## Blood Gas Policies

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Arterial Puncture and Patient Identification

POLICY

It is the policy of Cochise Regional Hospital to positively identify patients prior to Arterial Puncture according to regulatory standards and practices to include the use of at least two patient identifiers.

PROCEDURE

1. Identify patient
   a. Ask patient to state/spell their name and their date of birth.
   b. Check patient’s armband if they are wearing one (notify nursing staff, if applicable on discrepancies on armband.)
   c. In emergency situations and an armband cannot readily be attached, ask a nurse to identify patient. Document nurse’s initials or name on the requisition.

2. Explain to patient what Arterial Puncture procedure entails.

3. Put on gloves. Put on other protective equipment as required (mask, gown, and safety glasses). Follow universal precautions for patient contact.

4. Assemble supplies needed for Arterial Puncture. Be sure to inspect equipment for obvious defects.

5. Position patient.

6. Perform Arterial Puncture.
   a. Palpate area for collection to find vein using index finger. Do not choose a vein that is hard or cord like. Suitable veins will be able to be felt as your finger comes up off the skin. Turn patient’s arm to either side to properly feel vein.
   b. Cleanse site with alcohol pad. Mark vein site with alcohol pad if necessary. Air dry or dry with clean gauze pad.
   c. Pull skin taut with thumb.
   d. Insert needle and fill collection tubes as indicated by manufacturer.
   e. Cover entry site with gauze pad and pull out needle.
   f. Apply pressure with thumb and close safety cap with other hand.
7. After performing Arterial Puncture, bandage patient.

8. In the patient’s presence, label tubes with the patient’s last name, first name, date of birth, patient’s ID number, time specimen was drawn, date specimen was drawn, and initials of phlebotomist.

9. Remove protective equipment.

10. Once specimen is received in the laboratory, it will be reported through the computer system.

Important Notes:

Patient Identification: At least 2 identifiers must be used to identify the patient and one of those identifiers cannot be room or bed number. The person who collects the specimen will properly identify patient by asking the patient to state their name and date of birth and label the specimen at the time of collection and in the presence of the patient. All information must be matched with identifying labels and with requisition information.
Arterial Puncture for Blood Gas Analysis

POLICY

Arterial Blood Gas Analysis includes the evaluation of arterial blood to assess the adequacy of oxygenation, level of ventilation and acid/base balance. It is essential for documenting the need for, and effectiveness of, oxygen therapy and efficiency of the bicarbonate buffer system.

Arterial puncture competency will be validated annually by the Medical Director and documentation will be maintained in personnel files.

Therapeutic Objectives of ABG Analysis

Provide a record, for interpretation by the attending physician, of the following values:

Ph: Negative logarithm of the H+ concentration used as a positive number
PaCO2: Arterial carbon dioxide tension
PaO2: Arterial oxygen tension
SaO2: Arterial oxygen saturation
HCO2: Plasma bicarbonate concentration

Base Excess/Deficit: The number of milli-equivalents per liter of bicarbonate above/below the normal base buffer level.

See attached sample.

Establish measured and calculated values for correlation with other diagnostic data to determine the ventilatory, acid/base and oxygenation status of a patient.

Indications/Criteria:

1. Justification of Oxygen Therapy.
3. Assessment of general cardiopulmonary status to aid in evaluation of ventilatory, acid/base and oxygenation status.
4. As a diagnostic tool in the performance of oxygen consumption studies, exercise stress tests, etc.
Order Protocol

Date and time studies are to be done.

Percent of oxygen required for the study.

Any special considerations.

Equipment and Supplies

5. Five to ten milliliter syringe.
6. Sodium heparin (1000 units per milliliter concentration).
7. Needle — short bevel 21 gauge for radial puncture; 20 or 21 gauge for brachial puncture; 20 gauge for femoral.
8. Syringe cap or cork.
9. 4 x 4 gauze pad.
10. Alcohol prep pads.
11. Plastic bag or cup of crushed ice.
12. Latex gloves.

