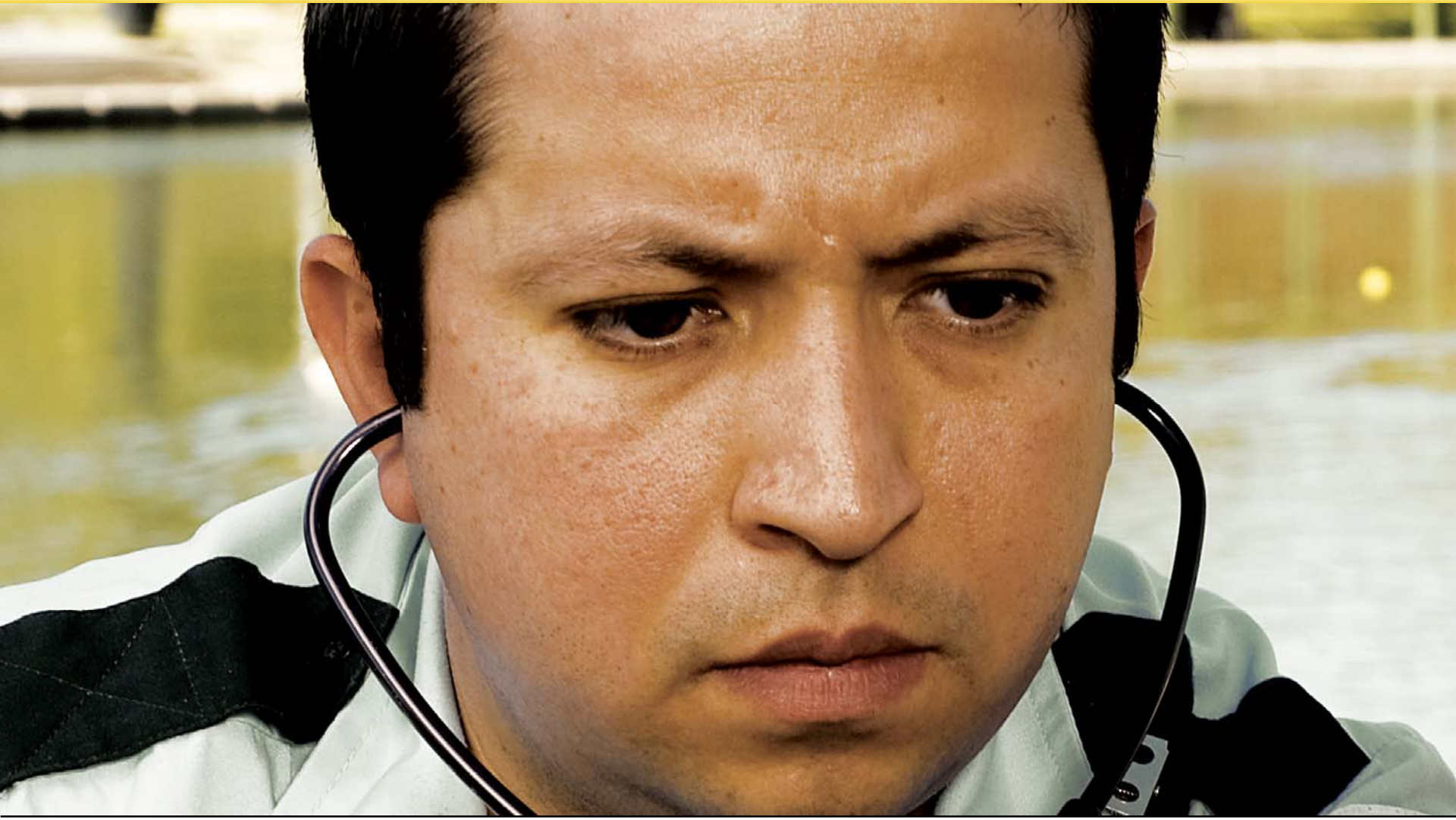
16

Critical Thinking and Decision Making



OBJECTIVES

16.1 Define key terms introduced in this chapter. Slides 14–16

16.2 Compare and contrast EMTs' and physicians' diagnoses. Slides 12–16

16.3 Explain the relationship between critical thinking and diagnosis. Slide 9

16.4 Explain typical steps used in the basic approach to reaching diagnoses. Slide 13

continued

OBJECTIVES

16.5 Explain how diagnosis in emergency situations may differ from traditional approaches to diagnosis. Slides 14–16

16.6 Identify some of the special challenges to EMS providers in the diagnostic process. Slides 14–15

16.7 Discuss the relationship between diagnosis and treatment in emergency situations. Slide 18

continued

OBJECTIVES

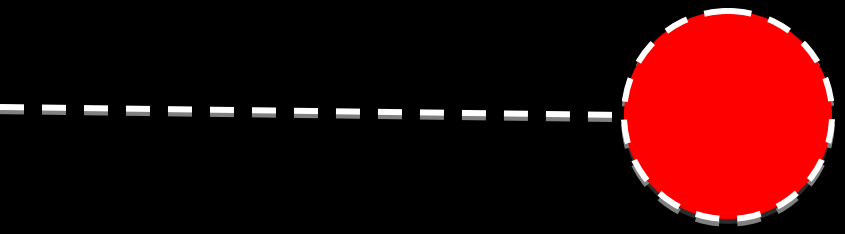
16.8 Discuss the benefits and pitfalls of diagnostic shortcuts (heuristics). Slide 18

