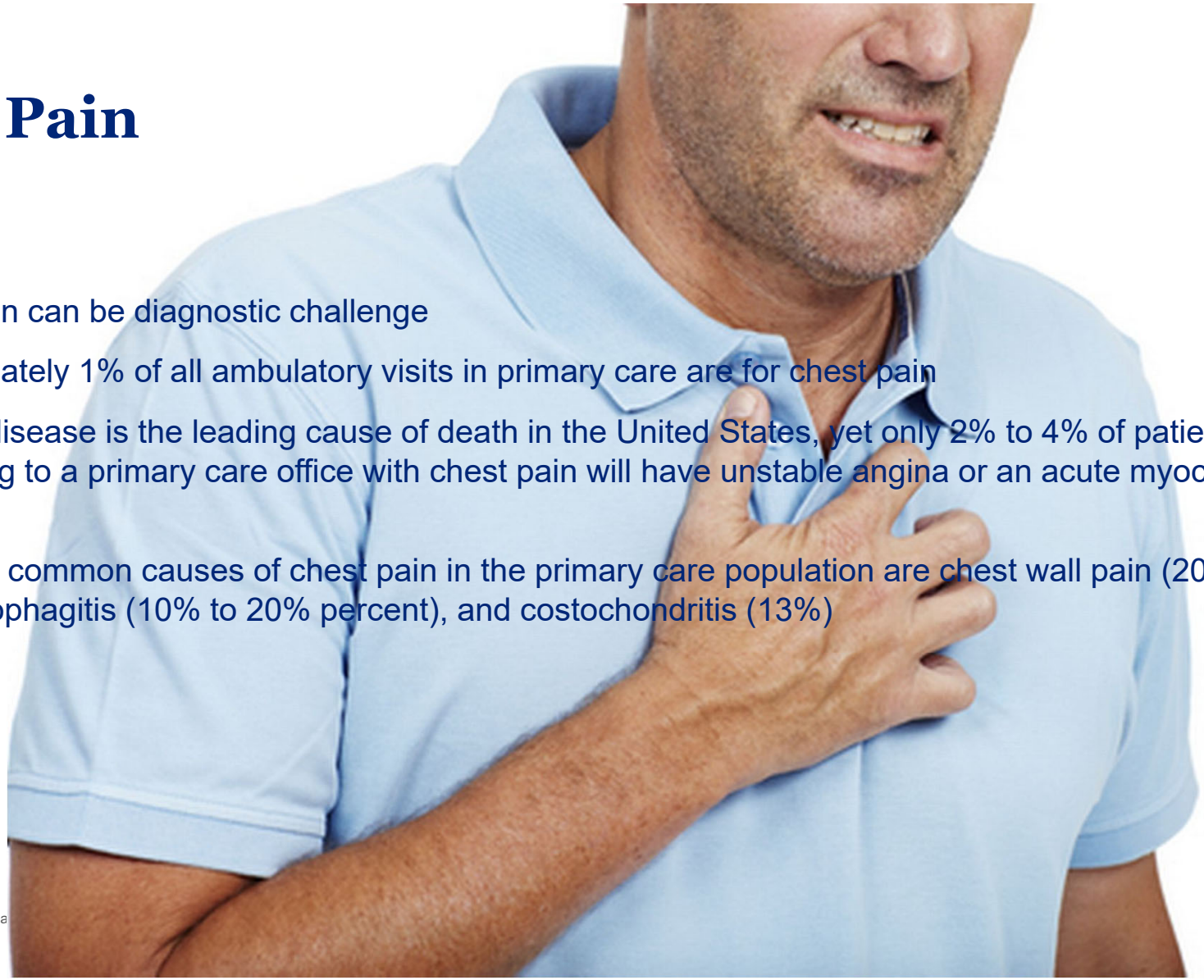
1. Define and discuss our roles in managing members with Chest Pain (CP)

2. Provide differential diagnoses for chest pain

3. Provide a brief clinical synopsis of certain causes of chest pain

4. Clinical scenarios

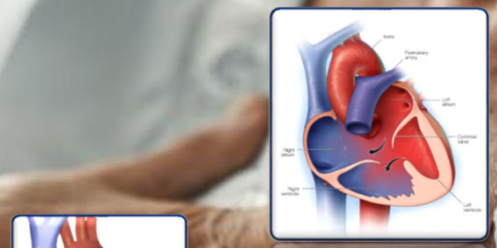
Chest Pain



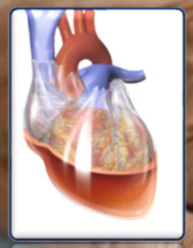
- Chest pain can be diagnostic challenge
- Approximately 1% of all ambulatory visits in primary care are for chest pain
- Cardiac disease is the leading cause of death in the United States, yet only 2% to 4% of patients presenting to a primary care office with chest pain will have unstable angina or an acute myocardial infarction
- The most common causes of chest pain in the primary care population are chest wall pain (20% to 50%), reflux esophagitis (10% to 20% percent), and costochondritis (13%)

