

Blood culture collection competency document

Blood culture collection

The practitioner will be able to fully demonstrate the knowledge and skills required for safe blood culture collection.

Each practice area has speciality competencies particular to the care of their patients. Blood culture collection is considered a speciality competency as it is not carried out in all areas of the Trust.

Please note that this competency can only be completed after completion of the venepuncture competency.

Working through the competency document will provide evidence of your learning and development to become a safe and effective practitioner in performing safe blood culture collection.

This pack is also designed for you to provide evidence of continuing competence and ongoing development required for your professional portfolio and SDR. By adding to it periodically you can demonstrate how you are keeping your skills and knowledge up to date and maintaining your competence

Competence

The Nursing and Midwifery Council (NMC, 2018) - Code requires that:

- *Keep your skills and knowledge up to date*
- *You must have the knowledge and skills for safe and effective practice when working without direct supervision*
- *You must recognise and work within the limits of your competence*
- *You must keep your knowledge and skills up to date throughout your working life*
- *You must take part in appropriate learning before carrying out a role*
- *Maintain the knowledge and skill you need for safe effective practice*

The Health and Care Professional Council (HCPC, 2024) - Standards of conduct, performance and ethics for allied health professional (AHP) (2012) states that duties as a registrant include:

- *You must provide (to us and any relevant regulators) any important information about your conduct and competence.*
- *You must keep your professional knowledge and skills up to date.*
- *You must act within the limits of your knowledge, skills and experience and, if necessary, refer the matter to another practitioner*
- *You must effectively supervise tasks that you have asked other people to carry out.*

Competence is therefore a combination of skills, knowledge and the ability to apply these principles to practice in diverse situations and circumstances, the evidence you produce as you work through this pack and in the future should reflect this. As skill minus knowledge / understanding / appropriate attitude **does not** equate with competent practice.

Assessment of practice

You should seek support from a practitioner already competent in blood culture collection. The competency assessment framework below should be completed and the chosen assessor should work through all the elements with you until you both deem that you are proficient in blood culture collection.

Reflective Practice

Continuous Professional Development (HCPC, 2024) and Revalidation (NMC, 2018) are essential elements of lifelong learning. It enables you to review your practice, improve standards of care and maintain your registration. It is expected that you prepare reflective accounts of your learning in practice and identify your future learning needs. Different models of reflection may be used, one suggested format is from the NMC:

- What was the nature of the CPD activity?
- What did you learn from the development of competence in blood culture collection?
- How did this change or improve your practice as a result?
- How is this relevant to the Code? (NMC, 2018)
- How is this relevant to the Standards? (HCPC, 2024)

You and your assessor should discuss these accounts and develop any action plans required to meet the learning needs identified through the reflective process.

How will I be assessed?

This document contains competency elements that must be achieved in order that you show overall achievement of competency. These competencies represent the minimum standard expected for a registered practitioner in the organisation. Completion of these competencies along with your reflective accounts of learning in practice will provide evidence for demonstrating the achievement of the required knowledge and skill framework domains.

The WASP framework has been used to host the required competencies, identifying the process of achievement of proficiency for every skill through measuring competency for each individual element of the skill. It uses the scoring system below to provide a robust assessment of each element at every stage of learning. All steps may be revisited as necessary until proficiency is achieved and agreed by the mentor. To ensure that mentors assess at the same standard, each competency has specific criteria that must be met.

Witnessed – Observe or witness the competency prior to being supervised.

Assimilated – Demonstrate sound knowledge base for the competency, including Trust Policies, Nursing & Midwifery Strategy, and professional and legal issues relating to the competency elements. Assimilation of knowledge can be assessed through observation of practice, or through questioning/or discussion/or simulation of situations relating to the competency.

Score is as follows:-

- 1= Demonstrates fundamental knowledge and understanding of this element of the competency.
- 2= Demonstrates broad knowledge and understanding

3= Demonstrates in-depth knowledge and understanding of the issues supporting the element of the competency / skill.

