<inst>**CHAPTER** </inst> <NOXMLTAGINDOC> <DOCPAGE NUM="289"> </DOCPAGE> </NOXMLTAGINDOC><?PearsonxmlValidateVersion 9.4.2?><?cplVersion 6.5.2.015?><chapter id="ch16" prefix="CHAPTER" label="16"><inst>**17**

</inst><title id="ch16.title">Respiratory Emergencies

<grp role="application"><title>**Handout 17-1**<inst>**:** </inst></title><subtitle>Evaluating Content Mastery</subtitle><authorgroup><author><name><inst> </inst>Student’s Name</name></author></authorgroup>

<inst>EVALUATION

</title><division id="ch16div1sec04"><title id="ch16div1sec04.title">**CHAPTER 17 QUIZ**</title>

<problemset><instruction><para>***Write the letter of the best answer in the space provided.***</para></instruction>

<mc-problem label="1" maxpoints="1"><inst>\_\_\_\_\_\_ **1.** </inst><question><para>The respiratory structure that allows air to flow in and out of the lungs through contraction and relaxation of its muscles is the:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>larynx.</para></answer><answer label="C"><inst> **C.** </inst><para>diaphragm.</para></answer>

<answer label="B"><inst> **B.** </inst><para>epiglottis.</para></answer><answer label="D"><inst> **D.** </inst><para>alveoli.</para></answer></answers></mc-problem>

<mc-problem label="2" maxpoints="1"><inst>\_\_\_\_\_\_ **2.** </inst><question><para>An adequate rate of breathing, or breaths per minute, for most adults is:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>25–50.</para></answer><answer label="C"><inst> **C.** </inst><para>15–30.</para></answer>

<answer label="B"><inst> **B.** </inst><para>20–40.</para></answer><answer label="D"><inst> **D.** </inst><para>12–20.</para></answer></answers></mc-problem>

<mc-problem label="3" maxpoints="1"><inst>\_\_\_\_\_\_ **3.** </inst><question><para>All of the following are signs of inadequate breathing <emphasis>except:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>present and equal breath sounds.</para></answer><answer label="C"><inst> **C.** </inst><para>cyanotic skin color.</para></answer>

<answer label="B"><inst> **B.** </inst><para>shallow respirations.</para></answer><answer label="D"><inst> **D.** </inst><para>use of accessory muscles.</para></answer></answers></mc-problem>

<mc-problem label="4" maxpoints="1"><inst>\_\_\_\_\_\_ **4.** </inst><question><para>The preferred method of providing artificial ventilation is:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>pocket face mask with supplemental oxygen.</para></answer>

<answer label="B"><inst> **B.** </inst><para>two-person bag-valve mask with supplemental oxygen.</para></answer>

<answer label="C"><inst> **C.** </inst><para>flow-restricted, oxygen-powered ventilator.</para></answer>

<answer label="D"><inst> **D.** </inst><para>one-person bag-valve mask with supplemental oxygen.</para></answer></answers></mc-problem>

<mc-problem label="5" maxpoints="1"><inst>\_\_\_\_\_\_ **5.** </inst><question><para>An adequate number of breaths per minute for artificial ventilation of infants and children are:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>40.</para></answer><answer label="C"><inst> **C.** </inst><para>20.</para></answer>

<answer label="B"><inst> **B.** </inst><para>30.</para></answer><answer label="D"><inst> **D.** </inst><para>12.</para></answer></answers></mc-problem>

<mc-problem label="6" maxpoints="1"><inst>\_\_\_\_\_\_ **6.** </inst><question><para>In an infant or a child, bradycardia is a sign of:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>circulatory collapse.</para></answer><answer label="C"><inst> **C.** </inst><para>respiratory failure.</para></answer>

<answer label="B"><inst> **B.** </inst><para>cardiac arrest.</para></answer><answer label="D"><inst> **D.** </inst><para>fatigue.</para></answer></answers></mc-problem>

