Objectives

1. Define key terms introduced in this chapter.
2. Explain the importance of taking and recording a patient's vital signs over a period of time to identify problems and changes in the patient's condition and of accurately documenting the vital signs and patient history (slides 18, 48).
3. Perform the steps required to assess the patient's breathing, pulse, skin, pupils, blood pressure, and oxygen saturation and consider the patient's overall presentation when interpreting the meaning of vital sign findings (slides 19-55).

Objectives

4. Differentiate between normal and abnormal findings when assessing a patient's breathing, to include the respiratory rate, quality of respirations, rhythm of respirations, and signs that may indicate respiratory distress or respiratory failure (slides 19-24).
5. Differentiate between normal respiratory rates for adults, children, infants, and newborns and evaluate the need to administer treatment based on assessment of a patient's breathing (slide 20).
6. Auscultate breath sounds to determine the presence of breath sounds, equality of breath sounds, and the presence and likely underlying causes of abnormal breath sounds (slides 21-22).
Objectives

7. Assess the pulse at various pulse points and consider the patient's age and level of responsiveness when selecting a site to palpate the pulse (slides 25-26).

8. Differentiate between normal and abnormal findings when assessing a patient's pulse, to include the pulse rate, quality of the pulse, and rhythm of the pulse (slides 27-30).

9. Associate pulse abnormalities with possible underlying causes and describe the changes in the pulse associated with pulsus paradoxus (slide 27-29).

Objectives

10. Recognize normal and abnormal findings in the assessment of skin color, temperature, condition, capillary refill, and color of the mucous membranes and associate abnormal skin findings with potential underlying causes (slides 31-36).

11. Explain factors that can affect capillary refill findings (slides 35-36).

12. When assessing the pupils, recognize dilation, constriction, inequality, and abnormal reactivity and associate abnormal findings with potential underlying causes (slides 37-38).

Objectives

13. In relation to blood pressure measurement, explain systolic and diastolic blood pressure, consider normal values for age and gender, find the pulse pressure, and identify potential causes of abnormal findings or changes (slides 39-41).

14. Compare palpation and auscultation of blood pressure as to processes, useful findings, and documentation and discuss how technique and selection of equipment can affect the accuracy of readings (slides 42-43).

15. Demonstrate assessment of orthostatic vital signs (slides 44-45).

16. Given a patient scenario, determine the frequency with which vital signs should be reassessed (slides 46-47).
Objectives

17. Explain what pulse oximetry measures, use pulse oximetry to help determine the need for supplemental oxygen, and describe factors and limitations in interpreting pulse oximetry findings (slides 50-55).
18. Describe the correct procedure for noninvasive blood pressure monitoring (slides 56-57).
19. Describe the processes for controlling the scene, achieving a smooth transition of care, and reducing the patient’s anxiety (slides 59-66).

Objectives

21. Given a scenario, efficiently elicit an adequate patient history using closed-ended and open-ended questions and active listening techniques (slides 69-78).
22. Use the mnemonics SAMPLE and OPQRST to ensure a complete prehospital patient history (slides 79-82).
23. React appropriately when asking questions about sensitive topics or when caring for patients who present special challenges to history-taking and assessment (slides 83-84).

Multimedia Directory

Slide 48 Vital Sign Assessment Video
Topics

- Gathering Patient Information
- Baseline Vital Signs
- Monitoring Equipment
- Preparing to Take the History
- Taking the History

CASE STUDY

Dispatch

EMS Unit 114

Respond to 1895 East State Street for an unknown medical emergency called in by family member.

Time out 1748
Upon Arrival

• Daughter states she hadn’t been able to reach her father, Mr. Li, all day
• She broke in and found him lying on the floor
• She states that he seems weak and in pain

How would you proceed to assess and care for this patient?
What is wrong with the patient?

