VENEPUNCTURE AND PERIPHERAL VENOUS CANNULATION POLICY

POLICY

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Approving Body	Documentation Group		
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	YES	**NO**	**N/A**
	X		
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Date of Environmental Impact Assessment (if applicable)	Not Applicable		
Legal and/or Accreditation Implications	Not Applicable		
Target Audience	All clinical staff who undertake the procedure of Venepuncture and /or Cannulation as required of their role, within their job description or as a role development to their practice where it is required for optimisation of patient care.		

Review Date	February 2026
Sponsor (Position)	Corporate Head of Nursing
Author (Position & Name)	Richard Corderoy-Foster – Practice Development Matron
Lead Division/ Directorate	Corporate
Lead Specialty/ Service/ Department	Nursing/ Professional Practice Development Team
Position of Person able to provide Further Guidance/Information	Practice Development Matron

Associated Documents/ Information	**Date Associated Documents/ Information was reviewed**
This policy should be read/ referred to in conjunction with the following Nursing/Allied Health /Non –registered specialist roles • Venous Access – Pre course Training Packages of 2 theory packs of which 1 is adult and the other paediatric including theory for neonatal nurses • Venepuncture (excluding neonates) OKS 140 • Insertion of Peripheral Cannula – (excluding neonates) OKS 108 • Posiflush® (Pre-filled 0.9% Sodium Chloride) – (excluding neonates) OKS 416 band 3 and 4 staff can only use for Posiflush® devices to flush cannulas as part of the insertion procedure. • Obtaining Blood Culture Sample (excluding Neonates) OKS 167 • Paediatric Procedural Guidance – Cannulation in infants, children and Young People • Paediatric Procedural Guidance – Venepuncture in Infants, Children and Young People • Neonatal Peripheral Intravenous Cannulation OKS579 • Neonatal Blood Sampling Training and Assessment OKS597 • **Paediatric** procedural guidance Venepuncture in Infants Children and Young People • **Paediatric** procedural guidance Cannulation in Infants Children and Young People • **Neonatal** Peripheral Venepuncture and Cannula Insertion • **Neonatal** Venous Blood Sampling	01/11/2022 For Paediatric/ Neonatal procedural guidance please see Royal Marsden Manual
Template control	June 2020

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1.0 INTRODUCTION

This policy refers to the practices of venepuncture and peripheral venous cannulation.

At Sherwood Forest Hospitals NHS Foundation Trust (SFHFT), venepuncture and peripheral venous cannulation are amongst the most frequent invasive procedures that staff are required to perform as an essential element in carrying out timely investigations and instigating treatments for our patients.

To be responsive and meet the needs of our patients, the Trust provides its staff with programmes of education and training to ensure that the right people in its workforce have the right levels of knowledge and skills to deliver efficient and timely care (NHS Improvement, 2016). The Trust incorporates, aligns and develops skills and competencies for venepuncture and peripheral venous cannulation to support the current and future workforce.

At the Trust venepuncture and peripheral venous cannulation are carried out by registered staff, Health Care Support Workers, Phlebotomists and allied healthcare professionals (registered and non-registered). Staff must be able to demonstrate and provide evidence to show that they have completed the appropriate level of practical and theoretical training to carry out these procedures and must have evidence of practical competencies which have been signed off by a suitably qualified assessor.

Since both procedures breach the circulatory system, meticulous infection control measures must be adhered to by all staff undertaking the procedures in order to minimise the risk of injury and/or infection to themselves and the patient.

2.0 POLICY STATEMENT

The purpose of this policy is to guide and support clinical staff in the safe practice of venepuncture and peripheral cannulation for patients and applies to all healthcare professionals working within the organisation including Medical Staff, Nurses, Midwives, Allied Health Professionals, Assistant Practitioners, Nursing Associates, Health Care Assistants, Phlebotomists and students from the healthcare disciplines who are required to undertake these procedures as a recognised part of their role and/or training programmes (Nursing and Midwifery Council, 2018, Health and Care Professions Council, 2018).

This policy is focused on the processes and procedure of venepuncture from a peripheral vein and peripheral venous cannulation: including insertion, post insertion care, management and removal. A separate Trust policy exists for obtaining blood cultures.