<mc-problem label="7" maxpoints="1"><inst>\_\_\_\_\_\_ **7.** </inst><question><para>If a patient is experiencing breathing difficulty but is breathing adequately, she should be placed in a:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>sitting position.</para></answer><answer label="C"><inst> **C.** </inst><para>prone position.</para></answer>

<answer label="B"><inst> **B.** </inst><para>supine position.</para></answer><answer label="D"><inst> **D.** </inst><para>position of comfort.</para></answer></answers></mc-problem>

<mc-problem label="8" maxpoints="1"><inst>\_\_\_\_\_\_ **8.** </inst><question><para>All of the following are examples of chronic obstructive respiratory disease (COPD) <emphasis>except:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>emphysema.</para></answer><answer label="C"><inst> **C.** </inst><para>black lung.</para></answer>

<answer label="B"><inst> **B.** </inst><para>chronic bronchitis.</para></answer><answer label="D"><inst> **D.** </inst><para>asthma.</para></answer></answers></mc-problem>

<mc-problem label="9" maxpoints="1"><inst>\_\_\_\_\_\_ **9.** </inst><question><para>The whistling sound from a narrowed bronchial airway is called:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>snoring.</para></answer><answer label="C"><inst> **C.** </inst><para>wheezing.</para></answer>

<answer label="B"><inst> **B.** </inst><para>stridor.</para></answer><answer label="D"><inst> **D.** </inst><para>rhonchi.</para></answer></answers></mc-problem>

<mc-problem label="10" maxpoints="1"><inst>\_\_\_\_\_\_ **10.** </inst><question><para>A condition in infants and small children in which the movement of the diaphragm causes the chest and abdomen to move in opposite directions is called:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>nasal flaring.</para></answer><answer label="C"><inst> **C.** </inst><para>retractions.</para></answer>

<answer label="B"><inst> **B.** </inst><para>seesaw breathing.</para></answer><answer label="D"><inst> **D.** </inst><para>grunting.</para></answer></answers></mc-problem>

<mc-problem label="11" maxpoints="1"><inst>\_\_\_\_\_\_ **11.** </inst><question><para>A harsh, high-pitched sound during breathing is called:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>gurgling.</para></answer><answer label="C"><inst> **C.** </inst><para>stridor.</para></answer>

<answer label="B"><inst> **B.** </inst><para>crackles.</para></answer><answer label="D"><inst> **D.** </inst><para>retractions.</para></answer></answers></mc-problem>

<mc-problem label="12" maxpoints="1"><inst>\_\_\_\_\_\_ **12.** </inst><question><para>All of the following are examples of medications delivered via prescribed inhalers, <emphasis>except:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>albuterol.</para></answer><answer label="C"><inst> **C.** </inst><para>Ventolin.</para></answer>

<answer label="B"><inst> **B.** </inst><para>aspirin.</para></answer><answer label="D"><inst> **D.** </inst><para>Atrovent.</para></answer></answers></mc-problem>

<mc-problem label="13" maxpoints="1"><inst>\_\_\_\_\_\_ **13.** </inst><question><para>An active process in which the intercostal (rib) muscles and the diaphragm contract, causing air to flow into the lungs, is known as:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>bronchoconstriction.</para></answer><answer label="C"><inst> **C.** </inst><para>expiration.</para></answer>

<answer label="B"><inst> **B.** </inst><para>exhalation.</para></answer><answer label="D"><inst> **D.** </inst><para>inspiration.</para></answer></answers></mc-problem>

<mc-problem label="14" maxpoints="1"><inst>\_\_\_\_\_\_ **14.** </inst><question><para>A possible side effect from a prescribed inhaler is:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>increased pulse rate.</para></answer><answer label="C"><inst> **C.** </inst><para>cyanosis.</para></answer>