Supervised – Practice under supervision to demonstrate understanding and competence. Score as follows:-

1 = Needs further practice

2 = Shows aptitude

3 = Demonstrates skilled and professional practice

Understanding and competence as part of “Supervised” can be assessed through observation of practice, or through questioning / discussion / simulation of situations relating to the competency if these particular situations have not arisen within the supervisory period. The “Supervision” element of the competency may be continuous observation by the assessor until he or she is confident that skilled confident and professional practice has been achieved by the candidate, and can be signed of as “Proficient”.

Proficient - Competent in both knowledge and skill elements of the competency.

Both the “Assimilated” and “Supervised” aspects of the competency can be scored more than once as necessary, and the combination of in-depth knowledge and understanding, coupled with skilled professional practice equals proficiency.

On the title page of the WASP framework, it is documented how the competency links to the;

1. Knowledge and Skills Framework
2. Nursing and Midwifery Strategy Key Performance Indicators
3. NMC Code (2018)
4. HCPC Standards (2024)
5. South Tees Accredited Quality Care Standards (STAQC)

These links have been provided to facilitate understanding of how all of these elements combine to ensure competence, and consequently the high standard of patient care and patient safety that the organisation expects. It is strongly advised that you use the links to help you fulfil your competencies.

The use of the competency framework is designed to highlight areas to help you monitor your progress and identify areas for further development. You will be encouraged and supported to work on these key areas.

On completion, please complete the final meeting form on page **16**, getting this signed by your assessor, and send a copy to:

The Clinical skills team via email stees.clinicalskills@nhs.net or to the second floor Murray building.

Blood Culture Collection Competency Document		
<i>Links to the NMC Code (2018):</i>		1,2,3,4,5,6,7,8,9,10,11,13,14,15,16,17,19,20,23,25.
<i>Links to the HCPC standards (2024)</i>		1, 2, 3, 5, 6, 7, 8, 9, 10.
<i>South Tees Accredited Quality Care (STAQC):</i>		D 1: 10,13,17,18, 22, 23 D 2: 1, 2, 7, 21, 22, 25, 37, 39, 41, 47, 48, 57 D 3: 5, 26, 29, 38, 53, 91, 92, 93, 99, 101 D 4: 3, 27, 28, 29, 41
Competency Standard Statement		To fulfil the requirements for safe and accountable practice in accordance with Trust Policy for the skill of safe blood culture collection.
W	WITNESSED	Observe or witness the skill– it is considered good practice that the learner will have had the opportunity to observe the procedure prior to being supervised.
A	ASSIMILATED	Understands the underpinning knowledge associated with each element of the competency, score as follows: 1 = Demonstrates fundamental knowledge and understanding 2 = Demonstrates broad knowledge and understanding 3 = Demonstrates in depth knowledge and understanding
S	SUPERVISED	Practice under supervision to demonstrate understanding, score as follows: 1 = Needs further practice 2 = Shows aptitude 3 = Demonstrates skilled and professional practice (at level 3)
P	PROFICIENT	Competent in both knowledge and skill elements of the competency.

I. GENERAL ELEMENTS					
Competency element	Rationale	W	A (Score)	S (Score)	P
Discusses the indications and rationale for taking blood cultures including the specific signs of bacteraemia or sepsis.	To ensure the learner has adequate knowledge base that will enhance the practice HIC 39				
Explains the importance of obtaining blood culture samples as part of the sepsis screen	To facilitate timely delivery of appropriate antibiotics to patients diagnosed with sepsis – G136, HIC 39				
Discusses the sources of contamination of blood cultures and the actions to prevent each one.	To minimise harm to patient through unnecessary administration of antibiotics from false positive results HIC 39				
Describes the correct procedure for taking blood cultures including : <ul style="list-style-type: none"> • Order of draw when collecting with other samples • Considerations in site selection to take the sample 	To minimise harm to patient through unnecessary administration of antibiotics from false positive results HIC 39				
Explain indications for blood culture sample collection via central and arterial lines (if applicable to your clinical area).	To minimise harm to patient through unnecessary administration of antibiotics from false positive results HIC 39				
Identifies the 2 bottles for blood culture collection, the correct sequence in filling them up and the reasons why.	To ensure a quality sample collection that will give representative true positive/negative results				