The recommended clinical procedures, Royal Marsden (2020), (Appendix 1 and Appendix 3) are based on evidence, recognised to lower the incidence of sharps injuries and optimise best practice in reducing venepuncture and cannula-related complications with an emphasis on the prevention of associated infection and injury risks. Care in the execution of venepuncture and peripheral venous cannulation is fundamental to reducing the risk of infection and injury to patients and staff**.**

2.1 Exclusions

There are no exclusions from this policy

3.0 DEFINITIONS/ ABBREVIATIONS

AHPs	Allied Health Professionals including Phlebotomy staff.
Assessor	A registered practitioner, who has completed training and can demonstrate competency and on-going practice in the identified roles of Venepuncture and/or Peripheral Venous Cannulation and has this recorded on Trust systems **This will not include persons either partially or not formally trained in the identified role.**
APEL	Accreditation of prior experience and learning.
CP1/CP2/CP3	Clinical phase 1 (3rd year medical student) Clinical phase 2 (4th year medical student) Clinical phase 3 (5th year medical student).

MACCS	Mandatory Assessment of Core Clinical Skills (undergraduate medical students only).
Managers	Includes Ward/Department Sisters/Charge Nurses /Leads Specialist Midwives, Matrons, Heads of Nursing, Clinical Leads and Allied Health Profession Managers.
Medical Education Team	Registered nurses who provide clinical education to medical students.
NICU	Neonatal Intensive Care Unit
OLM	Oracle Learning Management. A database to record training on individual electronic staff records.
PDM	Practice Development Matron.
PVC	Peripheral Venous Cannulation. The procedure of inserting a peripheral venous cannula into a peripheral vein. Peripheral venous cannulation is an invasive intervention that should only be carried out by suitably trained practitioners.
PETT	Professional Education and Training Team.
PVC / Cannula / Device	Peripheral venous cannula – a thin plastic tube used to deliver medications and fluids intravenously as prescribed. The tube is inserted over a hollow needle introducer.
Role Development/ Expansions to practice/ Role expansion	Terms which are descriptors of role development. These are supported through specialised training / competency packages/ supervised practice and should be subject to regular review in line with an individual's role.
Staff / Practitioners	Refers to employees of the Trust including Nursing, Midwifery, Allied Health Professional and medical disciplines (including students on placement from Higher Education Institutions providing healthcare professional education and training) who undertake venepuncture and cannulation as part of their role. This includes Bank, Agency and Temporary staff within the constraints of their role/job description who have achieved the required level of skills and competencies. The practice of these individuals will be covered by the Trust's indemnity arrangement.
The Trust / SFHFT	Refers to Sherwood Forest Hospitals NHS Foundation Trust incorporating: Kings Mill, Newark and Mansfield Community Hospitals.

Venepuncture	The introduction of a needle into a vein to obtain a blood sample for haematological, biochemical or bacterial analysis. Venepuncture is an invasive intervention that should only be carried out by suitably trained practitioners.
VIPS	Visual Infusion Phlebitis Score – a score used to determine the health of a cannula site as an indicator of site infection (phlebitis) VIPS is recorded on the Trust Cannulation Documentation.

4.0 ROLES AND RESPONSIBILITIES

The Chief Nurse and Medical Director are responsible for the content and implementation of this policy.

Heads of Nursing and Heads of Department are responsible for ensuring that necessary measures are in place to support the safe implementation and monitoring of the use of this policy in practice. They will need to take steps to address issues where practice has been identified as potentially unsafe.

Matrons, Department Managers and Service Line Directors are responsible for ensuring that all staff accountable to them are aware of this policy and adhere to its statement. It is the manager's responsibility to investigate and rectify any deviation from policy or identified discrepancies.

Ward Sister/Charge Nurses/Departmental Leaders will act as role models and are responsible and accountable for the policy implementation amongst staff in practice and the monitoring of all associated standards. They will ensure that all staff within the sphere of their responsibility have access to the required training and opportunities to achieve the necessary skills and competence. They are responsible for overseeing the timely completion of the associated study, workbooks and sign-offs within competency documentation.