Life-threatening Conditions

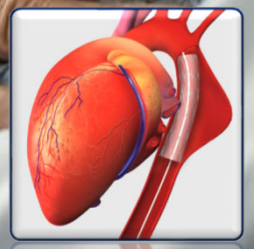
- Acute coronary syndrome
- Aortic Dissection
- Thoracic aortic aneurysm
- Pulmonary embolism
- Tension pneumothorax
- Esophageal rupture
- Cardiac tamponade
- Cardiac arrythmias



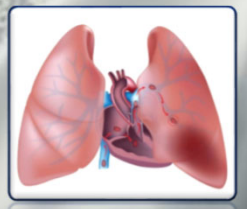
Aortic dissection



Cardiac tamponade

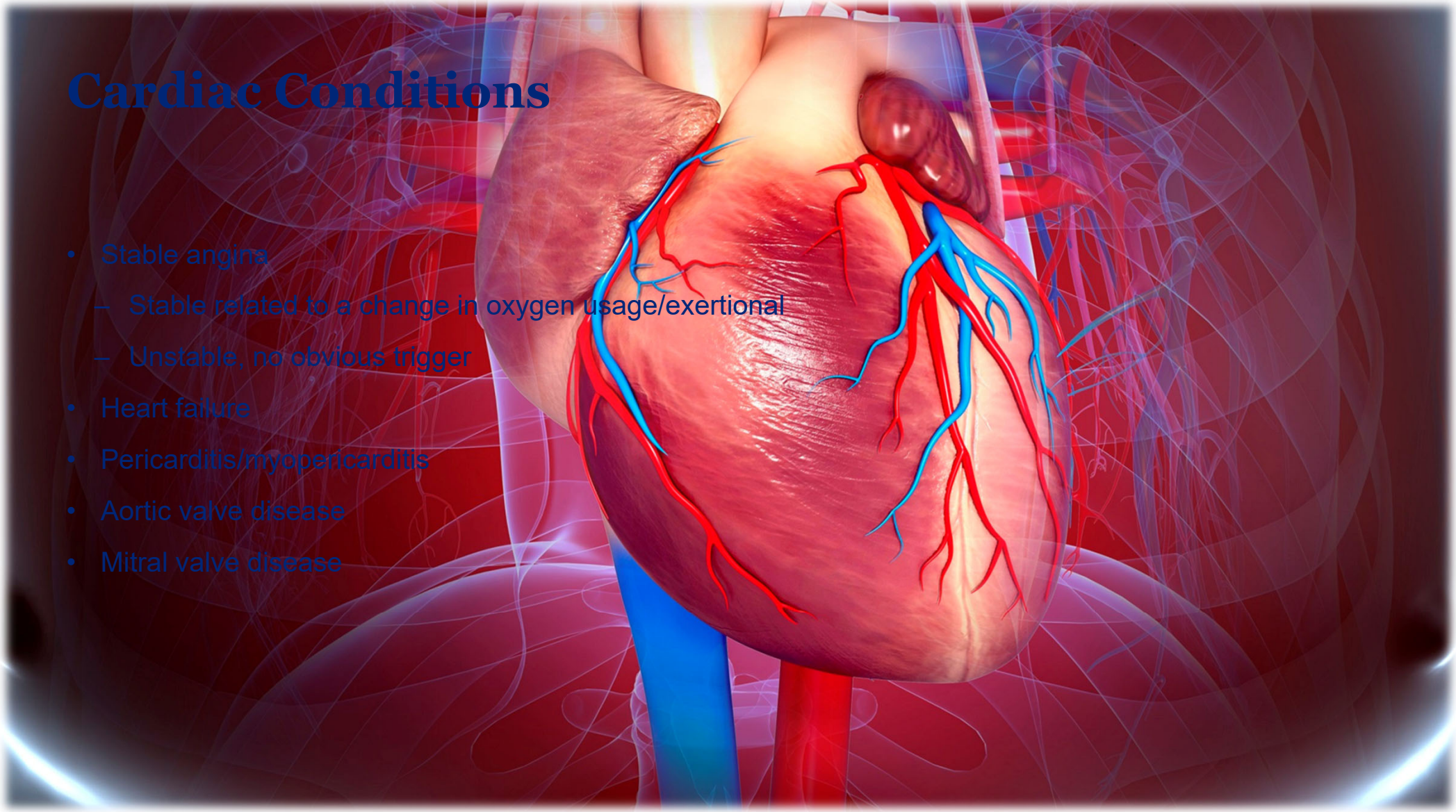


Thoracic aortic aneurysm



Pulmonary embolism

Cardiac Conditions



- Stable angina
  - Stable related to a change in oxygen usage/exertional
  - Unstable, no obvious trigger
- Heart failure
- Pericarditis/myopericarditis
- Aortic valve disease
- Mitral valve disease