General Standard for Arterial Puncture

Sites for arterial puncture, in order of preference, are radial artery of the wrist, brachial artery in the antecubital fossa and femoral artery.

Arterial puncture of the femoral artery may only be performed by a physician. The nurse staff may only be perform arterial puncture of the femoral artery if authorized by the physician.

A positive Modified Allen’s test demonstrates adequate collateral circulation to the hand via the ulnar artery, indicating that the radial artery should be the puncture site of choice.

A negative Allen’s test demonstrates inadequate collateral circulation, indicating that the brachial artery should be the puncture site of choice.

The femoral artery should be the puncture site of last resort due to its limited collateral circulation and should only be used in a “code” situation.

The puncture site must be thoroughly cleansed with an alcohol swab and arterial puncture procedure performed with strict adherent to aseptic technique.
The puncture technique should assure optimum prevention of bleeding, pain arterial obstruction, and infection, while providing an acceptable, anaerobic sample. This technique should be practiced by each Therapist or Technician as a matter of policy.

Upon completion of the arterial puncture, direct pressure should be applied to the puncture site for a minimum of five (5) minutes.

On patients undergoing anticoagulant therapy, the puncture site is to be compressed a minimum of ten (10) minutes, or until the bleeding stops. It should also be checked after the puncture every ten (10) minutes for half an hour in order to detect any seepage of blood.

Air bubbles that mix with a blood sample will result in gas equilibration between the air and the blood, so that the technician must take great care to assure that air does not mix with the sample as it is drawn from the artery or as it is introduced into the electrode chamber.

The sample should be analyzed within ten (10) minutes or cooled immediately to reduce the metabolic rate of the blood cells and prevent preanalytic error.

General Procedure for Radial Puncture

Pre-Clinical

Obtain a order from physician

Collect the necessary equipment

Perform the modified Allen’s Test to assure collateral circulation

Compress the radial and ulnar arteries at the wrist to obliterate pulse.

Have patient clench and release a fist until blanching occurs. (in the unconscious patient, elevate the patient’s hand above the level of the heart, squeeze the hand until blanching occurs, and lower the hand below the heart level.)

With radial artery still compressed, release pressure on the ulnar artery. Watch for pinkness to return to the hand. If pinkness returns, collateral circulation can he assumed and the puncture can he made. If not, collateral circulation can NOT he assumed and the brachial artery should he considered as the puncture site. If the brachial artery is inaccessible, the femoral artery puncture will be done.

Heparinize syringe, Holding syringe vertical, slide plunger up and down several times. When inside of barrel has been lubricated and moistened, gently tap syringe to remove air bubbles, eject remaining heparin and replace needle cap.

Stabilize the wrist in the position that presents the maximal pulse.
Palpate the chosen artery as before, noting the point of maximal pulse. This should be the puncture site.

Rub the puncture site with alcohol prep pad.

Remove the needle cap, and at an approximate angle of 45 degrees, pierce the skin slowly at the puncture site. Advance the needle slowly through the subcutaneous tissue. As soon as the needle enters the artery, blood will readily fill the syringe. A pulsation will be noted, if not, consider the possibility of being in a vein.

After enough blood has filled the syringe, withdraw the needle.

Immediately apply pressure with a gauze pad to puncture site for five (5) minutes (by the clock). More time may be necessary for patients taking anticoagulants or if bleeding or seepage is noted at the end of five (5) minutes.

After removing the pressure pad, palpate a pulse distal to the puncture site.

Hold syringe vertically, gently tape the barrel and advance the plunger to mobilize and remove air bubbles.

Remove needle and seal syringe.

Gently roll the syringe between the palms of your hands and totally immerse barrel of syringe in crushed ice.

Remove gloves and wash hands.

Post-Clinical

Record all pertinent data regarding the patient’s ventilatory status at the time the sample was drawn in the Nova CCX system.