All Healthcare staff/ Practitioners have a duty of care to their patients. They should only perform venepuncture or peripheral venous cannulation if required to do so as part of their role. This will be identified in their job description or be part of specific role development in support of patient care within their clinical setting. No Practitioner should attempt to undertake these roles unless they have completed the specific training and associated competencies.

Any person delegating these roles must be assured of the accountability and competency of the person to whom they are delegating.

Professional Education and Training Team (PETT) are responsible for the training, education and associated competency packages in the skills of venepuncture and peripheral venous cannulation at the Trust for all staff. Competency packages for the Trust are issued via the Sherwood e-Academy.

The Medical Education Team are responsible for overseeing the training and competencies of medical staff.

The Infection Prevention and Control Team are responsible for providing the training and education for the infection control elements of venepuncture and peripheral venous cannulation as part of the initial competency training for all staff groups except Medical staff. The Infection Prevention and Control Team audit practice for venepuncture and cannulation at ward and department level and provide specialist advice and support.

Practice Development Team / Corporate Head of Nursing are responsible for the production, issue and review of this policy and its contents.

5.0 APPROVAL

Following consultation, this revised policy has been approved by the Trust's Documentation Group.

6.0 GENERAL PRINCIPLES

Venepuncture and peripheral venous cannulation must only be undertaken by Practitioners who have completed a programme of training provided by the Trusts Professional Education Training Team, or by Practitioners who have accessed programmes that are recognised and approved by the Trust, such as those delivered at Universities as part of Medical/Nursing/ Midwifery and Allied Health professional education.

Independent practice cannot take place until the practitioner has achieved a level of proficiency under the direct supervision of a qualified and competent assessor and as detailed within a recognised competency document that aligns to their discipline and role.

Further information on Training requirements can be found in section 8 of the policy.

The procedures to follow can be found in:

- Appendix 1 – Venepuncture: procedural guidance (adults)
- Appendix 2 – Blood order of draw (adults)
- Appendix 3 – Peripheral venous cannulation procedural guidance (adults)
- Paediatric procedural guidance Venepuncture in Infants Children and Young People (available via the Royal Marsden Manual)
- Paediatric procedural guidance Cannulation in Infants Children and Young People (available via the Royal Marsden Manual)
- Neonatal Peripheral Venepuncture and Cannula Insertion (available via the Royal Marsden Manual)
- Neonatal Venous Blood Sampling (Available via the Royal Marsden Manual)

In the event of a practitioner being unable to gain venous access they should escalate using the Trust's Vascular Access Assistance Policy for inpatient areas or the Difficult Intravenous Access in the Emergency Department Pathway (Emergency Department only).

7.0 MONITORING COMPLIANCE AND EFFECTIVENESS

Minimum Requirement to be Monitored (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit (HOW – will this element be monitored (method used))	Frequency of Monitoring (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results (WHERE – Which individual/ committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Adherence to the policy	Ward and Department Sisters and Charge Nurses / Leads Infection Prevention and Control Team	Observations and audits of practice Via monitoring of incidents/complaints	 Monthly	 Ward Leaders, Infection Control Committee
Education and Training	**Ward and Department Leaders** Professional Education Training Team Infection Prevention and Control Team Practice Development Team Clinical Educators Supervisors/Assessors in practice	Staff appraisals / timely completion of packages Attendance at related study Competition of packages Monitoring of Incidents Policy content and support in practice Support in practice Support in practice	Monthly Ongoing	Monthly email to Ward Leaders regarding those who have had competencies issued for 4 months after issue date

Minimum Requirement to be Monitored (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit (HOW – will this element be monitored (method used))	Frequency of Monitoring (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results (WHERE – Which individual/ committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Ongoing competency	Individual Practitioners Ward and Department Leaders Professional Education Training Team Practice Development Team Clinical Educators Supervisors/Assessors in practice	At appraisal At appraisal Via OLM Support in practice /review of policy Support in practice	Ongoing (appraisals annually)	

8.0 TRAINING AND IMPLEMENTATION

The policy and its contents will be delivered to staff as part of the training for the procedures.