Pulmonary

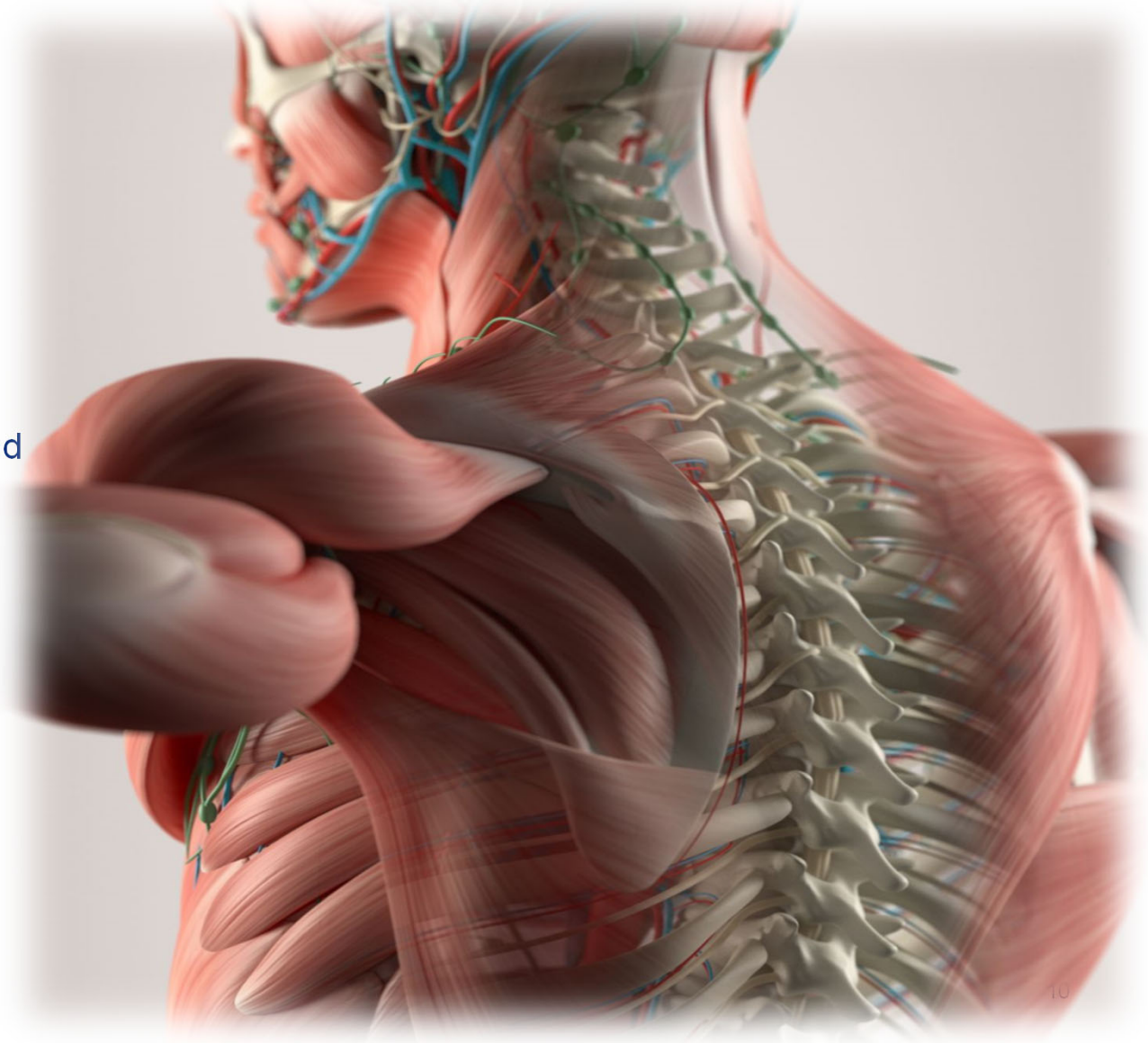
- Pneumothorax
- Pneumonia
- Malignancy
- Asthma and COPD
- Pleuritis
- Acute chest syndrome
- Sarcoidosis
- Pulmonary hypertension