Deliver sample to the blood gas laboratory immediately.

Hazards and Possible Side Effects

Because arterial puncture is a potentially dangerous procedure, it is essential that persons performing punctures be completely competent. Complications arising from arterial puncture are most commonly associated with poor technique, and this is a result of poorly trained and unskilled individuals who are responsible for arterial blood gas sampling. Preventing complication should be the first consideration during a puncture.

Arterial laceration can potentially occur during a puncture. This is avoided by a steady puncture technique that minimizes unnecessary needle movement. Jabbing and probing are also contributing factors to arterial laceration, and should be avoided. Should arterial laceration occur, hematoma may develop or bleeding at the site will
persist, and steps will need to be taken immediately as described under Adverse Reactions.

Hematoma is a frequently observed complication of arterial puncture. A hematoma may develop as a result of arterial laceration or failure to apply adequate pressure to the puncture site. Patients on anticoagulant therapy are at a higher risk for the formation of hematomas and may require special attention.

Pain, numbness, and paralysis are sometimes noted by the patient after an arterial puncture. The severity of this complaint is depended upon the extent of trauma to the periarterial tissues. Pain is a common complaint, and will vary tremendously from patient to patient. However, a complaint of tingling, numbness, severe pain, or varying degrees of paralysis may indicate nerve damage, and warrants physician notification.

Contamination is by far the most common complication of arterial puncture. Aseptic technique should be followed when performing arterial puncture.

Circulatory Insufficiency downstream from the puncture site is also a possible complication of arterial puncture. Circulation can be impaired as a result of arterial laceration, occlusion as a result arterial laceration, occlusion as result of clot formation.

Response to Adverse Reactions

Should a patient continue to bleed from the puncture site after five (5) minutes of applied pressure, continue to apply pressure until the bleeding has stopped. If after ten (10) minutes the site has not stopped bleeding, the physician should be notified immediately. Continue to apply pressure until instructed to do otherwise by the physician.

Should a hematoma develop, apply an ice pack to the site. This should be done only after adequate pressure has been applied to stop the bleeding. It is important to notify the supervisor should a hematoma develop and to document the steps taken to minimize its severity.

Should the patient complain of loss of feeling in the arm or fingers, radiating pain, or any other complication from arterial puncture, the physician should be notified immediately.

A suspected arterial occlusion as evidence by absent downstream pulses, or change in color/temperature of the distal extremity requires the notification of the physician. The area should be warmed with moist heat and positioned so that there is minimal impedance to blood flow. These steps should be taken under the supervision of the physician.

The most important step to be taken should a complication arise as a result of an arterial puncture is to notify the patient’s physician immediately. Complications should not be ignored or expected to just “go away”, and serious, life threatening, or debilitating injuries can be prevented through prompt action.
Procedure in Case of Suspected Erroneous Blood Gas Results

Inform the physician of the blood gas results.

Inform the physician that you suspect the results are erroneous and why you believe this is the case.

Request a repeat arterial study.
General Procedure for Brachial Puncture

POLICY

Equipment Required

1. Syringe — five (5) to ten (10) milliliter syringe with one (1) milliliter of Heparin (1000 units per milliliter).
2. Needle — short bevel one inch, 23 gauge
3. Syringe cap
4. 4 x 4 gauze pads
5. Alcohol prep pads
6. Plastic bag or cup of crushed ice
7. Latex gloves

PROCEDURE

Pre-Clinical

Obtain a computerized order from NextGen Clinical.
Collect the necessary equipment.
Proceed to the patient area, ID patient — ask for 2 identifiers (name & date of birth).
Locate and scan the patient’s chart to determine the order, diagnosis, pertinent history, and physical data.

Clinical

Locate and identify the patient.
Identify self and department and inform the patient of the purpose of the visit.
Wash hands; don gloves
Palpate the right and left brachial pulses and select the artery with the best pulse for puncture.
Heparinize the syringe. Holding syringe vertical, slide plunger up and down several times.