Competency element	Rationale	W	A (Score)	S (Score)	P
Explain steps in obtaining blood culture samples through central/arterial line (if applicable to your clinical area).	To minimise sample contamination – HIC 36, HIC 39				
State the recommended times collecting blood culture samples in patients with suspected sepsis: a) who have not yet been started on antibiotics b) who have already been commenced on antibiotics	To maximise safe, quality and cost effective patient care				
II. PREPARATION FOR COLLECTING BLOOD CULTURE SAMPLE					
Identifies appropriate equipment and accesses the Web Ice to print out appropriate request forms/labels required to perform the procedure and send the sample to the laboratory.	To aid appropriate assessment of the patient for blood culture collection, reduce risk and improve the patient's experience – HIC28, (DH 2010)				
Introduces oneself, checks patient details and gives an accurate explanation of the procedure to the patient in understandable terms, checks their understanding and gains consent.	To ensures patient is given the opportunity to make an informed consent – Policy G13, 38				
Ensures effective hand hygiene, personal protective equipment and an aseptic non-touch technique is appropriately employed throughout the procedure.	To minimise harm to patient through unnecessary administration of antibiotics from false positive results HIC 39				

	To comply with IPC policies and procedures HIC 01, HIC 04, HIC 14, HIC 19.				
Ensures that the bottles are disinfected for 30 seconds using a chlorhexidine alcohol swab and left to air dry for another 30 seconds.	To ensure that IPC policies and procedures are followed at all times HIC 01, HIC 04, HIC 14, HIC 19, 36, G125 To prevent sample contamination from organisms commonly found on the skin - HIC 39				
III. PERFORMING PROCEDURE USING WINGED DEVICE					
Selects an appropriate site cleans with an alcoholic chlorhexidine swab using a crosshatch technique for 30 seconds and allow to air dry for 30 seconds.	To clean the skin, maintain asepsis and reduce the risk of infection (Lovdeya et al 2014). Policy G125, HIC01, HIC 14.				
Ensures the patient is warned before the needle is inserted.	To minimise risk, harm and trauma to the patient and enhance the patient experience - G125				
Demonstrates that the needle is inserted at an appropriate angle for the insertion site. On sensing the needle puncturing the vein the needle angle is levelled off and held securely.	To minimise risk, harm and trauma to the patient - G125.				
Demonstrates that the needle is held safely and securely in place as the blood samples are obtained.	To minimise risk, harm and trauma to the patient and reduce the risk of needle stick injury – HS 4 & 16.				

Puncture the aerobic tube first followed by the anaerobic tube. Hold the bottle upright and check the graduation lines to ensure 8 to 10ml blood sample is obtained. Once sample obtained, gently invert the bottles to ensure the specimen is well mixed with the media.	To ensure adequate and quality sample is obtained			
Ensures that the tourniquet is released immediately after the blood starts to flow and samples have been obtained.	To minimise risk, harm and trauma to the patient (Lovdeya et al 2014).			
Demonstrates that when the needle is removed the safety mechanism is activated.	To minimise risk, harm and trauma to the patient (Lovdeya et al 2014).			
Demonstrates immediate safe disposal in the sharps container and directly applies pressure on the puncture site.	To reduce the risk of needle stick injury and blood borne infection - HIC 04, 12 & 16.			
IV. POST PROCEDURE				
Correctly labels the blood culture bottles with appropriate information at the bedside ensuring bar code areas are not covered. Places in appropriate specimen bags and sends to the laboratory.	To ensure correct identification and processing of specimen			
Thank the patient, clear the area, safely discards personal protective equipment and cleans hands.	To minimise risk of HCAI – HIC 1 & 14			
Records the procedure in the patient's notes including indication, date, time, site of venepuncture and any complications.	To facilitate continuity in the delivery of patient's care – G80			

