

South Tees Hospitals



NHS Foundation Trust

Peripheral Intravenous Cannulation Competency Document

Peripheral Intravenous Cannulation

The practitioner will be able to fully demonstrate the knowledge and skills required for the safe insertion and management of a peripheral intravenous cannula.

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

Working through this competency document will help you provide evidence of your learning and development and support you in becoming proficient in the performance of peripheral intravenous cannulation.

This competency package is designed for you to provide evidence of continuing competence and ongoing development required for your professional portfolio, revalidation and staff development review. Once the competencies are completed, evidence can be added periodically to demonstrate how you are keeping your skills and knowledge up to date and maintaining your competence.

Competence

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

- *You keep your knowledge and skills 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 and practice activities that maintain and develop your competence and improved performance*
- *complete the necessary training before carrying out a new role*
- *maintain the knowledge and skills you need for safe and effective practice'*

The Health and Care Professional Council (HCPC, 2024) - Standards of conduct, performance and ethics for allied health professional (AHP) 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 peripheral intravenous cannulation. 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 a proficient practitioner.

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 maybe 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 peripheral intravenous cannulation?
- 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 proficiency. These competencies represent the minimum standard expected for a healthcare worker 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 assessor. To ensure that staff assess at the same standard, each competency has specific criteria that must be met.

A needle free device (Octopus/ Line) must be primed with Sodium Chloride 0.9% (NaCl) prior to attaching the line to the patient.

There are significant differences between registered and non-registered staff regarding flushing the cannula:

Registered staff can either draw up 10mls of Sodium Chloride 0.9% (NaCl) or use prefilled NaCl syringes to flush immediately after insertion and thereafter to maintain patency/flush following drug administration.

Non-registered staff can only flush a cannula immediately after insertion using a prefilled Sodium Chloride 0.9% (NaCl) syringe as these are classified as a medical device not a drug

Witnessed – Observe or witness the skill 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, questioning, discussion and simulation of situations relating to cannulation.

Score is as follows:-

- 1 = Demonstrates fundamental knowledge and understanding of this element of competence.
- 2 = Demonstrates broad knowledge and understanding
- 3 = Demonstrates an 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, questioning, discussion and 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 preceptor/mentor/assessor until he or she is confident that skilled, confident and professional practice has been achieved by the candidate and can be signed off 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 it is the combination of in-depth knowledge and understanding, coupled with skilled professional practice that develops proficiency in cannulation.

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

1. Nursing and Midwifery Strategy Key Performance Indicators
2. NMC Code (2018)
3. HCPC Standards (2024)

These links have been provided to facilitate understanding of how all 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 send the final meeting form on page 15, getting this signed by your assessor, and send a copy to:

Education and Practice Development Team

Murray Building

South Tees NHS Foundation Trust

The James Cook University Hospital **OR**

Email: stees.clinicalskills@nhs.net

<u>Peripheral Intravenous Cannulation:</u>		
<i>Links to Nursing & Midwifery Strategy Key Performance Indicators:</i>		3,4,11,12,13,16,17,18,19,21,
<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>		D1: 10,13,17,18, 22, 23 D2: 1, 2, 7, 21, 22, 25, 37, 39, 41, 47, 48, 57 D3: 5, 26, 29, 38, 51, 52, 53, 58, 65, 91, 92, 93, 99, 101 D4: 3, 4, 41
Competency Statement	Standard	The practitioner will be able to fully demonstrate the knowledge and skills required for: Safe Insertion and Management of a Peripheral Cannula
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.

Competency element	Rationale	W	A (Score)	S (Score)	P
Discusses the principles of accountability in relation to professional practice in performing the procedure of cannulation.	To ensure that learner is working within the scope of practice or within their respective professional frameworks- NMC Code (2018), HCPC Standards, (2024).				
Demonstrate knowledge in infection control and standard Aseptic Non-Touch Technique (ANTT) in relation to cannulation, identifying: a) Key parts – needle tip. b) Key site – Cannulation site.	To reduce the risk of introducing infection via the skin. HIC policies 01, 04, 14, 19, 36, 39.				
Demonstrates an understanding of the need for patient consent and the mental capacity act.	To ensure that patient receives adequate information to make an informed choice and gives valid consent (NMC, 2018), complies with Policy G13				
Demonstrates a thorough understanding of the indications and contraindications for cannulation.	To minimise risk and enhance the patient's experience.				
Discusses how ongoing competence will be maintained, evidenced and documented in the future, using a reflective process.	To ensure that learner is working within the scope of practice or within their respective professional frameworks- NMC Code, (2018), HCPC standards, (2024).				
Demonstrates comprehensive knowledge and understanding of the current organisational procedure for performing cannulation.	To ensure that learner is working within the scope of practice or within their respective professional frameworks- NMC Code, (2018), HCPC standards, (2024) and minimise patient risk.				
Demonstrates an understanding of the possible risks when performing the procedure.	To ensure that learner is working within the scope of practice or within their respective professional frameworks- NMC Code, (2018), HCPC Standards, (2024).				