GI

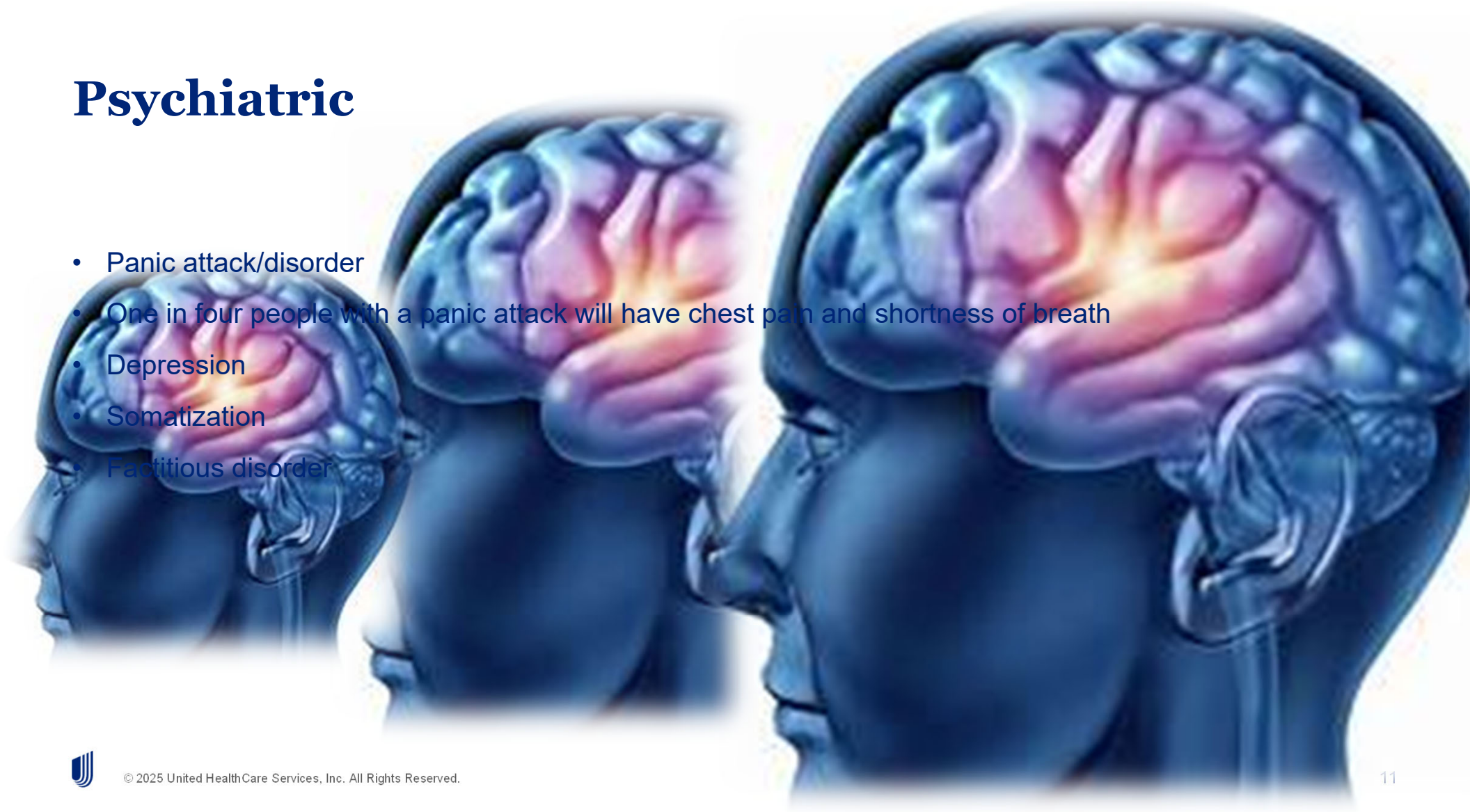
- GERD
- Peptic ulcer disease
- Esophageal mobility disorders
- Esophagitis
- Eosinophilic esophagitis
- Hiatus hernia
- Acute cholecystitis
- Biliary colic
- Pancreatitis

Musculoskeletal

- Isolated musculoskeletal; chest pain syndrome
  - Local or regional chest tenderness
  - Common causes-costochondritis and lower rib pain
- Rheumatic diseases
- Rib pain-fracture
- Trauma



Psychiatric

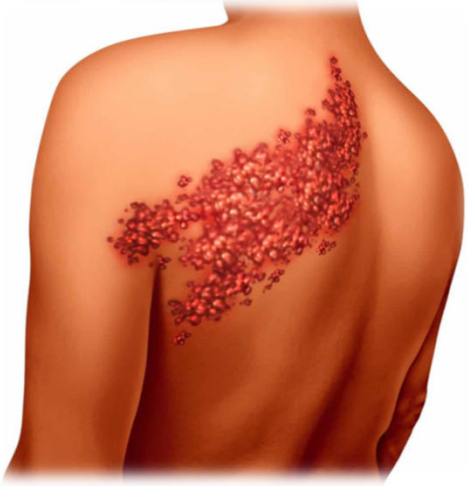


- Panic attack/disorder
- One in four people with a panic attack will have chest pain and shortness of breath
- Depression
- Somatization
- Factitious disorder

Drug Usage

Other Causes

- Referred pain
  - Painful disorders in viscera or somatic structures along the same spinal cord segments
- Herpes Zoster
- Intimate partner violence