Staff Member (Print Name)	NMC or HCPC Number	Staff Member (signature)				
Assessor (Print Name)	NMC or HCPC Number	Assessor (Signature)				
		Competency Achieved				Yes/No
		Date				

Record of Learning & Achievement (ROLA) - Evidence Log Sheets

	<p>Competency Element – <i>Blood Culture collection</i></p> <p>Use these ROLA sheets to keep an ongoing record of your learning and development. Reflect upon each time you Collect blood culture. Anything you see as relevant or significant, where possible, use a reflective approach in your entries and make reference to current evidence to underpin your work. Please record each blood culture collection attempt and add reflection to the reflect log.</p>
Date	

	<p><i>Competency Element blood culture collection</i></p> <p>Use these ROLA sheets to keep an ongoing record of your learning and development. Reflect upon each time you Collect blood culture. Anything you see as relevant or significant, where possible, use a reflective approach in your entries and make reference to current evidence to underpin your work. Please record each blood culture collection attempt and add reflection to the reflect log.</p>
<p>Date</p>	

Reflection on Learning in Practice

You should now reflect on what you have learnt by completing this competency and identify any future learning needs.

Describe the learning activity?
How many hours was the session?
What have you learnt?
How will this influence your practice?
What further learning needs has this identified?

REFERENCE LIST

Associated policies and references

Hospital Infection Control Policies

HIC 01 Standard Principles of Infection Control policy

HIC 04 Blood – borne virus and inoculation incident policy

HIC 14 Hand hygiene policy

HIC 19 Decontamination policy

HIC 28 Pathology specimens and transport policy

HIC 39 Taking Blood Cultures

HIC 36 Insertion and management of peripheral intravenous cannula and associated devices policy

General Policies

G 13 Consent to examination and treatment policy

G 28 Blood Product Transfusion Policy

G 38 Policy and Procedure for the Positive Identification of Patients

G 80 Healthcare Records Standards Policy

G 125 Adult Venepuncture Policy

Health and Safety Policies

HS12 Waste Management Policy

HS16 Dealing with The Safe Handling of Sharps policy

References

Health and Care Professional Council (2016) Standards of conduct, performance and ethics (online) <https://www.hcpc-uk.org/standards/standards-of-conduct-performance-and-ethics/> {accessed 9th December, 2024}

Knowledge and Skills Framework (2004) The NHS Knowledge and Skills Framework (NHS KSF) and the Development Review Process (online) http://webarchive.nationalarchives.gov.uk/20130107105354/http://dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/dh_4090843 {accessed on 5th February, 2024}

Lovedaya, H.P., Wilsona, J.A., Pratta, R., Golsorkhia, M., Tinglea, A., Baka, A., Brownea, J., Prietob, J., Wilcoxc, M. (2014) Epic3: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England (Online) http://www.his.org.uk/files/3113/8693/4808/epic3_National_Evidence-Based_Guidelines_for_Preventing_HCAI_in_NHSE.pdf [Accessed 01/04/2024]

Lavery, I. & Inglam, P. (2005). Venepuncture best practice. Nursing Standard, 19(49) pp55-66

National Institute for Health and Clinical Excellence (2012). Prevention and control of healthcare-associated infections in primary and community care.

Nursing and Midwifery Council (2013) .Consent. London: Nursing and Midwifery Council. (Online) www.nmc.org.uk/Nurses-and-midwives/Regulation-in-practice/Practice/Topics/consent/ {accessed 4th November, 2024}

Nursing and Midwifery Council (2018) The Code: Professional standards of practice and behaviour for nurses and midwives. NMC, London

Nurses and Midwives Council (NMC 2018) Revalidation (online) <http://revalidation.nmc.org.uk/welcome-to-revalidation> {accessed 4th November, 2024}

Shah, K., Idroro,J., Nicasro, J., McMullen, E., Molmenti, E. and Coppa, G. (2009) A retrospective analysis of the incidence of haemolysis in type and screen specimens from trauma patients. Int J Angiol. 18(4): 182–183.