Cannulation competency Version 7

Review date: December 2027

Competency element	Rationale	W	A (Score)	S (Score)	P
Discusses the various equipment available to perform cannulation, the various sizes of cannula.	To aid appropriate assessment of the patient for cannulation, reduce risk and improve the patient's experience. (DH 2010)				
Indicate the rationale or circumstances for their use.	To aid appropriate assessment of the patient for cannulation, reduce risk and improve the patient's experience. (DH 2010)				
Selects and uses the appropriate personal protective equipment for performing IV cannulation.	To reduce the risk of contamination and infection and compliance with HIC policies 01, 04, 14, 19.				
Discusses the principles of site selection to perform IV cannulation and the factors which would negate selecting a particular site.	To aid appropriate assessment of the patient for cannulation, reduce risk and improve the patient's experience. Policy HIC 36				
Discusses factors that can aid a successful technique when performing cannulation.	To aid appropriate assessment of the patient for cannulation, reduce risk and improve the patient's experience. Policy HIC 36				
Discusses the factors that can make the cannulation technique more difficult.	To aid appropriate assessment of the patient for cannulation, reduce risk and improve the patient's experience. Policy HIC 36.				
Highlights the potential complications which may arise during or after cannulation.	To reduce risk and improve the patient's experience. Policy HIC1, HIC 4, HIC 14, HIC 36, H&S 16.				
For each complication discusses how to recognise; <ul style="list-style-type: none"> • Complication (signs & symptoms). 	To reduce risk and improve the patient's experience. Policy G125, HIC 36 H&S 16.				

<ul style="list-style-type: none"> • Their actions and management in the event of the complication occurring. • What actions can be taken to minimise the risk of the complication. 					
Describes how to correctly assess, document and act upon the Visual Infusion Phlebitis (VIP) score.	To aid appropriate assessment of the patient, reduce risk and improve the patient's experience.				
Discusses the role of the VIP Score / Chart in preventing complications.	To aid appropriate assessment of the patient, reduce risk and improve the patient's experience.				
Practical Procedure					
Appropriately selects and prepares the required equipment for the procedure checks expiry date.	To reduce the risk of contamination. Policies HIC 01, HIC 04, HIC 14, HIC 19, HIC 36.				
Prepares Need free device (Octopus/ Line) Flush all lumens with prefilled Sodium Chloride 0.9% or with syringe and needle (Registered). Place it on the sterile field of the cannula pack using a non-touch technique.	To reduce the risk of contamination. Policies HIC 01, HIC 04, HIC 14, HIC 19, HIC 36.				
Prepares Need free device (Octopus/ Line) Flush all lumens with either, prefilled Sodium Chloride 0.9% 0.9% (Non registered). Place it on the sterile field of the cannula pack using a non-touch technique.	To reduce the risk of contamination. Policies HIC 01, HIC 04, HIC 14, HIC 19, HIC 36.				

Correctly identifies the patient.	To ensure the patient fully understands the reason for the procedure, what it involves and the potential side effects (NMC 2018) Policy G38.				
Ensure consent is obtained to perform the procedure.	To ensure the patient fully understands the reason for the procedure, what it involves and the potential side effects (NMC 2018) Policy G38.				
Provides an explanation of the procedure to the patient ensuring adequate physical and psychological preparation.	To ensure that learner is working within the scope of practice or within their respective professional frameworks- NMC Code, (2018), HCPC Standards, (2024).				
Appropriately positions the patient to facilitate cannulation always ensuring their comfort.	To enhance patient experience and aid successful cannulation.				
Ensures effective hand hygiene.	To ensure that IPC policies and procedures are always followed HIC 01, HIC 04, HIC 14, HIC 19.				
Personal protective equipment and an aseptic non-touch technique is appropriately employed throughout the procedure.	To ensure that IPC policies and procedures are always followed HIC 01, HIC 04, HIC 14, HIC 19.				
Demonstrates that equipment is handled and assembled safely, confidently and correctly throughout the procedure.	To minimise risk, harm and trauma to the patient. (DH, 2010)				
Assesses the patient for an appropriate vein.	To minimise risk, harm and trauma to the patient. (DH, 2010)				
Demonstrates an appropriate venous dilatation method when applying the tourniquet.	To minimise risk, harm and trauma to the patient. (DH, 2010)				