When inside of barrel has been lubricated and moistened, gently tap syringe to remove air bubbles; eject remaining heparin.

Stabilize the arm in the position that presents the maximal pulse.

Palpate the chosen artery as before, noting the point of maximal pulse. This should be the puncture site.

Rub the puncture site with an alcohol prep pad.

Remove the needle cap, and at an approximate angle of 60 degrees, pierce the skin slowly through the subcutaneous tissue. As soon as the needle enters the artery, blood will readily flow and pulsation will be noted. If there is no pulsation of blood into the syringe, consider the possibility of being in a vein.

After enough blood has filled the syringe, withdraw the needle.

Immediately apply pressure with a gauze pad to puncture site for five (5) minutes (by the clock). More time may be necessary for patients taking anticoagulants or if bleeding or seepage is noted at the end of five (5) minutes.

After removing the pressure pad, palpate a pulse distal to the puncture site.

Hold syringe vertically, gently tap the barrel and advance the plunger to mobilize and remove air bubbles.

Remove needle and seal syringe.

Gently roll the syringe between the palms of your hands and totally immerse barrel of syringe in crushed ice.

Remove gloves and wash hands.

Post-Clinical

Record in the CCX Nova computer system all pertinent data regarding the patient’s ventilatory status at the time the sample was drawn.

Deliver sample to the blood gas laboratory immediately.
Heel Punctures
(For Obtaining Capillary Blood)

Objective
To determine the status of ventilation, oxygenation, and acid/base balance by obtaining a sample of blood from a well perfused infant when an umbilical artery catheter is not present or unstable, or when an arterial stick is not warranted.

Indications
Justification of oxygen therapy
Monitoring of effectiveness of oxygen therapy
Assessment of general cardiopulmonary status to aid in evaluation of ventilatory, acid/base and oxygenation status.

Contraindications
Cardiopulmonary Instability Abnormal perfusion status will render pO2 data from capillary blood meaningless.

Infant over the age of three (3) MONTHS — Heel tissue becomes sclerotic after this age.

Hypothermia — Vasoconstriction is caused by hypothermia, which in turn leads to lowered peripheral perfusion and lowered oxygen tension.

ORDERING PROTOCOL Equipment/Supplies Needed
1. 75 microliter capillary tube (heparinized)
2. 3 mm Monocet lancet
3. Alcohol sponge
4. Sterile gauze pad
5. Band-Aid
6. Heating source (towels, heating pad, chemical pad, etc.)
7. Ice slurry
8. Latex gloves
PROCEDURE

Wash hands, don gloves

Warm site for 5-120 minutes at a temperature of no more than 39C. Use warm tap water, heated towels, heating pad, or chemical pad. Monitor temperature with thermometer unless using special chemical pad.

Cleanse heel with alcohol sponge, rubbing in a circular motion away from the puncture site.

Allow prepped area to dry.

Elevate foot approximately 45 degrees and, using the lancet, puncture the skin deeply on the lateral portion of the foot, just anterior to the heel.

Puncture 2.5 — 3 mm deep (but no deeper) to allow for free blood flow.

Puncture should be several mm in front of the distal edge of the calcanean protuberance to avoid possible calcaneus osteomyelitis.

Wipe away first drop of blood.

Collect blood in sample tube by placing end of tube directly into blood flow at puncture site.

Have flea already in tube and magnet around tube prior to collecting sample.

Hold tube below level of puncture.

Do not remove tube from flow until enough blood has been collected for analysis (Prevents air entry)

Do not squeeze heel or leg as this introduces serum and venous blood which renders sample inaccurate.

Wipe site with alcohol and apply pressure with gauze pad until bleeding stops.

Mix blood and seal ends of tube.

Place blood in ice water bath.

Dress puncture site with Band-aid or soft bandage.

Remove gloves and wash hands.