Before performing the procedures, staff must demonstrate that they have read this policy and the associated procedures. They must be able to evidence this as part of their training and development. This will include newly qualified nursing staff as part of their Preceptorship Programme and other newly appointed staff as part of any induction packages.

All staff undertaking venepuncture and peripheral venous cannulation are required to have:

1. Accessed the relevant training /study sessions in–house and return all completed associated competency documents within 12 weeks of their training.
2. Evidence of previous related study and competency sign-off as part of pre-registration training, or training and competencies from other organisations and APEL purpose and process.
3. Evidence of the maintenance of knowledge and skills in the use of the procedures for patient care or evidence of retraining where necessary.
4. Documented evidence of all of the above. Completion of training and competency /evidence of previous training will be recorded on the Trust OLM system.

8.1 Medical Students

Medical students complete venepuncture and PVC insertion as part of their pre- registration training. When joining the Trust they are only required to complete the Direct Observation of Practice (DOP) assessment.

Competency is recorded using the MACCS checklist criteria. The MACCS criteria is exactly the same for CP1 and CP3 with the exception that CP1 students are assessed using simulation and CP3 level students complete their assessments upon patients. This competency includes sign- off for performing flushing of cannulas.

8.2 Student Nurses and Student Midwives

Student nurses and Midwives will undertake theoretical training as part of their pre-registration course and may be required to complete supervised practice on placements to achieve competency in the skill. Competency is recorded within the student practice assessment documents and is assessed by a registered practitioner who has themselves been deemed as competent in the practice. Once competency has been achieved students may practice independently whilst on placement at the Trust.

8.3 Registered Nurses, Registered Midwives and Nursing Associates, Allied Health Professionals, Phlebotomists (band 2) Health Care Assistants (band 2) in ante-natal clinic and KTC only. Band 3 Health Care Assistants (Not applicable on NICU)

These staff groups will be required to complete the relevant pre-course workbook/s via the Sherwood e-Academy (refer to the associated documents section of this policy). They must

attend the study session and then complete the competency documents in practice within a specified timescale (usually twelve weeks). Competency is recorded on the Trust OLM system.

New starters to the Trust who were practising these procedures at other organisations can APEL their competency as specified in the Trust's Role Development Policy.

8.4 Considerations for staff caring for Neonates

8.4.1

As a guiding principle, it should be acknowledged that there must be a patient focused, demonstrated clinical need for staff to undertake training enabling them to undertake what would be 'role expansion'.

Role expansion is a descriptor of role development – supported by specialist training/competency packages/supervised practice which should be subject to regular review in line with an individual's role. Role development/extended practice competency training must be demonstrably appropriate to the practice of the individual and the clinical area in which they work and be of benefit to the patient. This is a Trust requirement outlined in the Trust Role Development Policy. An example of demonstrated clinical need would be an increased incidence of Datix reporting which might highlight trends related to delays in care or treatment, because of limited availability of staff with the required clinical skills. Any staff members intending to undertake cannulation training to provide care for neonates, must have the agreement and support of their line manager, and discussions around accessing training should include consideration of the needs of the service, and whether there is sufficient need to enable maintenance of knowledge and clinical skills.

8.4.2

Where there is a clinical need that requires staff to possess neonatal cannulation competency, Registered Childrens Nurses, Registered Adult Nurses, Registered Midwifes and Registered Neonatal Nurses working within NICU should access the neonatal venepuncture and cannulation pre-course workbook and ensure its completion, then attend the Trust's study session.

8.4.3.

Following attendance to the Trust's study session, to support the assessment of competency, it is necessary for Registered Childrens Nurses, Registered Adult Nurses, Registered Midwifes and Registered Neonatal Nurses working within NICU to have their supervised practice overseen by a Registered Childrens Nurse,Registered Adult Nurse, Registered Midwife and/or Registered Neonatal Nurse working within NICU who has evidence of competency (that is recorded on the Trust OLM database) and on-going clinical practice in relation to the skill of venepuncture and cannulation, or a suitably skilled paediatrician/clinician. Assessors must be current in their practice.