16.9 Identify heuristics commonly used by highly experienced physicians. Slide 18

16.10 Describe ways in which EMTs can improve their critical thinking processes. Slides 21–23

MULTIMEDIA

- Slide 10 Obstacles to Problem Solving Video
- Slide 19 Decision-Making Information Video
- Slide 25 Leadership Video
- Slide 26 Delegating Authority Video



CORE CONCEPTS

- What an EMT diagnosis is
- The role of critical thinking in EMS
- How you as an EMT can improve your critical thinking skills

Topics

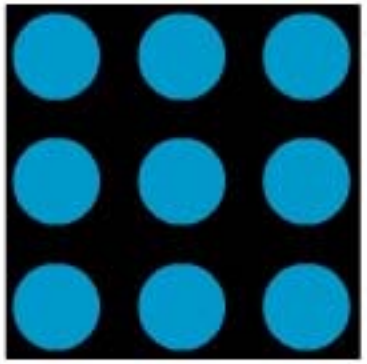
- EMT Diagnosis and Critical Thinking
- How a Clinician Reaches a Diagnosis
- How an EMT Can Learn to Think Like an Experienced Physician

EMT Diagnosis and Critical Thinking

EMT Diagnosis and Critical Thinking

- Diagnosis is label for condition
- Based on history, physical examination, vital signs
- Involves both physical and intellectual activity

Obstacles to Problem Solving Video



Representation Failure - Nine-Dot Problem

Confirmation Bias - Vowels and Numbers Problem

Functional Fixedness - Candle Problem

Click here to view a video on the subject of solving problems.

How a Clinician Reaches a Diagnosis

How a Clinician Reaches a Diagnosis

- Clinicians have different levels of training, experience, time, resources
- Techniques vary among types of clinicians

Traditional Approach to Diagnosis

- Assess patient
- List of conditions or diagnoses
  - "Differential diagnosis"
- Further evaluation
  - Reevaluate the differential
- Final diagnosis

Emergency Medicine Approach to Diagnosis

- Quickly rule out and treat immediate life threats
  - Stabilize patient
- Return to gather additional information
- Focus on ruling out worst-case scenario
  - Red flags suggest problem serious
- May be responsible for multiple patients

EMS Approach to Diagnosis

- Must be very efficient
  - Be available for another call as soon as possible
- Work in uncontrolled environment
- Limited tools and skill set
- Narrow educational focus

continued

EMS Approach to Diagnosis

- Follows same steps as emergency physician
  - Most are abbreviated or limited
- Considers most serious conditions associated with patient
  - Rules them in or out
- Creates a differential

Think About It

- You can reach a diagnosis, but your work is not done. Why?

The Experienced Clinician

- Experienced clinicians learn heuristics (shortcuts)
  - Pattern recognition
  - Features narrowing possibilities
- Allows efficient diagnosis and prompt treatment
- Realizes limitations of shortcuts
  - Understands common biases of heuristics

Decision-Making Information Video

Click here to view a video on the subject of making decisions.

How an EMT Can Learn to Think Like an Experienced Physician

Thinking Like an Experienced Physician

- Love ambiguity
  - Uncertainty natural part of EMS
- Understand limitations
  - People's limitations
  - Technology's limitations

continued

Thinking Like an Experienced Physician

- Utilize different methods
- No one single way always right
- Remain open-minded and flexible
- Learn from others
- Form strong foundation of knowledge
- Be familiar with conditions
- Remain up-to-date
- Continue learning

continued

Thinking Like an Experienced Physician

- Be organized
- Be a lifelong student
- Reflect on what you have learned

Think About It

- What are some of the important things to remember as you learn how to make a diagnosis and improve your critical thinking skills in EMS?

Leadership Video

Click here to view a video on the subject of effective leadership.

Delegating Authority Video

Click here to view a video on the subject of delegation.

Chapter Review

Chapter Review

- EMTs make some diagnoses in the field, although they are not as extensive or detailed as physicians' diagnoses.

continued

Chapter Review

- The traditional approach to reaching a diagnosis is to assess the patient, draw up a list of differential diagnoses, assess further to rule in or rule out different conditions, and narrow the list until you reach a conclusion.

continued

Chapter Review

- Highly experienced physicians don't always use the traditional approach. They use heuristics and their experience and training to speed up the process of reaching a diagnosis.
- Heuristics has limitations.

continued

Chapter Review

- Learn to think more critically by accepting ambiguity, understanding limitations of people and technology, forming a strong foundation of knowledge, and organizing data in your mind.
- When considering the cause of a patient's condition, don't let your search for a cause delay your treatment of the patient.

Remember

- Critical thinking an analytical process.
  - Organized and efficient way to solve problem.
  - Reflective, reasonable, focused thinking.
- EMT must be efficient, yet accurate.
- Patients often have more than one thing wrong.
  - Do not stop looking.

Questions to Consider

- What is a differential diagnosis based on?
- What is an emergency physician's first priority when formulating a differential?
- How are heuristics helpful in critical thinking?
- How can we as providers enhance our critical thinking and diagnostic skills?

Critical Thinking

- A 52-year-old man complains of chest pain while sitting at his desk at work. He appears alert and oriented. He tells you he thinks it may “just be stress.” How would you arrive at a diagnosis?

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