Transport sample to lab for analysis.
Hazards and Complications

Obtaining false information (or misinterpretation of correct information), which may result in infants being exposed to improper amounts of supplemental oxygen.

Bone osteoporosis.

Infection.

Arterial laceration.

Burns from heating source.

*Each of these may be prevented by careful attention to technique as described in the foregoing procedures.

Factors Affecting Capillary Blood Gas Valves

Undue squeezing of heel during sampling procedures.

Results in tissue damage with venocapillary admixture

Results in decreased pO2.

Corrective Measure: Refrain from applying excess pressure, and elevate the foot during procedure.

Improper of inconsistent heel warming prior to sampling procedure.

Results in varying degrees of capillary blood arterialization.

Results in inconsistent and unreliable pO2 and pCO2.

Corrective Measure: Refrain from applying excess pressure, and elevate the foot during procedure.

Periodic capillary tube removal from sampling site during sampling procedure

Results in contamination of sample with atmospheric oxygen.

Results in decreased pO2 (assuming FIO2 greater than 21%).

Corrective Measures: Place capillary tube directly into sample at puncture site and refrain from removing until sufficient blood is obtained.

Improper transport of sample.

Results in accelerated clotting and alteration of capillary blood values.
Results in increased pCO2 and decreased pO2.
Corrective Measure: Mix thoroughly and place in ice water bath for transport.

Infant age (birth — 24 hours)
Results in low systemic output leading to vasoconstriction with poor peripheral circulation.
Results in increased pCO2 and decreased pO2.
Corrective Measure: Delay capillary sampling until after first 24 hours or get arterial sample.

Infant hypothermia
Results in vasoconstriction with lowered peripheral circulation.
Results in decreased pCO2.
Corrective Measure: Maintain infant thermoneutrality.

Excessive crying
Results in hyperventilation.
Results in decreased pCO2.
Corrective Measure: Delay procedure or note results.

Excessive breath holding
Results in hypoventilation and increased pCO2
Corrective Measure: Delay procedure or note results.

Excessive vomiting prior to procedure
Results in loss of hydrochloric acid (HCl).
Results in increased pH.
Corrective Measure: Delay procedure or note on results.
Contaminated Specimens

POLICY

As the aerosolization of blood occurs during the use of the blood gas analyzer, tonometer, or co-oximeter, the following guidelines should be adhered to. These guidelines are especially important when working with the blood of individuals who are being treated for Hepatitis B or AIDS. However, always assume that every patient is potentially infected and use appropriate precautions.

Use of Non-Sterile Gloves

The use of non-sterile gloves is particularly important for personnel who have cuts or abrasions on their hands. Regardless of the use of gloves, hands must be washed, especially if they are contaminated with blood, body fluids, secretions or excretions.

Additional Puncture Wounds

Special care should be taken to avoid accidental wounds from needles or other sharp instruments. If accidental puncture does occur, employees with such exposure should promptly notify their supervisor and the employee health service. The hospital infection control programs or committee should initiate an active surveillance system to evaluate and follow up on health care staff who have documented parenteral or mucous membrane exposure to blood from definite or suspected patient with AIDS. In these cases, the hospital should contact the Hospital Infections Program at the Center for Communicable diseases (Telephone number (404) 329-3406) or their local health department for additional information.

Isolation Precautions

Following the Blood/Body Fluid Precautions described in the infection Control section of the department’s Policy and Procedure Manual for every patient with whom you have contact, regardless of diagnosis.

All blood and other specimens should be prominently labeled with a warning: “Blood/Body Fluid Precautions”. This label should accompany all such specimens through processing and disposal. If the outside of the specimen container is visibly soiled, it should be cleaned with disinfectant.

All blood specimens should be placed in a second container, such as an impervious bag, for transport and checked carefully for leaks or cracks.

