

## Quality Bundles: Insertion of Arterial or Central Venous Line

Ensure that patient and health care provider safety standards are met during this procedure including:

- Risk assessment and appropriate PPE
  - 4 Moments of Hand Hygiene
  - Two patient identification
  - Safe patient handling practices
  - Biomedical waste disposal policies
1. Prepare transducer set-up and connect to monitor for all arterial and CVC lines (except dialysis catheters).
  2. Pause to review procedure and assemble necessary equipment
  3. Senior to supervise junior residents until competency confirmed. Competency may be different for infrequent sites (femoral, subclavian, left sided lines).
  4. Only Fellows, Consultants or Nephrology Fellows/Consultants insert dialysis lines.
  5. Only consultants, experienced Fellows or vascular surgeons should place arterial lines into axillary or brachial arteries.
  6. Review allergies to skin preps, tapes or catheter materials (e.g. latex, heparin, chlorhexidine, silver sulfadiazine, minocycline or rifampin). Note: our standard central line catheter includes 2 of these 4 antimicrobials).
  7. Ensure appropriate catheter length for right-sided IJ/SC (16 cm NOT 20 cm). Catheter model, length, size and product number should be confirmed by provider and documented in procedure note.
  8. Guidewire exchange should be avoided. If required, rationale for guidewire exchange should be documented.
  9. Insertion of a multilumen catheter into an established introducer requires full barrier precautions. It should only be done if introducer was inserted using maximal precautions and a sterile introducer cap has been maintained. Only the correct companion CVC should be inserted (standard 7F CVCs are not compatible with percutaneous sheath introducer..
  10. Hair removal with clippers before skin cleansing and draping
  11. Scrub skin vertically and horizontally for 30 seconds with chlorhexidine 2% in 70% isopropyl alcohol
  12. Allow skin to dry 2 minutes after cleaning
  13. Cap, mask with face shield, sterile gown and sterile gloves for individual(s) performing or supervising insertion
  14. Cap and mask for all individuals within 1 meter of sterile field
  15. Broad draping of sterile field
  16. Provide saline syringes for use with sterile field.
  17. Inserter must complete Central Venous and Arterial Line Checklist and Procedure note and complete follow-up assessment. Online documentation may be completed but should include all of the fields on checklist.
  18. Confirm venous waveform for IJ, SC and femoral venous lines upon insertion and Q shift. Print and post waveform to paper chart. Vasopressors may be started upon confirmation of a venous waveform.
  19. Nurse creates a Dynamic Group under Devices Band. Under Activity field, selects inserted. This will document the insertion date.
  20. For all central lines, document the purpose of the line in the Grouper (e.g. dialysis, IV fluid).
  21. If patient arrives with existing line, under activity field, select "present on insertion". This will open a new field for nurse to record the date and time of insertion. If unable to determine, document in the assess/reassess comment field.
  22. **Any member of the team can stop a procedure/identify breaks in technique**
  23. **Procedure note should accurately reflect adherence to protocol to identify lines that should be changed**