

### BLOOD CULTURE SAMPLING - ADULT

*This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.*

#### 1. AIM

- To prevent contamination when performing blood culture sampling

#### 2. PATIENT

- Woman requiring blood culture(s) due to suspicion of sepsis

#### 3. STAFF

- Medical, nursing and midwifery staff

#### 4. EQUIPMENT

- Equipment trolley
- Blood culture bottles x 4 'adult'
- Sterile gloves
- Dressing pack
- Tourniquet
- Winged butterfly set with leash
- Vacutainer dome or syringe needle and blood transfer device
- 70% alcohol and 2% chlorhexidine swabs

#### 5. CLINICAL PRACTICE

- Clean equipment trolley with neutral detergent wipes
- Ensure arms of phlebotomist are bare below the elbows and perform hand hygiene
- Collect equipment and place onto bottom shelf of trolley
- Perform hand hygiene
- Open sterile equipment carefully onto cleaned top shelf to avoid contamination of equipment
- Keep unsterile equipment (bottles, tourniquet) on bottom shelf
- Use aseptic non touch technique (ANTT) to open dressing pack and add swabs or solution, sterile gloves, and venepuncture equipment to field
- Position woman's arm onto sterile towel. You may require a pillow.
- Collect blood in accordance with flowchart (appendix 1, remembering to collect the aerobic bottle first)
- Repeat venipuncture at second site (for second set of two bottle collection) maintaining aseptic technique
- Label each bottle with woman's name, medical record number, date and time of collection, and site e.g. left antecubital fossa. Do not cover barcode or bottom of bottle
- Mark request form "urgent"
- Place bottles in a biohazard bag, keep at room temperature and arrange to send to the laboratory via porter services
- Document in medical record:
  - date and time
  - indication for culture
  - number of sets
  - site taken e.g. left antecubital fossa
  - legible name
- Dispose of equipment correctly and clean trolley

**BLOOD CULTURE SAMPLING – ADULT cont'd**

**6. DOCUMENTATION**

- Medical record

**7. EDUCATIONAL NOTES**

- Blood cultures should be drawn when there is clinical suspicion of bloodstream infection<sup>1,2</sup>
- Blood should not be collected from indwelling arterial or venous lines unless an infected line is suspected. In that case one set should be taken from the line and another set from a peripheral site<sup>4</sup>
- Effective skin decontamination prior to venous access for obtaining a blood culture sample is crucial to avoid contamination from micro-organisms on the patient's skin. A scrubbing action is recommended with the use of 70% alcohol and 2% chlorhexidine to disinfect site and prevent contamination of culture<sup>2,3</sup>
- Ensure that the blood culture bottle is inoculated first, taking other samples afterwards<sup>3</sup>

**8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP**

- Sepsis in Pregnancy and Postpartum
- Antimicrobial Guideline - Obstetrics
- Infection Prevention and Control Policy MoH PD2017\_013

**9. RISK RATING**

- Low

**10. NATIONAL STANDARD**

- Standard 3 - Preventing and Controlling Health Care Associated Infections
- Standard 5 - Comprehensive Care
- Standard 8 - Recognising and responding to clinical deterioration

**11. REFERENCES**

- 1 Ntusi, N et al 2010, 'Guideline for the optimal use of blood cultures', SAMJ vol. 100, no. 12 pp 839-843
- 2 Clinical Excellence Commission Sepsis Kills Program; Adult Blood Culture Sampling Guideline 2016 SHPN(CEC) 160406  
[http://cec.health.nsw.gov.au/\\_data/assets/pdf\\_file/0005/259412/adult-blood-culture-guideline-updated-sept2016.pdf](http://cec.health.nsw.gov.au/_data/assets/pdf_file/0005/259412/adult-blood-culture-guideline-updated-sept2016.pdf)
- 3 National Services Scotland 2018, Literature Review 'What are the key infection prevention and control recommendations to inform a prevention of contamination of blood culture quality improvement tool? [C:/Users/53041128/Downloads/3\\_blood-culture-review-v3.pdf](C:/Users/53041128/Downloads/3_blood-culture-review-v3.pdf)
- 4 Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019). NHMRC. CD34. 3.1.6 Aseptic Technique  
[C:/Users/53041128/Downloads/Infections\\_Control\\_Guidelines%20\\_Update1.pdf](C:/Users/53041128/Downloads/Infections_Control_Guidelines%20_Update1.pdf)

**REVISION & APPROVAL HISTORY**

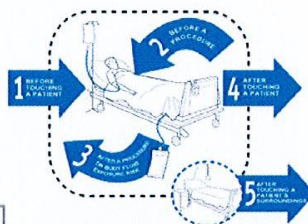
Reviewed and endorsed Maternity Services LOPs July 2020  
Approved Quality & Patient Safety Committee 21/11/13  
Endorsed Obstetrics LOPs 5/11/13

**FOR REVIEW : AUGUST 2023**



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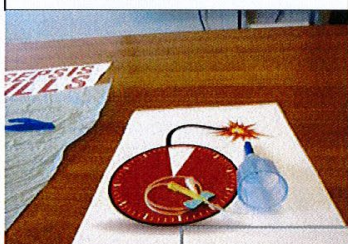
**Sepsis Kills Program: Visual guide for blood culture sampling V2 2012**  
**At all times ensure hand hygiene is attended 'The 5 Moments of Hand Hygiene'**



- 1. Assemble equipment, use sterile field and aseptic technique.**



- 2. Vacutainer and winged blood collection kit can be used; take blood cultures first then other blood samples.**



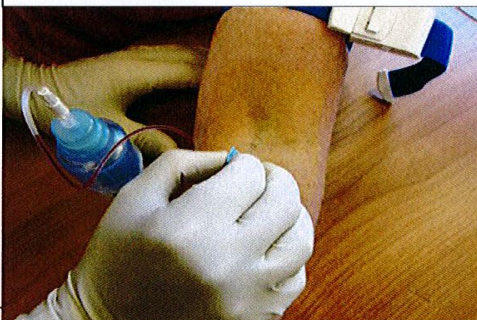
- 3. Mark 10mL above the broth level, remove caps from bottles and clean vial stoppers with chlorhexidine and 70% alcohol swabs. Allow to dry for 30 seconds.**



- 4. Clean vein site with chlorhexidine and 70% alcohol swabs in a scrubbing motion for 1 minute, using multiple swabs. Allow to dry for 30 seconds. Do not re-palpate vein.**



- 5. If there is a risk of re-palpating the cleansed site, wear sterile gloves when performing venepuncture for blood culture sampling. Keep blood culture bottle upright, insert into vacutainer. Collect 10mL blood per bottle and inoculate the aerobic bottle first.**



- 6. Remove winged collection set, cover the venepuncture site and apply pressure.**

Dispose of sharps appropriately.



- 7. Gently mix blood with broth, keep at room temperature and send promptly to the lab as an urgent request. Do not cover bar codes or base of bottle and state from which site the blood culture set was obtained.**



- 8. Finally:**

**Repeat process for second set of blood cultures.**  
**Label and complete request form.**  
**Document in health care record that blood cultures were sent to lab (date/time).**  
**Give antibiotics as soon as possible and as indicated. Do not delay antibiotic therapy.**