Protective Clothing and Equipment

Gloves, gowns, masks and protective eye wear should be worn in situations in which percutaneous or mucosal contact with any suspected material, such as blood, secretions, excretions or fluids is expected.
**Disposal of Needles and Syringes**

Needles and syringes should be disposable and disposed of in rigid, puncture resistant containers. Needles should not be recapped, bent or broken by hand, because accidental needle puncture may occur. The use of needle cutting devices is not recommended. All contaminated disposable items should be considered “Infectious Waste” and identified as such.

Non-disposable articles contaminated with blood or body fluids should be bagged and labeled “Blood Precautions” before being sent for decontamination and reprocessing. Disposable items should be incinerated or disposed of in accordance with the hospital’s policies for disposal of infectious waste.

**Disposal of Infectious Waste**

At this facility, the policy of infectious waste is as set forth in the Bloodborne Pathogen Policy Manual.

**Smoking, Eating, Drinking and Application of Cosmetics**

Both the serum and infectious forms of hepatitis can be transmitted to personnel by infections blood through either the oral or parenteral route. Therefore, there should be no smoking, eating, or drinking within the technical and analytical areas. Coffee makers should not be located in areas in which specimens are collected and handled. Fingers, pencils, and other formites must be kept away from the mouth.

**Food Storage**

No food or beverage should be stored in analytical areas or within refrigerators containing biological specimens or reagents. No food or beverage should be brought into the analytical area.

**Hand Washing**

Within the laboratory the most important safety precaution of all involves frequent hand washing. Hand washing should be accomplished with an effective detergent and is especially recommended upon leaving the laboratory.

The use of gloves should not be considered a substitute for careful hand washing after working with infectious material. Always wash hands after contact with patients or specimens.

Always wash hands prior to eating, drinking or smoking and after completing analytical work. Do not handle the telephone, door knobs, or laboratory equipment with contaminated hands or gloves.
Indications for Arterial Blood Gas Studies

POLICY

Indications for Arterial Blood Gas studies are as follows:

Before oxygen therapy is initiated

After oxygen therapy

After any changes in oxygen therapy

After oxygen therapy is discontinued

When there is any sign of respiratory distress

Cases of possible circulatory collapse (MI, CHF, etc.).

Trauma to the chest

As an aid to management of mechanical ventilator patients

Metabolic disorders

Acid/Base disorders or disturbances

As a diagnostic tool (oxygen consumptions studies, exercise stress tests, etc.).
Stat Blood Gas Orders

POLICY

Is the policy of Cochise Regional Hospital to order STAT ABG test in the computer services and call the laboratory to notify the laboratory technologist that an arterial puncture will be performed. The laboratory personnel will never collect arterial punctures, this procedure will be performed by nursing staff or physician.

Many times the laboratory technologists are in the critical care areas when the order is initiated, and if not called/paged, will not find the stat gas order until they return to the department.

Blood gases ordered at a specific time will be done by the laboratory within ten (10) minutes after specimen is collected by the nursing staff or physician.
Blood Gases on Patient on Anti-Coagulant Therapy

POLICY

All patients on anti-coagulant therapy having blood gases done will have radial puncture done using a 22 gauge needle. The site is to be doubled checked after the puncture at ten (10) minutes for any sign of seepage. This is mandatory.

When arterial blood gases are ordered, the site of preference is the brachial artery. After this, the radial may be used. The femoral may not be used in most units without the specific orders for this. Capillary sticks are to be done on the heel after it has been warmed for fifteen (15) minutes. The earlobe, fingers and toes are not to be used for capillary sites for babies.
Hazards of Arterial Puncture

POLICY

There are several problems that may be encountered while doing arterial punctures. The skin may be extremely tough and difficult to penetrate. The pain of the puncture may cause the patient to move and thus move the artery.

Extreme caution is to be used when puncturing the artery as it may be lacerated or severed (especially in children). Continued probing may also cut the vessel. No more than two separate attempts at one site should be done.

If pressure is not applied to the site for a sufficient length of time, a hematoma may develop.