<answer label="B"><inst> **B.** </inst><para>hypotension.</para></answer><answer label="D"><inst> **D.** </inst><para>altered mental status.</para></answer></answers></mc-problem>

<mc-problem label="15" maxpoints="1"><inst>\_\_\_\_\_\_ **15.** </inst><question><para>Sporadic, irregular breaths that are usually seen just before respiratory arrest are called:</para></question>

<answers><answer label="A"><inst> **A.** </inst><para>seesaw breathing.</para></answer><answer label="C"><inst> **C.** </inst><para>diaphragmatic breathing.</para></answer>

<answer label="B"><inst> **B.** </inst><para>agonal respirations.</para></answer><answer label="D"><inst> **D.** </inst><para>hypoxic drive.

\_\_\_\_\_\_**16**. All of the following are contraindications for CPAP use except:

**A.** tachycardia. **C.** hypotension.

**B.** apnea. **D.** poor mask seal.

\_\_\_\_\_\_**17**. Wet, gurgling lung sounds are an indication of:

**A.** COPD. **C.** asthma.

**B.** anaphylaxis. **D.** pulmonary edema.

\_\_\_\_\_\_**18.** Respiratory distress caused by an infection is most likely from:

**A.** COPD. **C.** anaphylaxis.

**B.** pneumonia. **D.** CHF.

\_\_\_\_\_\_\_**19**. Patients with absent or diminished lung sounds on one side only are suffering from:

**A.** pulmonary edema. **C.** pneumothorax.

**B.** pulmonary embolism. **D.** COPD.

\_\_\_\_\_\_\_**20**. A person who collapses from a clot in the pulmonary artery is suffering from:

**A.** pulmonary edema. **C.** pulmonary hypertension.

**B.** pulmonary embolism. **D.** pulmonary effusion. </para></answer></answers></mc-problem></problemset></division></grp>

<grp role="application"><title>**Handout 17-2:**<inst> </inst></title><subtitle>Reinforcing Content Mastery</subtitle><authorgroup><author><name><inst> </inst>Student’s Name</name></author></authorgroup>

<inst>REINFORCEMENT</inst>

<division id="ch16div1sec05"><title id="ch16div1sec05.title">**In the Field**</title>

<problemset><instruction><para>***Read the following real-life situation. Then answer the questions that follow.***</para></instruction></problemset>

<vignette><para>Your unit has just received a call from the emergency medical dispatcher. A 73-year-old woman at 154 Adams Way reports difficulty breathing. You and your partner head to the scene, arriving 12 minutes after the call.</para>

<para>Upon entry into the house, you find the patient sitting in a chair, leaning forward with her hands on her knees. She appears anxious and has difficulty speaking in full sentences without gasping for air. She tells you, “I can’t seem to get enough air.” As she struggles to catch her breath, the patient adds, “My chest is so tight.”</para>

<para>You position yourself at eye level with the patient and try to calm her fears. You introduce yourself and explain that you will need to ask several questions before beginning treatment. From your questions, you learn that the patient has a history of emphysema and that she takes Lasix, atenolol, and Ventolin. However, she has not taken these medications for several days in an effort to prolong the prescriptions. “Refills are so expensive,” she explains.</para>

<para>Upon physical examination, you find the patient alert but restless. Her pulse rate is 120 beats per minute, her blood pressure is 110/68 mmHg, her respiratory rate is 20 per minute. Breaths are labored and noisy. Her skin is warm and pale.</para>

<problemset><general-problem label="1." maxpoints="1" type="genq"><inst> **1.** </inst><question><para>Is the patient’s breathing adequate or inadequate?</para></question></general-problem>

<general-problem label="2." maxpoints="1" type="genq"><inst> **2.** </inst><question><para>When you elicited a focused history of the condition, what questions should you have asked the patient?</para></question></general-problem>

<general-problem label="3." maxpoints="1" type="genq"><inst> **3.** </inst><question><para>What steps would you take to treat this patient?</para></question></general-problem>

<general-problem label="4." maxpoints="1" type="genq"><inst> **4.** </inst><question><para>How would you administer oxygen to the patient?

