Analyzing FiO₂ on Delivery Systems

**Purpose**
To standardize the practice of verification of FiO₂ on delivery systems without an integrated oxygen analyzer.

**Scope**
The Department of Respiratory Care Services verifies the concentration of oxygen delivered to patients by high flow oxygen delivery systems without an integrated oxygen analyzer.

**Audience**
Licensed Respiratory Care Practitioner in the department of Respiratory Care Services.

**Equipment**
- O₂ analyzer which has been calibrated per manufacturers procedure
- Analyzer adapter
- 5” flex hose
- Sensormedics Oscillator 3100A/B, EnVe transport ventilator

**Procedure**

Note: The following oxygen delivery systems are to be analyzed continuously when in use: High Frequency Oscillators, and EnVe transport ventilators. The analyzer should be calibrated a minimum of once per day (night shift).

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
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<tbody>
<tr>
<td>1</td>
<td>Verify patient's FiO₂ order and patient using two identifiers.</td>
</tr>
<tr>
<td>2</td>
<td>Wash hands per hospital policy and follow any isolation procedure indicated.</td>
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<td>3</td>
<td>Introduce yourself and identify the patient.</td>
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<tr>
<td>4</td>
<td>Briefly explain the procedure and purpose to the patient.</td>
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<td>5</td>
<td>Prior to placing the analyzer inline, perform a 2-point calibration, according to manufacturer's instruction.</td>
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<td>6</td>
<td>Place the O₂ analyzer in the appropriate place within the delivery system. Keep the analyzer probe positioned so that condensation will not collect on it.</td>
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| 7    | Reading should be within + 2% of order FiO₂.  
  - If analyzed FiO₂ is not the same as ordered FiO₂, adjust the device until the proper FiO₂ is reached. |
Procedure
Continued

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| 7    | • If you are unable to reach the ordered \( \text{FiO}_2 \) by adjusting the device, remove the analyzer and re-calibrate it.  
    • Document \( \text{FiO}_2 \) in Epic as part of the respiratory assessment. |
| 8    | Document in EPIC as outlined in RCS Policy # 7.1.1. |

Infection Control


References

AARC Clinical Practice Guidelines; Oxygen Therapy in the Acute Care Hospital, Respiratory Care; 1991; 38:1410-1413.