8.4.4

There is an expectation that achievement of competency MUST be achieved within the specified timeframe. Where the staff member is unable to do this, this may indicate that there is not a clinical need-based requirement for the individual to have this skill and as such, limited opportunity to achieve or maintain competency. Extensions to timeframes to achieve competencies would only be appropriate in certain extenuating services and they should not be sought based on limited opportunities for supervised practice attempts.

8.5 Considerations for staff caring for Infants, Children and Young People

8.5.1

As a guiding principle, it should be acknowledged that there must be a patient focused, demonstrated clinical need for staff to undertake training enabling them to undertake what would be 'role expansion'.

Role expansion is a descriptor of role development – supported by specialist training/competency packages/supervised practice which should be subject to regular review in line with an individual's role. Role development/extended practice competency training must be demonstrably appropriate to the practice of the individual and the clinical area in which they work, and be of benefit to the patient. This is a Trust requirement outlined in the Trust Role Development Policy. An example of demonstrated clinical need would be an increased incidence of Datix reporting which might highlight trends related to delays in care or treatment, because of limited availability of staff with the required clinical skills. Any staff members intending to undertake venepuncture and cannulation training to provide care for children and young people, must have the agreement and support of their line manager, and discussions around accessing training should include consideration of the needs of the service, and whether there is sufficient need to enable maintenance of knowledge and clinical skills.

8.5.2

Where there is a clinical need that requires staff to possess venepuncture and cannulation competency, Registered Children's Nurses, and Nursing Associates working in children's services, (Ward 25, The Children and Young Peoples area of the Emergency Department, Children's Outpatients Department and the Children's Assessment Unit) should access the paediatric venepuncture and cannulation pre-course workbook and ensure its completion, then attend the Trust's study session.

8.5.3.

Following attendance to the Trust's study session, to support the assessment of competency, it is necessary for Children's Nurses and Nursing Associates (employed in the wards/departments outlined in section 8.5.2) to have their supervised practice overseen by a Children's Nurse who has evidence of competency (that is recorded on the Trust OLM

database) and on-going clinical practice in relation to the skill of venepuncture and cannulation, or a suitably skilled paediatrician/clinician. Assessors must be current in their practice.

8.5.4

It is recognised that in areas such as the Emergency Department and the Urgent Treatment Centre, children and young people are, on occasions, cared for by Registered Adult Nurses and Band 3 HCSWs. To ensure timely access care and treatment, it might be appropriate for some staff that practice in these areas need to be competent to undertake venepuncture and cannulation for children and young people. The Royal College of Paediatrics and Child Health (2018) have outlined in emergency care standards that:

“Developing a flexible nursing workforce with both Adult and Paediatric emergency care skills is key, especially in smaller units”.

Staff with line management responsibility, who would generally approve requests for role expansion training (from Registered Adult Nurses and Band 3 HCSW’s working in ED or UCC) should adhere to the principles outlined in section 8.5.1 when supporting staff accessing role expansion opportunities.

It is the responsibility of the line manager to request that the staff member be issued both the adult and children’s pre-course workbook (if completion of both competencies is required). Where the manager does not request that the children’s workbook is issued, only the adult workbook will routinely be issued. Competencies will be issued according to which pre-course workbook(s) are issued i.e., where the adult workbook has been issued the adult competencies will be issued, if both workbooks have been issued both adult and children’s competencies will be issued for completion.

Registered Adult Nurses and Band 3 HCSW’s who access the venepuncture and cannulation study day to support the care of children and young people, as well as adult patients in UCC and ED, must have completed both the Adult and Children’s services pre-course workbooks. When undertaking supervised clinical practice to achieve competency these staff members will be required to have their supervised clinical practice assessed by a Children’s Nurse who has completed their training (with evidence of training / competency recorded on the Trusts OLM database) or an appropriately skilled Paediatrician or Clinician. Achievement of paediatric competencies is in addition to any supervisory practice required to achieve competencies in adult services, which would be undertaken separately.