**5**. Should you assist this patient in taking her prescribed inhaler?</para></question></general-problem>

<general-problem label="5." maxpoints="1" type="genq"><inst>**6.** </inst><question><para>In what position should this patient be transported to the hospital?</para></question></general-problem></problemset></vignette></division></grp>

<grp role="application"><title>**Handout 17-3**<inst>**:** </inst></title><subtitle>Reinforcing Content Mastery</subtitle><authorgroup><author><name><inst> </inst>Student’s Name</name></author></authorgroup>

<inst>REINFORCEMENT</inst>

<division id="ch16div1sec06"><title id="ch16div1sec06.title">**Chapter 17 Review**</title>

<problemset><instruction><para>**Write the word or words that best complete each sentence in the space provided.**</para></instruction>

<orderedlist numeration="arabic" spacing="normal" inheritnum="ignore" role="para" continuation="restarts"><listitem><para><inst> **1.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol> complaints are among the most common reasons that people call EMS.</para></listitem>

<listitem><para><inst> **2.** </inst>The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> is a muscular structure that divides the chest cavity from the abdominal cavity.</para></listitem>

<listitem><para><inst> **3.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol> is an active process that uses the contraction of several muscles to increase the size of the chest cavity.</para></listitem>

<listitem><para><inst> **4.** </inst>Normal breathing may be determined by observing for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol>, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol>, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol>.</para></listitem>

<listitem><para><inst> **5.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol> \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> are sporadic, irregular breaths that are usually seen just before respiratory arrest.</para></listitem>

<listitem><para><inst> **6.** </inst>Infants and small children in respiratory distress exhibit \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol>, in which the movement of the diaphragm causes the chest and abdomen to move in opposite directions.</para></listitem>

<listitem><para><inst> **7.** </inst>A low, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol>, pulse in infants and small children in the setting of a respiratory emergency usually means trouble!</para></listitem>

<listitem><para><inst> **8.** </inst>A high-pitched sound during breathing is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol>.</para></listitem>

<listitem><para><inst> **9.** </inst>Use the letters \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> to remember which questions to ask when eliciting a history of a respiratory disorder.</para></listitem>

<listitem><para><inst> **10.** </inst>Never withhold \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> from a patient in respiratory distress.</para></listitem>

<listitem><para><inst> **11.** </inst>Emphysema—as well as chronic bronchitis and black lung—are examples of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol>.</para></listitem>

<listitem><para><inst> **12.** </inst>A patient who uses several pillows to prop himself up when sleeping may be suffering from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol>.</para></listitem>

<listitem><para><inst> **13.** </inst>A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> attack may be triggered by an allergic reaction to something inhaled, swallowed, or injected into the body.</para></listitem>

<listitem><para><inst> **14.** </inst>Blockage, due to narrowing of the bronchi that lead from the trachea to the lungs, is known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol>.</para></listitem>

<listitem><para><inst> **15.** </inst>Contact \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol> for specific authorization to help a patient self-administer a prescribed inhaler.</para></listitem></orderedlist></problemset></division></grp>

<grp role="application"><title>**Handout 17-4:**<inst> </inst></title><subtitle>Reinforcing Content Mastery</subtitle><authorgroup><author><name><inst> </inst>Student’s Name</name></author></authorgroup>

<division id="ch16div1sec07"><title id="ch16div1sec07.title">**Adequate and Inadequate Breathing**</title>

