I. **KEY PERFORMANCE ELEMENTS**

**IMPLEMENTATION AND ASSESSMENT**

<table>
<thead>
<tr>
<th>Procedural Element (Step):</th>
<th>Description of Satisfactory Performance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Connects aerosol generator to appropriate gas source.</td>
<td>Selects gas source corresponding to F\textsubscript{1}O\textsubscript{2} ordered.</td>
</tr>
<tr>
<td>7. Adds appropriate solution aseptically in correct amount.</td>
<td>Utilizes sterile demineralized water unless otherwise specified. Fills reservoir to specified level. Ensures function of feed system where utilized.</td>
</tr>
<tr>
<td>9. Initiates gas flow and fills enclosure with aerosol.</td>
<td>Sets metering device (if used) at flush. Adjusts baffles/dampers if applicable. Checks enclosure for appropriate aerosol density.</td>
</tr>
<tr>
<td>13. Measures F\textsubscript{1}O\textsubscript{2}, adjusts to prescribed level.</td>
<td>Refer to proficiency evaluation: MEASUREMENT OF F\textsubscript{1}O\textsubscript{2}. Adjusts venturi/mixing system to stabilize F\textsubscript{1}O\textsubscript{2} at prescribed level. Adds supplement oxygen if necessary.</td>
</tr>
</tbody>
</table>
Observes patient for alleviation of symptoms, confirms comfort, allays anxiety.  
Ensures appropriate monitoring, to include: body weight (for fluid gain); ABG’s SaO₂ if oxygen administration.

16. Follows oxygen safety precautions.  
Posts “oxygen-in-use” signs.  
Removes ignition sources from room.  
Informs patient (family) and staff of oxygen precautions.

FOLLOW-UP:

17. Maintains proper equipment function (FIO₂, temperature, aerosol output).  
Provides continuous monitoring of FIO₂ and temperature; or  
Rechecks FIO₂, temperature every shift or according to department policy.  
Rechecks/replenishes reservoir.  
Rechecks/readjusts flow/aerosol output.

II. REQUISITE PERFORMANCE VARIABLES:

The student is expected to demonstrate proficiency in the application of the following types of aerosol enclosures:

<table>
<thead>
<tr>
<th>TYPE</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>High output jet nebulizer</td>
<td>Ohio Pediatric Tent</td>
</tr>
<tr>
<td>Refrigerated enclosures</td>
<td>CAM Tent</td>
</tr>
<tr>
<td>High flow hydromanics</td>
<td>McGaw Maxi-Cool</td>
</tr>
<tr>
<td>(Babbington) enclosures</td>
<td></td>
</tr>
</tbody>
</table>

III. ADDITIONAL EVALUATION CRITERIA:

None

IV. ORAL REVIEW QUESTIONS

1. What are the indications for aerosol therapy utilizing enclosures?

2. What are the advantages, disadvantages and limitations of aerosol enclosure therapy as compared to other techniques of aerosol administration?

3. Relate the physical concepts of heat gain/loss to the problems and methods of temperature control within patient enclosures.

4. For the specific apparatus utilized, describe its functional characteristics and principles of operation.
V. SCENARIO QUESTIONS:

1. A three year-old male is admitted to the pediatric floor with the following signs: barking cough, prolonged inspiratory phase, inspiratory retractions and tachypnea. What disease states could be causing these signs? Describe how you can differentiate between various causes of these signs in the pediatric patient. Highlight the key aspects of treating and pediatric diseases that could cause the above clinical picture.

2. You are making oxygen/aerosol rounds on an cool mist tent, you note that there is no mist being generated in the tent. Describe how you would troubleshoot and correct any cause of lack of mist in the tent.

3. A pediatric patient's mother complains that it is getting warm in her child's mist tent. Describe how you would troubleshoot and correct this problem?

4. A physician wants you to deliver a precise oxygen concentration in a croup patient's cool mist tent. Describe various methods by which you could deliver a precise oxygen concentration to a patient who required a cool mist tent.
### STEPS IN PROCEDURE OR TASK:

**EQUIPMENT AND PATIENT PREPARATION**

1. Selects, gathers, and assembles appropriate equipment. Ensures asepsis.
2. Verifies, interprets and evaluates physician's order.
3. Identifies patient, self and department.
4. Explains procedure and confirms patient (family) understanding.

**IMPLEMENTATION**

5. Attaches cat frame and secures to bed (crib).
6. Connects aerosol generator to appropriate gas source.
7. Adds appropriate solution aseptically in correct amount.
8. Tests equipment for proper function.
9. Initiates gas flow and fills enclosure with aerosol.
10. Introduces patient into enclosure.
11. Adjusts gas flow, aerosol output, and temperature appropriate to objectives.
13. Measures \( F_{O_2} \) and adjusts to prescribed level.
14. Assesses patient response (objective and subjective)
15. Modifies technique to respond to adverse patient response.
16.Follows oxygen safety precautions.

**FOLLOW-UP**

17. Maintains proper equipment function. (\( F_{O_2} \), temperature, aerosol output)
18. Records pertinent data in patient's chart.
Upon completion the student will be able to answer oral review questions and discuss clinical scenarios related to the following cognitive objectives:

1. Describe the indications, advantages, disadvantages and limitations of aerosol administration.
2. Describe the physical concepts of heat gain/loss and methods of temperature control within patient enclosures.
3. Describe how the apparatus used during this skill evaluation regulates temperature and provides mist for the patient.
4. Given clinical signs and symptoms of pediatric patients who may require cool mist therapy, differentiate between disease states that may be causing the signs and symptoms and recommend specific respiratory care modalities to care for each disease process.
5. Trouble shoot common problems that occur with cool mist tents.
6. Describe various methods for delivering a precise oxygen concentration within an aerosol tent.

**Skill evaluation**

Ability to perform applicable steps in procedure as listed on the front of form without error or omission.

**Oral Review**

Knowledge of the cognitive objectives listed above.

**Specify Deficiencies:**

Specify applicable skill steps that were omitted or done erroneously. Also note any errors in discussing cognitive objectives. Please give enough detail to allow the student to work on specific remediation.

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**Evaluator Data**

Please sign your name and state your affiliate name.

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**Date**

☐ Satisfactory

☐ Unsatisfactory

☐ Ready for minimally supervised clinical application

☐ Requires additional clinical practice. Repeat skill evaluation. See deficiencies.

☐ Satisfactory

☐ Unsatisfactory

☐ Requires repeat oral review. See deficiencies.

☐ Ready for minimally supervised clinical application

☐ Requires additional clinical practice. Repeat skill evaluation. See deficiencies.

☐ Satisfactory

☐ Unsatisfactory

☐ Requires repeat oral review. See deficiencies.

☐ Ready for minimally supervised clinical application

☐ Requires additional clinical practice. Repeat skill evaluation. See deficiencies.

☐ Satisfactory

☐ Unsatisfactory

☐ Requires repeat oral review. See deficiencies.

☐ Ready for minimally supervised clinical application

☐ Requires additional clinical practice. Repeat skill evaluation. See deficiencies.

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