Bleeding and hematomas may develop even after two hours have passed. Treatment of these hematomas is ice or heat packs depending on the physician who has been notified.

Contamination is probably the major hazard of arterial puncture. Make sure the puncture technique is aseptic as possible.

After withdrawing blood from an arterial line, make sure that the obturator is firmly tightened on to the catheter when you are finished. If the obturator should slip out, severe loss of blood may occur.
Amount of Blood Drawn for Blood Gases

POLICY

Adult

When drawing arterial blood on an adult for blood gases and using a heparinized syringe (5cc), 3.5 to 4 cc’s of blood must be drawn to adequately mix with the heparin. This assures that the heparin does not alter the blood gas values, by being in a significant concentration. Make sure only the dead space of the needle and hubs contain heparin. No additional heparin should be left in the syringe.

Pediatric Patient

When drawing blood from a pediatric patient, you will be using a 1 cc tuberculin syringe with a clear hubbed needle (23 gauge). Heparin should be expelled from the syringe and only left in the needle dead space. Draw only 0.5 cc’s of blood.

Neonate

When drawing blood from a neonate, you will be using a 1 cc tuberculin syringe with a clear hubbed needle (23 gauge). Heparin should be expelled from the syringe and only left in the needle dead space. Draw only 0.33 cc’s of blood.
Blood Gas Panic Values

POLICY

The physician is to be notified immediately of any of the following critical results:

pH: Below 7.3 OR Above 7.5
pCO2: Below 30 OR Above 55
pO2: Below 54 OR Above 100
HCO3: Below 10 OR Above 35
Use of Back-up ABG Machine

POLICY

If unable to bring machine into quality control standards and unable to resolve problem through use of troubleshooting guide:

If blood gas is ordered, notify local courier to pick up a specimen and transport it STAT to Copper Queen Hospital blood gas lab. Specimen will be drawn from the patient, labeled properly and stored on ice for transportation.

Call Copper Queen Hospital — (520) 432-5383 — tell them we are sending an emergency blood gas sample. They will page Cardiopulmonary and alert him/her so sample can be run.

Results will be called to the laboratory at Cochise Regional Hospital by fax/telephone. Technician will double check patient ID and write results on blood gas slip. Physician will then be notified of result immediately.

Notify Laboratory Manager.

Call Nova at (800) 545-NOVA for technical assistance or for service representative to come to facility.
Corrective Actions — Quality Control

POLICY

The following procedure will be performed and documented on Out of Control. In addition, the following personnel will be notified if controls do not come in after all reasonable attempts have been made to bring them in:

Director of Cardiopulmonary Services

Medical director

PROCEDURE

Run QA controls again if unable to get controls in, use trouble-shooting guide for assistance.

Make copy of disk and send to Bayer.

Check with QC for expired QC.

Change out measurement/QC cartridge.

Call Bayer at (800) 545-NOVA for technical assistance.

If unable to get controls, send disk to technical assistance for further trouble-shooting procedures.
Maintenance & Quality Control for Blood Gas Analyzer

POLICY

Laboratory staff will document for permanent records the quality control run on the blood gas analyzer. In addition, staff will document proper functions and corrective action taken when results are out-of-range on the computer for the nova CCX Analyzer.

Necessary Information

Electronic Auto QC

Usage

Blood Gas auto QC will run level III at least every 8 hours on the blood gas machine. Corrective action must be documented and taken if results are out-of-range. Quality Control is stored in the computer program.

Quality Control Ranges

Quality Control Ranges: Statistical mean/absolute limits are set by Westgard options.

Standard deviations are calculated monthly from Confirmation Statistical Analysis program in the computer.

This information will be documented in the department Permanent Record binder.
Reviewed and Approved by:

Veronica Santiago
Laboratory Manager

Approval Date: 7/1/14

Approved by the Board

Seth Guterman MD
Chairman of the Board

Approval Date: 7/15/14