<problemset><instruction><para>***Complete the following table to review the characteristics of adequate and inadequate   
breathing.***</para></instruction>

|  |  |  |
| --- | --- | --- |
| <informaltable id="informaltable2" float="0" frame="none"><tgroup cols="3" colsep="0" rowsep="0" align="left"><colspec colnum="1" colname="c1" align="left" colwidth="35"/><colspec colnum="2" colname="c2" align="left" colwidth="30"/><colspec colnum="3" colname="c3" align="left" colwidth="35"/><thead><row><entry valign="top"><para/></entry> | <entry valign="top"><para>**Adequate Breathing**</para></entry> | <entry valign="top"><para>**Inadequate Breathing**</para></entry></row></thead> |
| <tbody><row><entry morerows="2" valign="top"><division id="ch16div1sec08"><title id="ch16div1sec08.title">**Rate**</title></division></entry> | <entry valign="top"><para><emphasis role="strong">**Adult:**</emphasis></para></entry> | <entry valign="top"><para><emphasis role="strong">**Adult:**</emphasis></para></entry></row> |
|  | <row><entry valign="top"><para><emphasis role="strong">**Child:**</emphasis></para></entry> | <entry valign="top"><para><emphasis role="strong">**Child:**</emphasis></para></entry></row> |
|  | <row><entry valign="top"><para><emphasis role="strong">**Infant:**</emphasis></para></entry> | <entry valign="top"><para><emphasis role="strong">**Infant:**</emphasis></para></entry></row> |
| <row><entry valign="top"><division id="ch16div1sec09"><title id="ch16div1sec09.title">**Rhythm**</title></division></entry> | <entry valign="top"><para/></entry> | <entry valign="top"><para/></entry></row> |
| <row><entry valign="top"><division id="ch16div1sec10"><title id="ch16div1sec10.title">**Quality**</title></division></entry> | <entry valign="top"><para/></entry> | <entry valign="top"><para/></entry></row> |
| <row><entry valign="top"><para>Breath sounds</para></entry> | <entry valign="top"><para/></entry> | <entry valign="top"><para/></entry></row> |
| <row><entry valign="top"><para>Chest expansion</para></entry> | <entry valign="top"><para/></entry> | <entry valign="top"><para/></entry></row> |
| <row><entry valign="top"><para>Effort of breathing</para></entry> | <entry valign="top"><para/></entry> | <entry valign="top"><para/></entry></row></tbody></tgroup></informaltable> |

<link linkend="informaltable2" preference="1" role="generated"></link></problemset></division></grp><grp role="application"><title>**Handout 17-5:**<inst> </inst></title><subtitle>Reinforcing Content Mastery</subtitle><authorgroup><author><name><inst> </inst>Student’s Name</name></author></authorgroup>

<division id="ch16div1sec12"><title id="ch16div1sec12.title">**Prescribed Inhaler Completion**</title>

<problemset><instruction><para>***Write in the missing information on the following medication flash card, and save the completed card for future reference.***</para></instruction>

|  |
| --- |
| <informaltable id="informaltable3" float="0" frame="none"><tgroup cols="1" colsep="0" rowsep="0" align="left"><colspec colnum="1" colname="c1" align="left" colwidth="100"/><thead><row><entry valign="top"><para>**Prescribed Inhaler**</para></entry></row></thead> |
| <tbody><row><entry valign="top"><division id="ch16div1sec13"><title id="ch16div1sec13.title">**Medication Names**</title></division></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**1.** </inst>Generic: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol></para></listitem> |
| <listitem><para><inst>**2.** </inst>Trade: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_<inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row> |
| <row><entry valign="top"><division id="ch16div1sec14"><title id="ch16div1sec14.title">**Indications**</title></division></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**1.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**2.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**3.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row> |
| <row><entry valign="top"><division id="ch16div1sec15"><title id="ch16div1sec15.title">**Contraindications**</title></division></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**1.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**2.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**3.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**4.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row> |
| <row><entry valign="top"><division id="ch16div1sec16"><title id="ch16div1sec16.title">**Medication Form:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**\_\_\_\_\_\_\_\_\_\_\_\_\_**<inlinewol type="wol1"><inst></inst></inlinewol></title></division></entry></row> |
| <row><entry valign="top"><division id="ch16div1sec17"><title id="ch16div1sec17.title">**Dosage:** <inlinewol type="wol1"><inst>\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst></inlinewol></title></division></entry></row> |
| <row><entry valign="top"><division id="ch16div1sec18"><title id="ch16div1sec18.title">**Action:** <inlinewol type="wol1"><inst>\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst></inlinewol></title></division></entry></row> |
| <row><entry valign="top"><division id="ch16div1sec19"><title id="ch16div1sec19.title">**Side Effects**</title></division></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**1.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**2.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row> |
| <row><entry valign="top"><orderedlist numeration="arabic" inheritnum="ignore" spacing="normal" continuation="restarts"><listitem><para><inst>**3.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</inst><inlinewol type="wol1"><inst></inst></inlinewol></para></listitem></orderedlist></entry></row></tbody></tgroup></informaltable> |