Baseline Vital Signs

- Respirations
- Pulse
- Skin
- Pupils
- Blood Pressure
Breathing (Respiration)

Breathing (Respiratory) Rate

• Observe rise and fall of chest
• Ranges for all age groups

Breathing (Respiration)

Breathing (Respiratory) Quality

Back to Objectives
Breathing (Respiration)

**Breathing (Respiratory) Rhythm**

- Normal
- Shallow
- Labored
- Noisy

- Regular
- Irregular
Pulse

Location of Pulses

• Carotid
• Femoral
• Radial
• Brachial
• Popliteal
• Posterior tibial
• Dorsalis pedis

Pulse Rate
Pulse

Pulse Quality and Rhythm

Back to Objectives

- Average rate
- Tachycardia
- Bradycardia

- Strong
- Weak
- Regular
- Irregular
Skin

Skin Color

- Pallor
- Cyanosis
- Flushing
- Jaundice
- Mottling

Skin Temperature and Condition
Skin

Capillary Refill

• Compressed capillaries to refill with blood
• More reliable in infants and children than adults

(© Daniel Limmer)
Pupils

- Size
- Equality
- Reactivity

Blood Pressure
• Systolic – Korotkoff’s sound
• Diastolic

Normal Range

• Adult male
• Adult female
• Child age one to ten years
• Child greater than age ten years

Blood Pressure

Methods of Measuring Blood Pressure
Testing Orthostatic Vital Signs

- Supine
- Standing
- Tilt test
Vital Sign Reassessment

- Stable every 15 minutes
- Unstable every five minutes

Click here to view a video on the topic of vital sign assessment.

Return to Directory
Monitoring Equipment

Pulse Oximeter: Assessing Oxygen Saturation

• Pulse oximetry
• Purpose
• Function
• Signs of hypoxia
Pulse Oximeter: Assessing Oxygen Saturation

Indications for Pulse Oximetry and Limitations to the Pulse Oximeter

• Indications
• Limitations

Procedure for Determining the SpO₂ Reading
Noninvasive Blood Pressure Monitor

- Automatically measures blood pressure
- Procedure for monitoring

• Turn on
• Attach to patient
• Troubleshoot any errors
• Continually reassess
Preparing to Take the History

Gain Control of the Scene

- Competence
- Confidence
- Compassion
Achieve a Smooth Transition of Care

• Introduce yourself and your partner
• Gain information from First Responders

Reduce the Patient’s Anxiety
• Bring order
• Introduce yourself
• Gain consent
• Position yourself
• Use communication skills
• Be courteous
• Use touch when appropriate

Maintain Control

• Attempt to control the scene
• If it cannot be controlled, rapidly remove yourself and the patient
Taking the History

- Chief complaint
- Gather history from patient or family

Statistical and Demographic Information
Current Health Status

- Medications
- Allergies
- Tobacco
- Drugs, alcohol
- Use of safety equipment
- Family history
Techniques for Taking a Patient History

Note Taking

Take notes to present information as accurately as possible.

Types of Questions
Techniques for Taking a Patient History

Active Listening Techniques

• Open-ended question
• Closed-ended question

• Facilitation
• Reflection
• Clarification
• Empathetic response
• Confrontation
• Interpretation
Standardized Approach to History Taking

The SAMPLE History

• Signs and symptoms
• Allergies
• Medications
• Pertinent past history
• Last oral intake
• Events leading to the injury

Assessing Patient Complaints: OPQRST
Sensitive Topics or Special Challenges
Patient Assessment

• No problems with ABCs
• Apply cervical collar
• Vitals: BP: 168/82 mmHg; pulse: 78 regular; RR: 18; skin pink, warm and dry
• Patient complains of left hip pain

Patient Assessment

• Allergies to PCN
• Hip joints replaced in 1989
• Fell about 11 a.m. this morning
• Transport to hospital unremarkable
Critical Thinking Scenario

• 56-year-old male fell from the roof of his house onto the concrete driveway
• Patient is not alert, appears to have fallen head first, and has severe head trauma
• Large amount of blood from his mouth, nose, and ears
• Gurgling sounds with each respiration
• His wife arrives home while you’re on scene and begins to scream frantically

Critical Thinking Scenario

Vital signs:
• BP: 198/72 mmHg
• HR: 48 bpm; radial pulse is slow but strong
• RR: 45 per minute; rapid with minimal chest movement
• SpO₂ is 76 percent
• Skin is cyanotic, warm, and dry

Critical Thinking Questions

1. What is the significance of the gurgling sound?
2. How would you document the pulse rate?
3. What does the pulse oximeter reading indicate?
4. What do the skin signs indicate?
5. What other vital signs would be important to assess in this patient?
6. When would you attempt to gather a SAMPLE history?
7. How would you gather the SAMPLE history?
8. What information would you be able to gather using the OPQRST mnemonic?

Reinforce and Review

Please visit www.bradybooks.com and follow the myBradykit links to access content for the text.