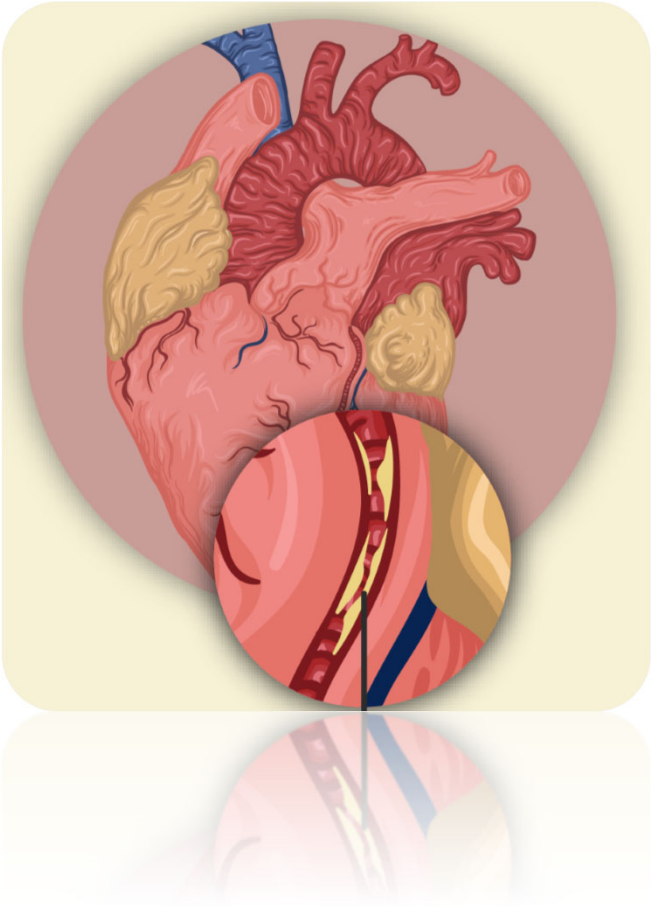
Diagnostic Approach

- Initial triage
  - Vital signs and oxygen saturation
  - Blood pressure in both arms if aortic dissection is a concern
  - Pulsus paradoxus (drop in BP with inhalation) if pericarditis is expected
    - Chest pain decreased by leaning forward
- Members with unstable vital signs or symptoms should be sent to the ER by ambulance

Symptoms of Life-threatening Conditions

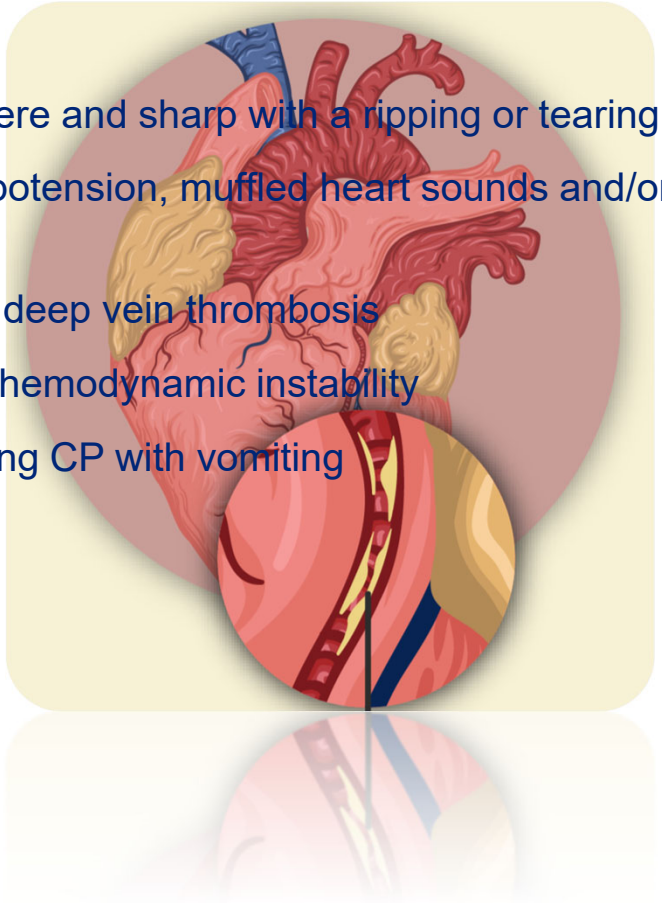
Myocardial Infarction (MI) Concerns

- Anginal symptoms at rest
- New onset angina
- Unpredictable or progressive angina



Symptoms of Life-threatening Conditions
(continued)

- Aortic dissection - acute chest and back pain that is severe and sharp with a ripping or tearing quality
- Cardiac tamponade - CP with dyspnea, tachycardia, hypotension, muffled heart sounds and/or jugular vein pressure increase
- Pulmonary embolism - CP with cough and symptoms of deep vein thrombosis
- Tension pneumothorax - sudden onset pleuritic CP with hemodynamic instability
- Boerhaave Syndrome (esophageal rupture) - excruciating CP with vomiting



H and P

Complete examine including all body systems

Indications for an EKG

- New onset of CP
- Present episode is different from previous episodes
- Most useful in the evaluation of suspected MI
- Pericarditis may mimic an anterior MI
  - PR segment depression, ST elevation and T wave inversions are consistent with pericarditis
  - Usually more diffuse than in MI
- Pulmonary embolism – tachycardia, nonspecific ST and T wave changes

Chest X-ray

Concerns for:

- Pneumonia
- Pneumothorax
- Acute chest syndrome
- Heart failure
- Rib fracture(s)

Stable Myocardial Ischemia

After a life-threatening cause for CP is identified, stable myocardial ischemia is next

