

ICD-10-PCS: Umbilical Venous Catheters and Umbilical Arterial Catheters

December 16, 2014

Vol. 2

Umbilical Venous Catheters

- Umbilical vein catheterization (UVC) may be a life-saving procedure in neonates who require vascular access and resuscitation. The umbilical vein remains patent and viable for cannulation until approximately 1 week after birth. After proper placement of the umbilical line, intravenous (IV) fluids and medication may be administered to critically ill neonates.
- The cord is cut horizontally with the scalpel, approximately 1.5-2 cm from the abdominal wall. Two thick-walled small arteries and one thin-walled larger vein should be identified. The umbilical vein may continue to ooze blood. Hemostasis is achieved by tightening the umbilical tape or suture. The arteries do not usually bleed secondary to vasospasm.
- A properly placed umbilical vein catheter appears to travel cephalad until it passes through the ductus venosus.
- In the fetus, the ductus venosus shunts a portion of the left umbilical vein blood flow directly to the inferior vena cava.
- The ductus venosus is open at the time of the birth and is the reason why umbilical vein catheterization works. Ductus venosus naturally closes during the first week of life in most full-term neonates; however, it may take much longer to close in pre-term neonates.
- Once secured, an x-ray of the catheter should be performed to locate the tip position. The ideal catheter tip position is at the junction of the ductus venosus and the inferior vena cava. On x-ray this has the appearance of the UVC going straight up with the tip at the level of the diaphragm. This can be confirmed on ultrasound.

ICD-10-PCS

- We need to work with physicians so they know to document in the operative report the anatomical site where the Umbilical vein catheter **ends** and the planned use of the line
- Coding Clinic 3rd Q '14 p5-6 states, "When the provider's documentation does not specify the end placement of the infusion device, the imaging report may be used to identify the body part."
- This information is needed for accurate selection of the body part and device in the operative tables

ICD-10-PCS Umbilical Vein Catheter Example

- Scenario: This preterm, 2 hour old, 775 gm, male infant requires placement of an umbilical catheter for venous access for infusions. Catheter is placed following established protocol and is confirmed as ending in the inferior vena cava.

ICD-10-PCS Index

- Insertion of a device in

- Vein

- Vena Cava

- Inferior **06H0** ←
- Superior **02HV**

ICD-10-PCS Tabular - 06H033T

Section	0 Medial and Surgical			
Body System	6 Lower Venis			
Operation	H Insertion: Putting in a nonbiological appliance that monitors, assists, performs, or prevents a physiological function but does not physically take the place of a body part			
Body Part	Approach	Device	Qualifier	
0 Inferior Vena Cava	0 Open 3 Percutaneous ←	3 Infusion Device	T Via Umbilical Vein Z No Qualifer ←	
0 Inferior Vena Cava	0 Open 3 Percutaneous	D Intraluminal Device	Z No Qualifer	
0 Inferior Vena Cava	4 Percutaneous Endoscopic	3 Infusion Device D Intraluminal Device	Z No Qualifer	

Umbilical Arterial Catheters

- Umbilical artery catheterization is a common procedure in the neonatal intensive care unit and has become the standard of care for arterial access in neonates. The umbilical artery can be used for arterial access during the first 5-7 days of life, but it is rarely used beyond 7-10 days.
- Umbilical artery catheterization provides direct access to the arterial blood supply and allows accurate measurement of arterial blood pressure, a source of arterial blood sampling, and intravascular access for fluids and medications.
- **Indications**
 - Continuous arterial blood pressure monitoring
 - Arterial blood gas sampling
 - Blood sampling for other laboratory tests and studies
 - Exchange transfusion
 - Angiography
 - Infusion of maintenance fluids when other routes are not available
- Once the catheter has been advanced to the predetermined depth, placement should be confirmed with a chest and abdominal radiograph. The catheter tip should lie above the level of the diaphragm between thoracic vertebrae T6 and T9. On radiograph, the catheter should be seen entering the umbilical cord and then proceeding inferiorly to connect with the internal iliac artery. The catheter should be seen curving cephalad to enter the aorta and proceeding in a straight line to the left of the vertebral column

ICD-10-PCS

- We need to work with physicians so they know to document in the operative report the anatomical site where the Umbilical arterial catheter ends and the planned use of the line
- Coding Clinic 3rd Q '14 p5-6 states, "When the provider's documentation does not specify the end placement of the infusion device, the imaging report may be used to identify the body part."
- This information is needed for accurate selection of the body part and device in the operative tables

ICD-10-PCS Umbilical Arterial Catheter Example

- Scenario: This preterm, 2 hour old, 775 gm, male infant requires placement of an umbilical catheter for arterial access for blood gas sampling. Catheter is placed following established protocol and is confirmed as ending in the aorta at the T7 level.

ICD-10-PCS Index

- Insertion of a device in

- Aorta

- Abdominal **04H0**
- Thoracic **02HW** ←

ICD-10-PCS Tabular - 02HW3DZ

Section	0 Medial and Surgical			
Body System	2 Heart and Great Vessels			
Operation	H Insertion: Putting in a nonbiological appliance that monitors, assists, performs, or prevents a physiological function but does not physically take the place of a body part			
Body Part	Approach	Device	Qualifier	
P Pulmonary Trunk Q Pulmonary Artery, Right R Pulmonary Artery, Left S Pulmonary Vein, Right T Pulmonary Vein, Left V Superior Vein Cava W Thoracic Aorta ←	0 Open 3 Percutaneous ← 4 Percutaneous Endoscopic	0 Monitoring Device, Pressure Sensor 2 Monitoring Device 3 Infusion Device D Intraluminal Device ←	Z No Qualifer	