8.5.5

There is an expectation that achievement of competency MUST be achieved within the specified timeframe. Where the staff member is unable to do this, this may indicate that there is not a clinical need-based requirement for the individual to have this skill and as such, limited opportunity to achieve or maintain competency. Extensions to timeframes to achieve

competencies would only be appropriate in certain extenuating services and they should not be sought based on limited opportunities for supervised practice attempts.

8.5.6

When Band 3 HCSWs have completed all the elements required to be recorded as competent to undertake venepuncture and cannulation in children and young people, subsequent use of these clinical skills in clinical practice must be appropriately delegated. Registered Nurses and Registered Nursing Associates will retain accountability for their decisions to delegate tasks, such as obtaining venous access, to a Band 3 HCSW. Registered Nurses and Nursing Associates must ensure clear communication to ensure that delegated tasks are within the other persons scope of competency, instructions are fully understood, adequate supervision and support is provided and that theyconfirm that outcomes of tasks delegated to someone else meet the required standard (Nursing and Midwifery Council, 2018).

8.5.7

In the Emergency Department and Urgent Treatment Centre, Registered Adult Nurses and B3 HCSWs who have completed the Adult Trust study session and competency pack are able to undertake cannulation and venepuncture in children and young people aged 12 years and over.

As a guiding principle, B3 HCSWs working in the Emergency Department and Urgent Care Centre should generally only undertake venepuncture and cannulation on an older child. Developing practical skills on older children is more appropriate as they are more likely to remain still during blood sampling which will enable staff to learn the dexterity necessary before being introduced to the clinical holding aspects that may be required for younger children (Royal College of Nursing, 2016). There needs to be consideration regarding the technical skill required to undertake the procedure in the younger child and staff members should always liaise with a senior/more clinically experienced staff member if they feel that attempting venepuncture or cannulation on a younger child would be practically difficult. Consideration should also be given to the fact that whilst an older child may demonstrate physical maturity, and where practical aspects of the procedure may be uncomplicated, physical maturity does not always reflect emotional maturity. Any care provided must recognise the unique and individualised needs of the child or young person, decision making must be child/young person focused, and there should be multi-disciplinary decision making regarding the competency and skill required based on individual patient need.

8.5.8

Registered Adult Nurses and B3 HCSWs (practicing in the ED) who have historically practiced the skill and have the confidence and competence to undertake venepuncture and cannulation may continue to do so. As stated in 8.5.6, for B3 HCSWs, Registered Nurses will retain accountability for their decisions to delegate tasks, such as obtaining venous access, to a Band 3 HCSW. Registered Nurses must ensure clear communication to ensure that

delegated tasks are within the other persons scope of competency, instructions are fully understood, adequate supervision and support is provided and that they confirm that outcomes of tasks delegated to someone else meet the required standard (Nursing and Midwifery Council, 2018).

8.6 Children and young people attending an adult phlebotomy service

8.6.1

Adult phlebotomy services do not routinely offer a phlebotomy service for children and young people as this is provided via the children's outpatient's department (clinic 11). The children's outpatient's department is a child/young person friendly environment, whereby blood taking procedures can be undertaken by an appropriately trained nursing and health care team, in a purpose-built clinical setting, with access to hospital play therapy services. The environment and services provided in children's outpatients department consider the unique, holistic needs of children and young people.

8.6.2

For children and young people requiring blood testing, processes are in place to ensure that any requests for blood sampling are clinically assessed on a case-by-case basis. The Childrens outpatient's department (Clinic 11) does not run a direct phlebotomy service and children and young people referred for blood tests from outside paediatrics (for example GP services) will need an assessment first. Referring children and young people to a specialised service offers the opportunity for the paediatrician to review the clinical history, so that it is confirmed that a blood test is indicated. This process also supports in ensuring that all appropriate blood tests are done at a single sitting and avoids unnecessary blood sampling.

8.6.3

Where children and young people attend adult phlebotomy services via GP services as "walk in" patients, firstly, staff should check that they have not attended the adult service in error and could contact clinic 11 to check whether the child or young person has an appointment. If the clinic 11 team are not expecting the child or young person, adult phlebotomy service staff should redirect the child/young person and their parents/responsible carers back to their GP, to ensure that a referral to a paediatrician has been made. This gives assurance that the need for blood testing, within the context of a clinical assessment, has been confirmed and could potentially avoid a child or young person having an unnecessary procedure.