- Symptoms: pressure, heaviness, tightness or constriction in the center or left side of chest that is made worse with exertion and eased by rest
- Ischemic pain often radiates - neck, throat, teeth, jaw, arms and shoulders
  - May be associated with dyspnea, nausea, vomiting, sweating, light heaviness or palpitations
  - Wide chest pain radiation increases the chances of a MI

Stable Myocardial Ischemia (continued)

- Often gradual, increasing over minutes
- Usually doesn't last more than 20 to 30 minutes
  - MI may be prolonged
- Some groups may not have typical anginal symptoms
  - Women
  - Older adults
  - Diabetics
  - May have an increased risk of death

Risk Assessment

History

- Age, family history, tobacco or cocaine usage, DM, HTN, hyperlipidemia and life-style
- 10-year risk of CV disease
  - Pooled Cohort Equations CV risk calculator (AHA and American College of Cardiology)
  - MESA - Multi-Ethnic Study of Atherosclerosis
  - Framingham risk score - separate calculators for women and men
  - INTERCHEST score - useful in differentiating those with low risk for unstable CAD

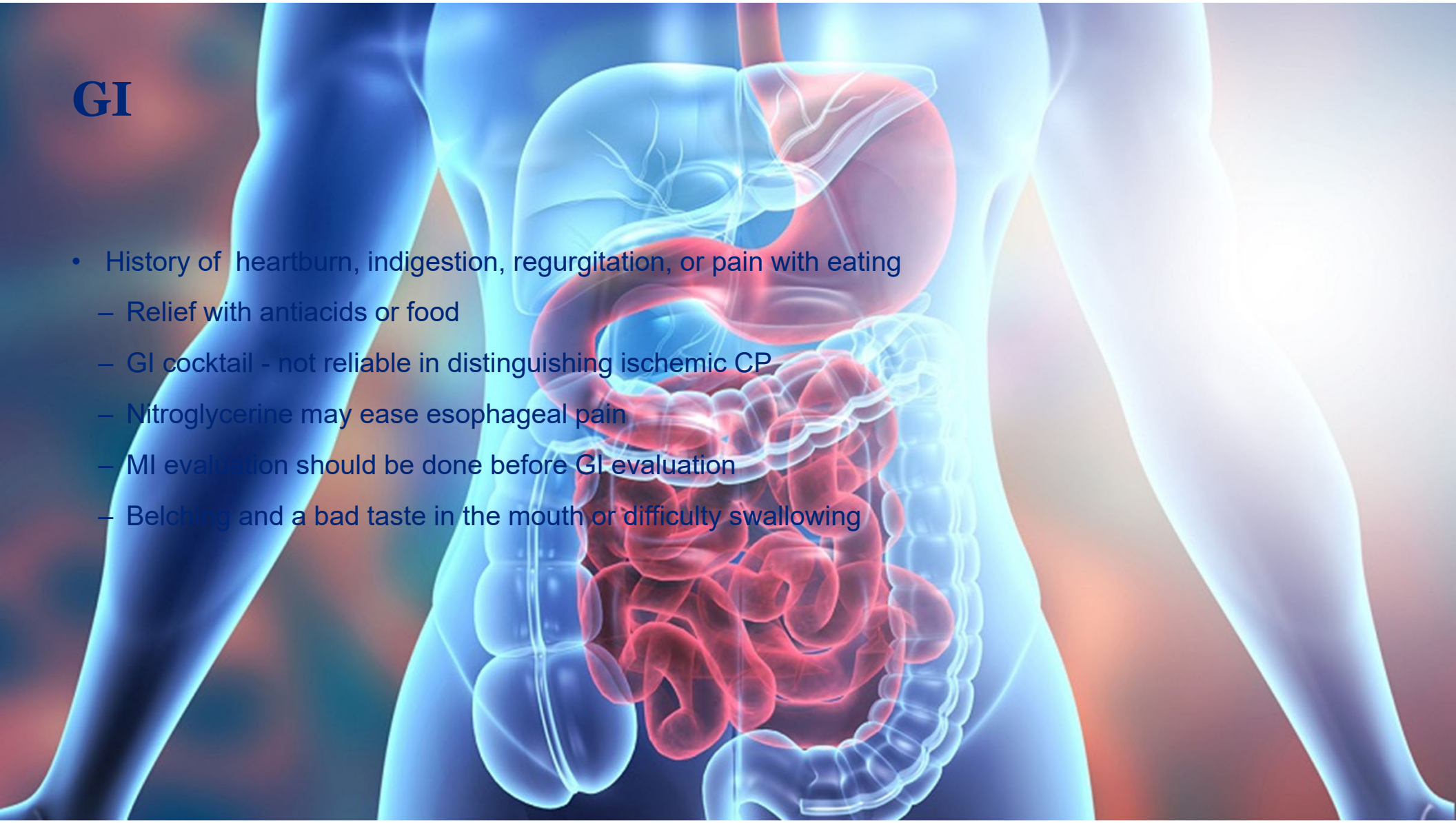
Risk Assessment (continued)