<link linkend="informaltable3" preference="1" role="generated"></link></problemset></division></grp><answerset><title>**Chapter 17 Answer Key**</title>

<division id="ch16div1sec20"><title id="ch16div1sec20.title">**Handout 17-1:** </title><para><link linkend="ch16" preference="0">Chapter <xref linkend="ch16" label="16"><inst>17</inst></xref></link> Quiz</para><answerset>

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| <answer label="1" type="ans"><inst> **1.** </inst><para>C</para></answer> | <answer label="4" type="ans"><inst> **4.** </inst><para>A</para></answer> | <answer label="7" type="ans"><inst> **7.** </inst><para>D</para></answer> | **10.** </inst><para>B</para></answer> | **13.** </inst><para>D</para></answer> |
| <answer label="2" type="ans"><inst> **2.** </inst><para>D</para></answer> | <answer label="5" type="ans"><inst> **5.** </inst><para>C</para></answer> | <answer label="8" type="ans"><inst> **8.** </inst><para>D</para></answer> | **11.** </inst><para>C</para></answer> | <answer label="13" type="ans"><inst><answer label="14" type="ans"><inst> **14.** </inst><para>A</para></answer> |
| <answer label="3" type="ans"><inst> **3.** </inst><para>A</para></answer> | <answer label="6" type="ans"><inst> **6.** </inst><para>C</para></answer> | <answer label="9" type="ans"><inst> **9.** </inst><para>C</para></answer> | <answer label="10" type="ans"><inst><answer label="11" type="ans"><inst><answer label="12" type="ans"><inst> **12.** </inst><para>B</para></answer> | <answer label="15" type="ans"><inst> **15.** </inst><para>B</para></answer></answerset></division> |
| **16.** A | **17**. D | **18**. B | **19**. C | **20.** B |

<division id="ch16div1sec21"><title id="ch16div1sec21.title">**Handout 17-2:** </title><para>In the Field</para><answerset>

<answer label="1" type="ans"><inst> **1.** </inst><para>Adequate, but with the potential to progress to inadequate.</para></answer>

<answer label="2" type="ans"><inst> **2.** </inst><para>OPQRST. When did the condition begin? What were you doing when it came on? Can you describe the feeling you have? Does the feeling seem to spread to any other part of your body? On a scale of 1 to 10, how bad is your breathing problem? How long have you had this feeling? Have you taken any prescribed medications or done anything else to help relieve the condition?</para></answer>

<answer label="3" type="ans"><inst> **3.** </inst><para>Perform an initial assessment, administer high-flow oxygen, phone medical direction for permission to help the patient with her prescribed inhaler, and transport her rapidly to the hospital.</para></answer>

<answer label="4" type="ans"><inst> **4.** </inst><para>Use a nonrebreather mask to administer 12 to 15 lpm of high-flow oxygen.

