I. Purpose
   A. Establish practices and standards that will ensure delivery of quality care

II. Policy
   A. Acceptable criteria for oxygen therapy are:
      1. An arterial blood gas sample on room air that demonstrates hypoxemia (PaO2 below 60 mm Hg, or below the normal range for the specific patient in question)
      2. An arterial oxyhemoglobin saturation SaO2 on room air below or equal to 92%
      3. Medical emergencies where symptoms are evident:
         a. tissue hypoxia may be reasonably expected to be part of the problem due to shock, pulmonary edema, or drug overdose
         b. Physical symptoms of tissue hypoxia (e.g., cyanosis, tachycardia, confusion, etc)
         c. Trauma victims with chest injuries, head injuries, blood loss, etc.
         d. Prophylactic use in-patients with symptoms, which indicate pending hypoxemia (e.g., suspected myocardial infarction).
   B. Objective for oxygen therapy is:
      1. Correct hypoxemia
   C. Standards for oxygen therapy are:
      1. When oxygen is ordered on an emergency basis or prophylactically, the need should be documented by arterial blood gas analysis or arterial oxyhemoglobin as soon as possible.
   D. Oxygen will be started immediately after receiving the physician's order.
   E. Documentation of the time of initiation of therapy, evaluation of the patient's hypoxemia via arterial blood gases or pulse oximetry saturation, physical signs of cyanosis or response to a medical emergency, pulse rate, respiratory rate, liter per minute of oxygen flow and FIO2 must be performed at each bedside visit.
   F. The patient's cardiopulmonary status should be evaluated routinely to determine the dosage of oxygen required.
   G. The patient's cardiopulmonary status should be evaluated at least twice daily to determine the dosage of oxygen required.
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H. Patients on continuous oxygen therapy at an FIO2 above 0.6 for more than 48 hours should be reevaluated to prevent overdosing.
I. Patients receiving oxygen therapy to treat hypoxemia should not be removed from oxygen without documentation of their ability to maintain an adequate PaO2 or SaO2 on room air.
J. Oxygen flows to nose below 2 liters per minute may be given without supplemental humidification; flows above 2 liters per minute must be humidified.
K. Humidification will be delivered through disposable devices when available.
L. Only sterile distilled water (sterile water, USP) will be used in bubble humidifiers.
M. "The time, date, patient's mode of oxygen therapy FIO2, liter flow, spontaneous ventilatory frequency, pulse and arterial blood gas values, if available, should be noted on the patient's chart.
N. The Supervisor may select appropriate administering devices based on the patient's individual need if the device being used is inappropriate.
O. Oxygen delivery devices may be removed from patient's room when the safety policy is deliberately and continuously violated by the patient. In cases where the oxygen is removed from the room, the physician will be notified.

III. Equipment

A. Nasal Cannula
   1. Oxygen flowmeter
      a. 0-15 lpm for most applications
      b. 0-5 lpm for low flow administration
      c. 0-200 cc per minute for precise pediatric applications
   2. Bubble humidifier
      a. Disposable prefilled type
      b. Disposable refillable type
      c. Humidification adapter
      d. Sterile water
   3. Nipple adapter for non-humidified therapy
   4. Oxygen connecting tube
      a. 6-foot disposable oxygen tube
      b. Continuous bubble tubing cut to desired length
      c. Plastic Tubing Connector with 0.25 inch diameter
   5. Nasal Cannula, appropriately sized
      a. Adult
      b. Pediatric
      c. Infant

C. Simple Oxygen Mask
   1. Oxygen flowmeter: 0-15 lpm
   2. Bubble humidifier
      a. Prefilled disposable humidifier
      b. Disposable refillable type
      c. Humidification adapter
      d. Sterile water
   3. Nipple adapter for non-humidified therapy
   4. Oxygen connecting tube, optional for lengthening tubing
      a. 6-foot disposable oxygen tube
      b. Continuous bubble tubing cut to desired length
      c. Plastic Tubing Connector with 0.25 inch diameter
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5. Simple Oxygen Mask, appropriately sized
   a. Adult
   b. Pediatric
   c. Infant
   d. Neonatal