- Stress test
- Coronary CT (CCTA)
- Coronary angiography
- If MI is not suspected, evaluation of the most likely cause

Work-up for Non- MI Causes

- Pericarditis-Supine and sitting while leaning forward cardiac exam
  - Sitting position is best to detect pericardial rub
  - Pulsus paradoxus
- Aortic or Mitral Stenosis
  - Echocardiogram for definitive diagnosis and severity
  - CHF

GI



- History of heartburn, indigestion, regurgitation, or pain with eating
  - Relief with antiacids or food
  - GI cocktail - not reliable in distinguishing ischemic CP
  - Nitroglycerine may ease esophageal pain
  - MI evaluation should be done before GI evaluation
  - Belching and a bad taste in the mouth or difficulty swallowing

Pulmonary Disease

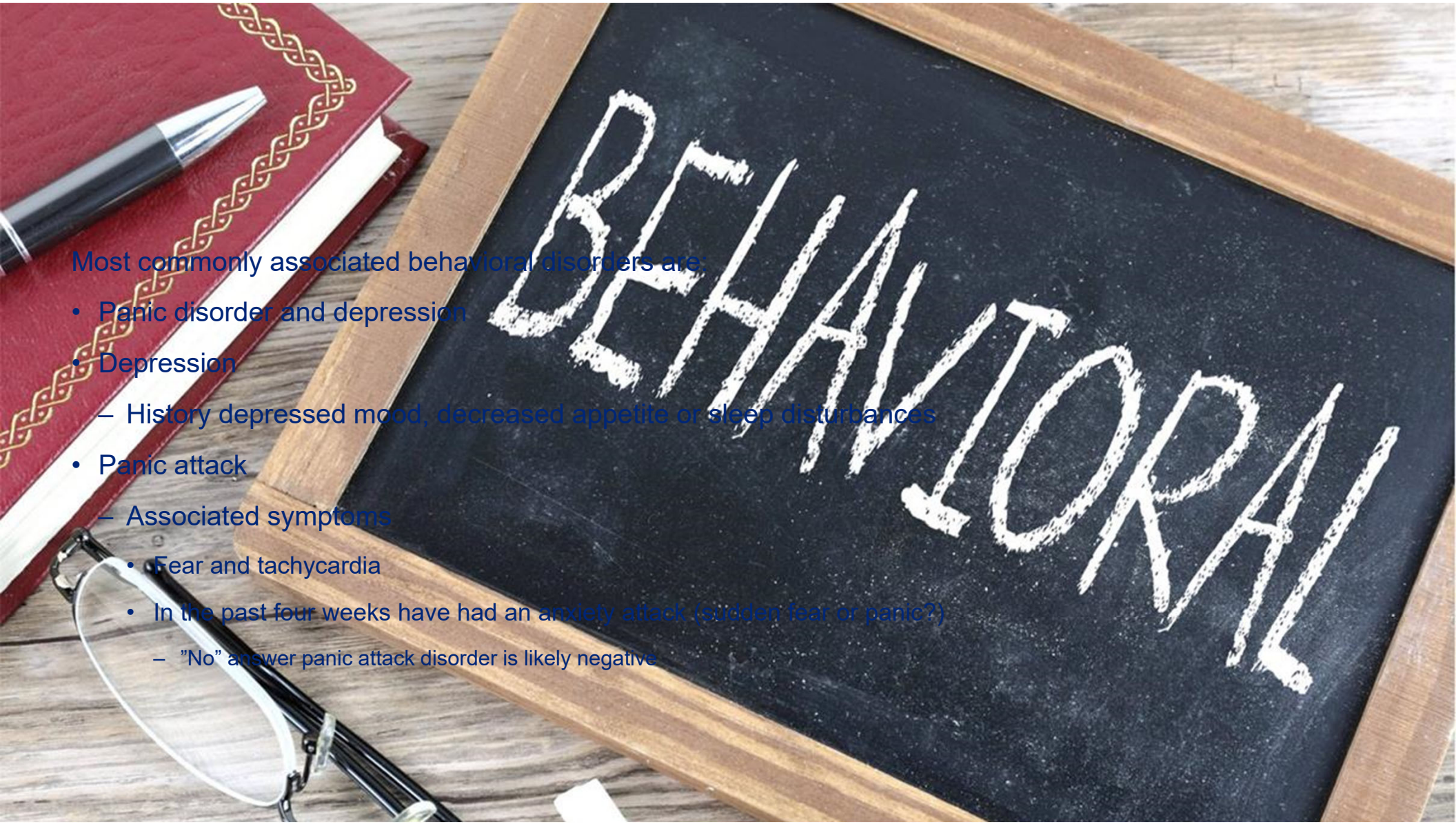
Symptoms:

- Pleuritic chest pain
- Cough
- Dyspnea

- Large pneumothorax decreased chest wall excursion
- Enlarged hemithorax, diminished breath sounds, absent tactile or vocal fremitus

Musculoskeletal

- Most common causes of CP
- Well-located pain with point tenderness
- Associated pain outside of the chest
- PT or nonsteroidal anti-inflammatory medicine may be considered