**5**. Assisting the patient with her prescribed inhaler should only be done after consulting medical control online and receiving a direct order from medical control to assist the patient with her inhaler. Depending on whether the breathing difficulty originates in the heart or the lungs, her inhaler may be either beneficial or potentially harmful.</para></answer>

<answer label="5" type="ans"><inst> **6.** </inst><para>In a position of comfort, most likely a seated position.</para></answer></answerset></division>

<division id="ch16div1sec22"><title id="ch16div1sec22.title">**Handout 17-3:** </title><para><link linkend="ch16" preference="0">Chapter <xref linkend="ch16" label="16"><inst>17</inst></xref></link> Review</para><answerset>

<answer label="1" type="ans"><inst> **1.** </inst><para>Respiratory</para></answer>

<answer label="2" type="ans"><inst> **2.** </inst><para>diaphragm</para></answer>

<answer label="3" type="ans"><inst> **3.** </inst><para>Inspiration</para></answer>

<answer label="4" type="ans"><inst> **4.** </inst><para>rate, rhythm, quality</para></answer>

<answer label="5" type="ans"><inst> **5.** </inst><para>Agonal respirations</para></answer>

<answer label="6" type="ans"><inst> **6.** </inst><para>seesaw breathing</para></answer>

<answer label="7" type="ans"><inst> **7.** </inst><para>bradycardic</para></answer>

<answer label="8" type="ans"><inst> **8.** </inst><para>stridor</para></answer>

<answer label="9" type="ans"><inst> **9.** </inst><para>OPQRST</para></answer>

<answer label="10" type="ans"><inst> **10.** </inst><para>oxygen</para></answer>

<answer label="11" type="ans"><inst> **11.** </inst><para>chronic obstructive pulmonary diseases</para></answer>

<answer label="12" type="ans"><inst> **12.** </inst><para>pulmonary edema</para></answer>

<answer label="13" type="ans"><inst> **13.** </inst><para>asthma</para></answer>

<answer label="14" type="ans"><inst> **14.** </inst><para>bronchoconstriction</para></answer>

<answer label="15" type="ans"><inst> **15.** </inst><para>medical direction</para></answer></answerset></division>

<division id="ch16div1sec23"><title id="ch16div1sec23.title">**Handout 17-4:** </title><para>Adequate and Inadequate Breathing</para><link linkend="informaltable4" preference="1" role="generated"></link></division>

|  |  |  |
| --- | --- | --- |
| <informaltable id="informaltable4" float="0" frame="none"><tgroup cols="3" colsep="0" rowsep="0" align="left"><colspec colnum="1" colname="c1" align="left" colwidth="35"/><colspec colnum="2" colname="c2" align="left" colwidth="30"/><colspec colnum="3" colname="c3" align="left" colwidth="35"/><thead><row><entry valign="top"><para/></entry> | <entry valign="top"><para>**Adequate Breathing**</para></entry> | <entry valign="top"><para>**Inadequate Breathing**</para></entry></row></thead> |
| <tbody><row><entry morerows="2" valign="top"><division id="ch16div1sec24"><title id="ch16div1sec24.title">**Rate**</title></division></entry> | <entry valign="top"><para><emphasis role="strong">**Adult:**</emphasis> 12–20/min</para></entry>  <entry valign="top"><para><emphasis role="strong">**Child:**</emphasis> 15–30/min</para></entry>  <entry valign="top"><para><emphasis role="strong">**Infant:**</emphasis> 25–50/min</para></entry> | <entry valign="top"><para>Above or below normal rates for the patient’s age group</para></entry></row> |
| <row><entry valign="top"><division id="ch16div1sec25"><title id="ch16div1sec25.title">**Rhythm**</title></division></entry> | <entry valign="top"><para>Regular</para></entry> | <entry valign="top"><para>May be irregular</para></entry></row> |
| <row><entry valign="top"><division id="ch16div1sec26"><title id="ch16div1sec26.title">**Quality**</title></division></entry> | <entry valign="top"><para/></entry> | <entry valign="top"><para/></entry></row> |
| <row><entry valign="top"><para>Breath sounds</para></entry> | <entry valign="top"><para>Present and equal</para></entry> | <entry valign="top"><para>Diminished, unequal, or absent</para></entry></row> |
| <row><entry valign="top"><para>Chest expansion</para></entry> | <entry valign="top"><para>Adequate and equal</para></entry> | <entry valign="top"><para>Inadequate or unequal</para></entry></row> |
| <row><entry valign="top"><para>**Effort of breathing**</para></entry> | <entry valign="top"><para>Unlabored, normal respiratory effort</para></entry> | <entry valign="top"><para>Labored—increased respiratory effort; use of accessory muscles (may be pronounced in infants and children with nasal flaring, seesaw breathing, grunting, and retractions between the ribs and above the clavicles and sternum)</para></entry></row></tbody></tgroup></informaltable> |