D. Non-Rebreathing or Partial Rebreathing Oxygen Mask
   1. Oxygen flowmeter: 0-40 lpm
   2. Bubble humidifier is contraindicated.
   3. Nipple adapter for non-humidified therapy
   4. Oxygen connecting tube, optional for lengthening tubing
      a. 6-foot disposable oxygen tube
      b. Continuous bubble tubing cut to desired length
      c. Plastic Tubing Connector with 0.25 inch diameter
   5. Non-Rebreathing or Partial Rebreathing Oxygen Mask, appropriately sized
      a. Adult
      b. Pediatric

E. Venturi mask
   1. Oxygen flowmeter 0-15 LPM
   2. Humidifier (optional)
      a. Nebulizer Cup
      b. Nebulizer Adapter
      c. Nebulizer Water
      d. Corrugated tubing
      e. Medical air flowmeter, 0-15 LPM
   3. Oxygen connecting tube, optional for lengthening tubing
      a. 6-foot disposable oxygen tube
      b. Continuous bubble tubing cut to desired length
      c. Plastic Tubing Connector with 0.25 inch diameter
   4. Appropriate oxygen diluter adapter (24%, 28%, 35%, 40%, 50%)

IV. Procedure
A. Instituting Oxygen Therapy
   1. Collect the appropriate equipment
   2. Proceed with minimum delay to patient area
   3. Locate and scan chart to determine the order, diagnosis, documentation of hypoxemia, and pertinent history and physical
   4. Locate and identify the patient
   5. Identify self and department to the patient
   6. Explain prescribed therapy to the patient, oxygen safety
   7. Wash hands
   8. Apply gloves
   9. Explain safety precautions
   10. Connect flowmeter into wall outlet
   11. Aseptically attach delivery device to flowmeter
   12. Set desired liter flow
   13. Assure proper function of equipment
   14. If appropriate, obtain room air saturations and evaluate patient for Oxygen Therapy Weaning Guideline
   15. Apply oxygen delivery device to the patient
   16. Monitor patient's heart rate and respiratory rate
   17. If a pulse oximeter is in use note any change in oxygen saturation
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18. Remove gloves
19. Wash hands before leaving the patient’s room
20. Complete appropriate documentation

B. Monitoring Oxygen Therapy
   1. Scan the worklist to determine pertinent patient demographic information
   2. Obtain patient medical information through report
   3. Locate and scan chart to verify the order, diagnosis, documentation of hypoxemia, and new developments of pertinent history and physical
   4. Locate and identify the patient
   5. Identify self and department to the patient
   6. Inform the patient of the purpose of the visit
   7. Wash hands
   8. Apply gloves
   9. Assess the patient’s vital signs to determine respiratory rate, pulse rate, saturation value and cyanotic state
10. Evaluate for Inclusion in the Oxygen Therapy Weaning Guideline
11. Check equipment for proper function, adequate humidification fluid level, proper FiO2 or liter flow, and proper fit on patient
12. Remove gloves
13. Wash hands before leaving the patient’s room
14. Complete appropriate documentation

C. Discontinuing Oxygen Therapy
   1. Locate and scan chart to determine the order, diagnosis, documentation of hypoxemia, and pertinent history and physical
   2. Locate and identify the patient
   3. Identify self and department to the patient
   4. Explain prescribed therapy to the patient
   5. Wash hands
   6. Apply gloves
   7. Inform the patient that oxygen is being discontinued on his/her doctor’s order or according to guideline criteria
   8. Discard all disposable equipment
   9. Remove all oxygen therapy equipment from the patient room
10. Remove gloves
11. Wash hands
12. Return all permanent equipment to the respiratory therapy department