Most commonly associated behavioral disorders are:

- Panic disorder and depression
- Depression
  - History depressed mood, decreased appetite or sleep disturbances
- Panic attack
  - Associated symptoms
    - Fear and tachycardia
    - In the past four weeks have had an anxiety attack (sudden fear or panic?)
      - ”No” answer panic attack disorder is likely negative

Our Roles at the Health Plan

- Helping our members in getting their needs met
  - Assessing and assisting members in obtaining appropriate services that they are eligible to receive based on our contract with Texas HHS
  - Initial assessments and periodic reassessments of member needs
- Case management
  - Advising and educating members on services for which they are eligible
  - Monitoring if they are receiving care
    - Timeliness
    - Adherence
    - Problems in contoured

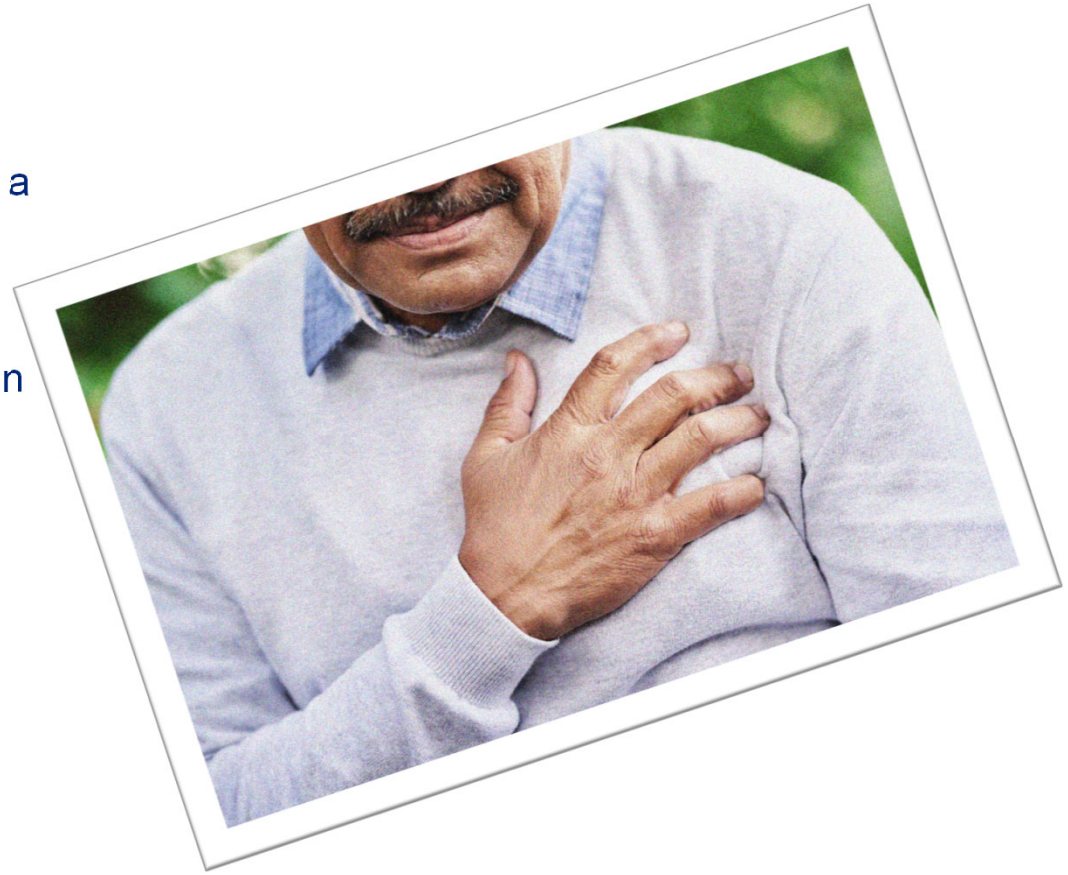
Role as a Service Coordinator

- Role is not to attempt to diagnose
- Direct the member to their PCP or other provider
- Monitor for repeated history of ER visits or inpatient stays:
  - Encourage the member to see their PCP regularly
  - Consider supportive care that can be arranged through Optum Behavioral
  - Is this a case where the Complex Care Team may be appropriate? If yes, encourage the member to agree to enroll
  - Have the MBI/CC rounds been considered?

Case Scenario 1

- 57-year-old female with hypertension, DM, and a BMI of 35
- She has had multiple ER visits for chest pain
- She has had one observation stay for chest pain where she was ruled out for an acute MI
- She hasn't seen her PCP in over 6 months

What can we attempt with this member?



Case Scenario 2

- 47-year-old male with a history of substance usage with cocaine has a diagnosis of being bipolar
- He has developed a new onset of chest pain
- He has a family history of his father dying at the age of 45 from a heart attack

What should our actions be for this member?

Case Scenario 3

- 37-year-old with multiple ER visits and one observation stay for chest pain
- She goes to the ER without checking with her PCP first

Thoughts on this case?

Medical Emergency?

Call 9-1-1!