Ensuring tourniquet is released after identification of vein.	To minimise risk, harm and trauma to the patient. (DH, 2010)				
Cleans site (estimating area Tegaderm will cover) with an alcoholic chlorhexidine swab for 30 seconds.	To clean the skin, maintain asepsis and reduce the risk of infection (Lovdeya et al 2014). Policy HIC 36, HIC01, HIC 14.				
Allowed to air dry for 30 seconds.	To clean the skin, maintain asepsis and reduce the risk of infection (Lovdeya et al 2014). Policy HIC 36, HIC01, HIC 14.				
Reapply the tourniquet.	To minimise risk, harm and trauma to the patient and enhance the patients experience (DH, 2010).				
Pull skin taut from 2cm below intended puncture site to anchor the vein.	To minimise risk, harm and trauma to the patient and enhance the patients experience (DH, 2010).				
Warn patient of imminent insertion of cannula with bevel up at 10 to 45° angle depending on the depth and size of the vein.	To minimise risk, harm and trauma to the patient and enhance the patient's experience. (DH, 2010)				
Observe for first flashback in the hydrophobic chamber, level cannula by decreasing the angle between the cannula and skin; advance the cannula 1 mm to ensure it is in the vein.	To minimise risk, harm and trauma to the patient and staff member policy HIC 36, H&S 16.				
Keep cannula still and observe for the second flashback in the cannula itself.	To minimise risk, harm and trauma to the patient and staff member policy HIC 36, H&S 16.				
Slightly withdraw the needle, ensuring stabilisation of the device, then advance the cannula off the needle into the vein, release the tourniquet.	To minimise risk, harm and trauma to the patient and staff member policy HIC 36, H&S 16.				
Advance the cannula off the needle into the vein.	To minimise risk, harm and trauma to the patient and staff member policy HIC 36, H&S 16.				
Release the tourniquet.	To minimise risk, harm and trauma to the patient and staff member policy HIC 36, H&S 16.				

Place gauze under the needle and wings; then occlude vein 3cm above the insertion site (ported cannula).	To minimise risk, harm and trauma to the patient and staff member policy HIC 36, H&S 16.				
Completely withdraw the needle, immediately place into sharps bin.	To minimise risk, harm and trauma to the patient and staff member policy HIC 36, H&S 16.				
Attach the needle free device; The needle free (Octopus/ Line) device must be primed prior to attaching to the patient using Sodium Chloride 0.9%.	To aid appropriate assessment of the cannulation site, reduce risk and improve the patient's experience.				
Dress cannula with transparent occlusive IV dressing.	To aid appropriate assessment of the cannulation site, reduce risk and improve the patient's experience.				
Only professionals who have undergone training are able to flush the cannula. Registered Nurses: The flush is drawn up using an aseptic technique; - gold standard would be the use of a prefilled Sodium Chloride 0.9% syringe. Flush with 10mls 0.9% Sodium Chloride using push/ pause method, observe for pain, swelling and leakage, if resistance is felt, stop flushing. RGNs must be competent in administrating IV medications prior to flushing cannulas.	To ensure that the cannula is patent and positioned within the vein. Policies HIC 01, HIC 04, HIC 14, HIC 36. To reduce the risk of contamination. Policies HIC 01, HIC 04, HIC 14, HIC 36. To minimise risk, harm and the risk of contamination. Policy HIC 36. HIC 01, HIC 04, HIC 14				

<p>Non-Registered Staff (HCS or AP) can flush using a pre-filled syringe only. (<i>HCA</i>s or <i>AP</i>s cannot flush cannulas with drawn up 0.9% Normal Saline Solution.</p> <p>Check the syringe to establish its contents, look for any abnormalities in the fluid and the date of expiry.</p> <p>Remove the stopper from the syringe, taking care not to touch the tip.</p> <p>Open the cap on the cannula and insert the syringe.</p> <p>Flush slowly with a gentle pressure.</p> <p>Must only use a prefilled Sodium Chloride 0.9% syringe with an aseptic technique to flush a cannula on insertion-never draw up Sodium Chloride 0.9% or flush any other time apart from immediately on insertion of the cannula.</p>	<p>To ensure that the cannula is patent and positioned within the vein. Policies HIC 01, HIC 04, HIC 14, HIC 36.</p> <p>To reduce the risk of contamination. Policies HIC 01, HIC 04, HIC 14, HIC 36.</p> <p>To minimise risk, harm and the risk of contamination. Policy HIC 36. HIC 01, HIC 04, HIC 14</p>				
<p>The cannula is flushed immediately after insertion, observing site for:</p> <ul style="list-style-type: none"> a) Resistance to flow. b) Pain or discomfort at site. c) Swelling at site. d) Leakage 					
<p>The patient is comfortable and cannula site is clean and secure.</p>	<p>To minimise risk, harm and trauma to the patient. Policy HIC 36</p>				

VIP and cannula insertion documentation is accurately and legibly completed.		To minimise risk, harm and trauma to the patient. Policy HIC 36, G 80.				
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

Competency Element- Peripheral Intravenous Cannulation.

