Guideline for Arterial Line Insertion by Advanced Critical Care Practitioner

Radial and Dorsalis Pedis Site

- The standard choice of arterial line insertion site should be radial or dorsalis pedis.
- Arterial line insertion at any site is a sterile procedure and therefore as per NHS Lothian Critical Care policy, full precautions including hat, mask, gloves and gown should be worn whenever the procedure is performed
- Failure to cannulate these sites should be discussed with a senior doctor (consultant or senior rota trainee) regarding the necessity of an arterial line and the next most suitable choice of site.

Brachial and femoral Site

- Brachial and femoral arterial lines are associated with serious complications, including digital ischemia, thrombosis/dissection and haematoma and loss of limb. The ACCP may cannulate these sites when it has been agreed with a senior rota trainee or consultant that the requirement for arterial monitoring necessitates the use of these sites and the ACCP has this competency signed off.
- The ACCP must be competent in the insertion of standard radial arterial lines before attempting as the brachial or femoral approach. They must also be competent and familiar with the use of ultrasound and at least 1 year post qualification.
- Prior to undertaking any femoral or brachial arterial lines the ACCP should meet with an ACCP clinical lead to confirm readiness to attempt this procedure. This discussion will include indications and contraindications, anatomy and technique. A DOPS should be completed for the both brachial and femoral insertion. The Brachial /Femoral Arterial Line sign off form should be completed and filed in the ACCP's portfolio.
- If a non-standard site is utilised during an emergency then consideration should be given to re-siting the line in a standard site once the patient's condition allows.
- Whenever a femoral or brachial approach is taken then the ACCP must document the rationale for this approach in both on the devices sheet and in the TRAK record.

Title: Insertion of arterial lines by ACCP	
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Status Draft/Final: Final	**Approved by: G McNeill, F Weidanz, G Renwick**
	Written: May 2021
	Next review : May 2025