<division id="ch16div1sec27"><title id="ch16div1sec27.title">**Handout 17-5:** </title><para>Prescribed Inhaler Completion</para>

<division id="ch16div2sec01"><title id="ch16div2sec01.title">**Medication Names**</title><answerset>

<answer label="1" type="ans"><inst> **1.** </inst><para>Generic: albuterol, isoetharine, metaproterenol</para></answer>

<answer label="2" type="ans"><inst> **2.** </inst><para>Trade: Proventil, Ventolin, Bronkosol, Bronkometer, Alupent, Metaprel</para></answer></answerset></division>

<division id="ch16div2sec02"><title id="ch16div2sec02.title">**Indications**</title><answerset>

<answer label="1" type="ans"><inst> **1.** </inst><para>Patient exhibits signs and symptoms of respiratory emergency.</para></answer>

<answer label="2" type="ans"><inst> **2.** </inst><para>Patient has physician-prescribed, handheld inhaler.</para></answer>

<answer label="3" type="ans"><inst> **3.** </inst><para>Medical direction gives specific authorization to use.</para></answer></answerset></division>

<division id="ch16div2sec03"><title id="ch16div2sec03.title">**Contraindications**</title><answerset>

<answer label="1" type="ans"><inst> **1.** </inst><para>Patient is unable to use the device (e.g., not alert).</para></answer>

<answer label="2" type="ans"><inst> **2.** </inst><para>Inhaler is not prescribed for the patient.</para></answer>

<answer label="3" type="ans"><inst> **3.** </inst><para>Medical direction has not authorized its use.</para></answer>

<answer label="4" type="ans"><inst> **4.** </inst><para>Patient has already taken the maximum dosage prior to EMT’s arrival.</para>

<itemizedlist mark="none" spacing="normal"><listitem><para><emphasis role="strong"> **Medication Form:**</emphasis> Handheld, metered-dose inhaler</para></listitem>

<listitem><para><emphasis role="strong"> **Dosage:**</emphasis> Based on medical direction’s order or physician’s order</para></listitem>

<listitem><para><emphasis role="strong"> **Action:**</emphasis> Beta-agonist bronchodilator that dilates bronchioles, reducing airway resistance</para></listitem></itemizedlist></answer></answerset></division>

<division id="ch16div2sec04"><title id="ch16div2sec04.title">**Side Effects**</title><answerset>

<answer label="1" type="ans"><inst> **1.** </inst><para>Increased pulse rate</para></answer>

<answer label="2" type="ans"><inst> **2.** </inst><para>Tremors</para></answer>

<answer label="3" type="ans"><inst> **3.** </inst><para>Nervousness</para></answer></answerset></division></division></answerset></section></chapter>

</para></marginalnote> <NOXMLTAGINDOC> <DOCPAGE NUM="301"> <ART FILE="Notebook\_1.eps" W="30.616pt" H="26.857pt" XS="100%" YS="100%"/> </DOCPAGE> </NOXMLTAGINDOC>