Date	Use these ROLA sheets to keep an ongoing record of your learning and development. Record each attempt at cannulation and reflect upon 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.

Date	<p style="text-align: center;"><i>Competency Element- Peripheral Intravenous Cannulation.</i></p> <p>Use these ROLA sheets to keep an on-going record of your learning and development. Record each attempt at cannulation and reflect upon 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.</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?

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

HIC14 Hand hygiene policy

HIC 19 Decontamination policy

HIC 36 - Insertion and management of peripheral intravenous cannulae and associated devices policy

General Policies

G 13 Consent to examination and treatment policy

G 38 Policy and Procedure for the Positive Identification of Patients

G 80 Healthcare Records Standards Policy

Health and Safety Policies

HS16 Dealing with the Safe Handling of Sharps policy

References

British Journal of Nursing (2015) Promoting Safe IV Management in practice using H.A.N.D.S. (IV Therapy supplement) **British Journal of Nursing**: 24(2)

DH (2010) Clean safe care. High impact intervention. Central venous catheter care bundle and peripheral IV cannula care bundle. London: Department of Health.

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

Nursing and Midwifery Council (2018) The Code - Professional Standards of practice and behaviours for nurses and midwives (Online) <https://www.nmc.org.uk/globalassets/sitedocuments/nmc-publications/nmc-code.pdf> {accessed 9th December 2024}

South Tees Nursing and Midwifery Strategy 2015-18: Delivering High Quality Compassionate Care Every Time (online) <https://www.southtees.nhs.uk/content/uploads/Nursing-Midwifery-strategy.pdf> {accessed 18th April, 2018}

Final Meeting: Cannulation

Staff members name:

Job Title:

Ward/Department:

Email Address to where certificate should be forwarded:

.....

Name of Line Manager:

Assessors' Name:

Date of workshop attended:/...../.....

Date of competency document completion:/...../.....

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

- Workshop has been attended
- The competency packs has been completed and the staff member has meet the criteria to carry out the skill of cannulation.
- Adheres to ANTT principle.
- 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

Education and Practice Development Team. Second Floor, Murray Building, JCUH.

Entered in ESR date:

By whom:

Guideline for cannulation using an aseptic non-touch technique (ANTT)

Elements of Performance
Select appropriate equipment (cannula, cannulation pack, needle free device and flush), ensure it is in date. Introduce self, positively identify patient and confirm by checking patient's four identifiers (first and second name, DOB and Hospital number). These should be cross referenced verbally with the patient/relative/carer, health care records (HCRs), and wristband worn by the patient.
Explain the procedure to the patient, then either obtain informed consent, or if the patient is assessed as not having capacity, act in their best interest (<i>Mental Capacity Act 2005</i>).
Discuss any previous issues with cannulation including allergies.
Perform hand hygiene, wear gloves and an apron.
Apply a tourniquet 8 to 10cm from the potential insertion site, visualise vein and palpate to confirm, release the tourniquet.
Clean the identified cannula site for 30 seconds using chlorhexidine 2% in 70% alcohol wipe in a crosshatch motion, allow to air dry for another 30 seconds.
Open the cannulation pack using ANTT, pick the towel from the pack and place it under the patient's arm.
Prepare the cannula by opening and dropping it onto the sterile field using ANTT. Flatten the cannula wings, withdraw the needle a small amount and replace, unscrew cannula cap and place it on the sterile field (ported cannula) or open and prime a needle-free device (non-ported cannula).
Apply the tourniquet firmly with two fingers between skin and tourniquet to prevent occluding arterial flow. Maintain ANTT ; avoid re-palpating or allowing unsterile items to be in contact with cleansed site.
Pull skin taut from 2cm below intended puncture site to anchor the vein.
Warn patient of imminent insertion of cannula with bevel up at 10 to 45° angle depending on the depth and size of the vein.
Observe for first flashback in the hydrophobic chamber, level cannula by decreasing the angle between the cannula and skin; advance the cannula 1 mm to ensure it is in the vein. Slightly withdraw the needle, keeping the cannula still, and observe for the second flashback in the cannula itself. Stabilise the device, then advance the cannula off the needle into the vein, release the tourniquet. Place gauze under the needle and wings; then occlude vein 3cm above the insertion site (ported cannula). Completely withdraw the needle, immediately place into sharps bin.
Attach needle free device; dress cannula with transparent occlusive IV dressing.
Flush with 10mls 0.9% Sodium Chloride using push/ pause method, observe for pain, swelling and leakage, if resistance is felt, stop flushing.
Clear area and dispose of rubbish appropriately, perform hand hygiene.
Record date on label, place it on the dressing, complete Visual Infusion Phlebitis (VIP) chart, document in the patients' healthcare records.