CCT: NEONATAL PERIPHERAL ARTERIAL CATHETERIZATION

PURPOSE
A. May be performed by transport personnel. The decision to perform a percutaneous arterial catheterization should be based upon the severity of the infant’s condition

SCOPE
A. This guideline applies to all members of the Indiana University Lifeline Critical Care Transport team

GUIDELINES
A. Indications
   a. When frequent arterial blood samples are required and an umbilical arterial catheter cannot be placed or has been removed because of complications.

B. Contraindications
   a. Bleeding disorder that cannot be corrected.
   b. Pre-existing evidence of circulatory insufficiency in limb being used for cannulation.
   c. Evidence of inadequate collateral flow.
   d. Local skin infection.
   e. Malformation of the extremity
   f. Previous surgery at site

C. Complications
   a. Thromboembolism/vasospasm/thrombosis
   b. Infiltration
   c. Infection
   d. Hematoma
   e. Damage to peripheral nerves

D. Equipment
E. Sterile gloves
F. Antiseptic solution
G. 4 x 4 gauze squares
H. ½ to 0.9% NS
I. 3 or 5 ml syringe
J. 20, 22, 24 gauge needle
K. Arterial pressure transducer and extension tubing
L. T connector primed with NS
M. Transparent dressing
N. Procedure
O. Choose site: radial most routine site but ulnar, dorsalis pedis and posterior tibial can also be used.
P. Trans illuminate if needed.
Q. Palpate proximal to the transverse crease on the palmar surface of the wrist, medial to the styloid process of the radius, and lateral to the flexor carpi radialis.
R. Put on gloves.
S. Prepare skin over site with antiseptic solution.
T. Cannulate artery; puncture artery directly at an angle of 10 to 15 degrees to the skin with the needle level down.
   a. Advance catheter slowly. Blood return may be delayed.
U. Withdraw needle stylet and advance cannula into artery as far as possible.
V. Pressure should be held on site for 5 minutes

**Required Documentation:**
1. Catheter size.
2. Placed secured and sutured.
3. CXR documentation of placement.

**Citations/References:**