

PROCEDURE FOR: Blood Gas Sampling and Disposition

- POLICY:**
1. Universal precautions will be used during specimen sampling and handling.
 2. Supportive measures will be instituted to minimize discomfort or distress during procedure. Supportive measures will be utilized after procedure to facilitate return to baseline.

SUPPORTIVE

DATA: Blood samples are best run right away. Arterial blood gases can be saved in a cup of ice for up to 45 minutes. Immediate disposition minimizes RBC metabolism which would alter the results by increasing PCO₂ and decreasing PO₂ due to O₂ consumption and CO₂ release by the RBCs.

EQUIPMENT: Cup of slushy ice
Arterial: blood gas syringe
Capillary: capillary tubes for blood gas sampling
2 plastic caps for capillary tubes
Blood Gas Requisition Form

PROCEDURE:

ACTION

POINTS OF EMPHASIS

1. Complete Blood Gas Requisition.
2. Ensure that FiO₂ and other ventilator or CPAP settings are accurate prior to sampling.
3. After verifying identity of infant, draw arterial blood gas.
 - a. Use prepared anticoagulant (dry lithium) blood gas syringe.
 - a. Follow the manufacturer's recommendations for dispersing the anticoagulant through the syringe and the blood sample.
 - b. Draw blood according to protocol for Umbilical Arterial or Peripheral Arterial Line.
 - b. Only 0.2-0.3 ml of blood is needed for the sample. Always note oxygen saturation and/or TcPCO₂ as sample is drawn.
 - c. Remove air bubbles by gently tapping the syringe.
 - d. Replace plastic cover on the end of the syringe. At the bedside, label the syringe with the patient's name.
 - e. Place the syringe in a cup of slushy ice and place in respiratory bucket on even hours. On odd hours, place the sample in the blood gas lab, time the requisition form and page the respiratory therapist.

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4. Capillary Blood Gas

- a. Warm infant's extremity and draw blood as per procedure for Blood Drawing: Capillary.
 - b. Fill capillary tube completely without allowing any air in the tube.
 - c. If respiratory therapist is available, give sample to therapist for capping. Give Blood Gas Requisition to therapist.
 - d. Cap both ends of tube with plastic caps, place in cup of ice and, at the bedside, label with patient's name.
 - e. Place capillary tube in respiratory bucket on even hours. On odd hours, place sample in the blood gas lab, time the requisition form and page the respiratory therapist.
- a. Verify identity of infant prior to blood drawing.
 - b. Note oxygen saturation and/or TcPCO₂.

APPROVAL: Nursing Standards Committee

EFFECTIVE DATE: 11/85

REVISION DATES: 1/86, 8/87, 11/91, 3/92, 8/93, 6/99, 10/00, 10/01, 11/02, 10/03, 12/04, 12/08

REVIEWED DATES: 11/07