

Handbook for Coding in NVivo:

Hershey Medical

Central Line Insertion Training Feedback

General Coding Methods:

- Coding will be conducted only during the discussion between the medical student and the instructor (Katelyn); read but ignore the students' narrations of their attempts to insert CLI
- To ensure that the same passages are highlighted, all coding will be done on a sentence-by-sentence basis. That is, despite how short a reference to a node may be, the entire sentence in which it is included will be highlighted.
- A sentence is ended exclusively by a period (.), or question mark (?). Anything separated by any other punctuation mark such as commas, semicolons, colons, or ellipses (...) should still be considered as one sentence.
- More than one node can exist in any given sentence.
- Some nodes may be discussed multiple times. Only code the first time a certain issue is mentioned.
- A node will be discussed for more than one sentence, choose the sentence that you find most directly discusses the particular node
- Child nodes will often be determined by context and tend to be added in with most nodes such as a praise or mistake
- The following will be a guide for identifying instances to code each node:

Selecting the appropriate site for venipuncture:

- Centered on where needle is inserted at the skin, not the actual vein.
- Code for any time direction of needle (longitudinal/latitudinal), at site of insertion
- Any time placement of insertion is mentioned: could be body, or anatomical phrasing (e.g. "want to be more medial")

Selecting the correct ultrasound probe and using it in the appropriate orientation:

- Having good orientation is directly mentioned
- The discussion of correctly checking orientation (with finger), or figuring out probe is mentioned

Obtaining a clear image of the target vessels and using the ultrasound machine:

- Any instance in which Katelyn directly mentions the images of the vessels on the ultrasound
- Typically, this node can be found when Katelyn discusses how an ultrasound works, and projects images in perpendicular lines. Any point Katelyn discusses this with the context of the vessels, and seeing their cross-section would be appropriate for coding

Correctly distinguishing artery and vein:

- Katelyn directly mentions compressibility of a vein when commenting on identifying the vessel
- Child nodes:

- Correctly distinguishing with compressibility
- Correctly distinguishing with vein without compressibility
 - Anatomically
 - Pulsatility

Inserting the needle at a 35-45 degree angle from the skin:

- Any time the angle of the insertion is mentioned
- Words like “steep” or “shallow” may be used to describe the angle of insertion

Locating the needle’s position on the ultrasound image:

- Typically, this node can be found when Katelyn discusses how an ultrasound works, and projects images in perpendicular lines.
- The first time the needle is mentioned with this explanation (before, during, or immediately after) is the sentence to code

Advancing the introducer needle slowly and steadily:

- Anytime Katelyn mentions going in slowly and steadily
- Anytime Katelyn discusses the torquing of the needle during the insertion

Placing the introducer needle at the center of the vein:

- Any instance Katelyn discusses the needle’s position in relation to the center of the vein (e.g. going through and through,

Confirming vessel entry by aspiration of blood:

- Anytime aspirating is mentioned in the context of confirming vessel entry
- Any instance in which aspirating is discussed in the context of getting flash back, or knowing whether or not student went “through and through”
- Any time where Katelyn discusses “aspirating easily”
- May often overlap with **Aspirating the Entire Time**

Conducting the entire procedure without any mistakes:

- Instances in which Katelyn says she has no critiques at the beginning of her feedback
- If Katelyn almost immediately asks for questions or discussing the rest of the procedure

Aspirating the entire time:

- Aspirating the entire time is directly mentioned
- Any time Katelyn discusses aspirating as soon as needle is inserted in body

Hand position on the syringe (how they're holding it):

- Usually can be identified when Katelyn says “holding like this” or a close derivative
- Any time a student had to “walk hands up” the syringe
- Likely discusses how awkward the positioning is in the context

Anchoring hand on body to ensure stability (*need to get exact name*):

- Any time Katelyn mentions not wanting free-floating hands during the procedure
- Typically, the phrase “brace yourself” is used