South Tees Nursing and Midwifery Strategy Key Performance Indicators 2010-2015 (online) <http://southtees.nhs.uk/content/uploads/Nursing-and-midwifery-strategy-2010-2015.pdf> {accessed 5 August, 2024}

Final Meeting: Blood Culture

Staff members name:

Job title:

Ward/Department:

Assessors Name:

Date venepuncture workshop attended:/...../.....

Date of completion of blood culture competency:/...../.....

Discussion between assessor & the staff member completing to identify and agree that the:

- The venepuncture workshop has been attended
- The competency packs has been completed and the staff member has meet the criteria to take blood cultures.
- The staff member will carry out this clinical skill frequently enough to remain competent.

Comments from the assessor:

Comments from the staff member after completion:

Signatures: Staff members signature.....PIN.....
Assessors signature:PIN.....
Assessor print name/designation.....

On completion of this form please retain a copy in your portfolio, file a copy in your personnel file and send a copy to:

stees.clinicalskills@nhs.net or
Clinical Skills Team, Corporate Practice Development, Second Floor, Murray Building,
JCUH.

Guideline for peripheral blood culture specimen collection using an Aseptic Non-Touch Technique (ANTT).

Elements of Performance
1.Preparation
Print web ice form, select appropriate equipment, introduce self, confirm the identification of patient with the patient's identity band against the web-ice form using four patient identification verifiers.
Explain the procedure to the patient; then either obtain informed verbal consent, or if the patient is assessed as not having capacity, act in their best interest (Mental Capacity Act 2005).
Discuss any vein preferences or previous issues with venepuncture and any history of allergies.
Have sharps disposal container available in immediate vicinity; and all equipment ready.
2.Procedure
Perform hand hygiene, wear gloves and an apron and clean any visibly soiled skin on the patient with soap and water then dry. Change gloves.
Visualise vein and palpate to confirm; or apply a tourniquet 8 to 10cm from venepuncture site, select vein; <u>release the tourniquet.</u>
Perform hand hygiene and put on a clean pair of gloves.
Remove the tamper proof cap from the 2 tubes, clean the tops of culture bottles with a 2% chlorhexidine in 70% isopropyl alcohol impregnated swab for 30 seconds and allow to air dry for 30 seconds. <u>Do not touch the top of the bottle after cleaning.</u>
Use the second chlorhexidine 2% in 70% isopropyl alcohol wipe to clean the patient's skin carefully in a crosshatch motion at the venepuncture site for 30 seconds. Consider using 2 swabs if required; allow to air dry for 30 seconds. <u>Do not re-palpate skin following cleaning.</u>
Assemble barrel and the winged blood collection device.
Apply the tourniquet firmly introducing 2 fingers underneath the tourniquet to prevent occluding arterial flow. <u>Do not allow the cleansed site to come into contact with any unsterile items as this is an ANTT.</u>
Pull skin taut from 2cm below intended puncture site to anchor the vein.
Warn the patient of imminent needle insertion; guide the needle smoothly at an angle of 15 to 30° depending on size and depth of the vein.
Place adapter cap over blood collection bottle and pierce septum.
Hold the bottle upright and use the bottle graduation lines to accurately gauge sample volume and collect sample; approximately 8-10 MLs. Use the aerobic tube first and then use the anaerobic tube. Release tourniquet as soon as blood starts flowing into tube.
Lightly place low lint dressing above insertion site, remove the needle, engage the safety mechanism then dispose immediately into a sharps bin. Apply pressure for approximately 1 minute. Apply a plaster to site. Correctly dispose of clinical waste. Perform hand hygiene.
3.Post procedure
Label blood bottles correctly at the patient's bedside, place in the appropriate specimen sample bags; send to laboratory within as soon as possible within 4 hours .