8.6.4

On occasions where children and young people attend outpatient clinics that are outside of the children's outpatient's department, and where clinicians may request blood tests, the children's outpatient's team (clinic 11) should be contacted directly to ascertain if they are able to support at that time. Alternatively, the child or young person and their

parents/responsible carers could be offered an appointment for blood testing on a mutually agreed date and time.

8.7 Phlebotomy services for children and young people at Newark hospital

At Newark Hospital there are two ambulatory slots throughout the week for urgent paediatric assessments where a blood test may be required. These slots may be booked for other urgent patients but there may be capacity for urgent requests for tests if they are needed. The on-call Paediatrician should be contacted to agree that the assessment is needed, then phone 01623 672383 to confirm the slot. A formal letter will be required from the requesting clinician to achieve one of these slots. At King Mill Hospital there are ambulatory clinics on Monday, Wednesday and Friday which again should be agreed by speaking to the on-call Paediatrician directly, and then once agreed by phoning 01623 622515 extension 4399 to confirm slot time.

9.0 IMPACT ASSESSMENTS

- This document has been subject to an Equality Impact Assessment, see completed form at Appendix 4
- This document is not subject to an Environmental Impact Assessment

10.0 EVIDENCE BASE (Relevant Legislation/ National Guidance) AND RELATED SFHFT DOCUMENTS

10.1 Evidence Base:

- B braun (2017) Peripheral Cannulation and Venepuncture. Distance Learning Workbook. Found at https://www.iow.nhs.uk/Working-With-Us/learning-cannulation.pdf Accessed 30/10/2022
- B braun (2017) **Page 23**; **Selecting a Vein** Peripheral Cannulation and Venepuncture. Distance Learning Workbook.:–Found at https://www.iow.nhs.uk/Working-With-Us/learning-cannulation.pdf Accessed 20/08/2022
- Blood Order of Draw (2018). Becton Dickenson Life Sciences. bd.com/en-uk. Weu227.1
- Department of Health (2010). Clean Safe Care High Impact Intervention Central Venous Catheter Care Bundle and Peripheral IV Cannula Care Bundle. London. Department of Health.
- Department of Health (2015) The Health and Social care Act 2008 code of practice on the prevention and control of infections and related guidance at :- https://www.gov.uk/government/publications/the-health-and-social-care-act-2008-code-ofpractice-on-the-prevention-and-control-of-infections-and-related-guidance (accessed 20/08/2022)

- Health and Safety (Sharp Instruments in Healthcare) Regulations 2013 Guidance for employers and employees :from http://www.hse.gov.uk/pubns/hsis7.pdf Accessed 20/09/2022
- Healthcare Safety Investigation Branch (HSIB) (2019) Wrong patient details on blood sample: Healthcare safety investigation 2019/003. Farnborough: HSIB.
- Infection Prevention Society, National Infusion and Vascular Access Society, Royal College of Nursing (IPS, 2015) UK Vessel Health and Preservation from https://www.3mlearning.co.uk/media/1155/vhp-poster.pdf. Accessed 01/11/2022
- Health and Care Professions Council (2018) Standards for Proficiency: found at https://www.hcpc-uk.org/standards/standards-of-proficiency/. Accessed 01/11/2022
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- Nursing and Midwifery Council (2018) Future nurse: Standards of proficiency for registered nurses https://www.nmc.org.uk/globalassets/sitedocuments/education-standards/future-nurse-proficiencies.pdf accessed 01/11/2022
- Nursing and Midwifery Council (2018) The Code – Professional standards of practice and behaviour for nurses, midwives, and nursing associates. London. NMC.
- Royal College of Nursing (2016) Competences – An education and training framework for capillary blood sampling and venepuncture in children and young people. London. RCN
- Royal College of Nursing (2016) Standards for Infusion Therapy.4th Edition. London
- Royal College of Paediatrics and Child Health (2018) Facing the Future: Standards for children in emergency care settings – Developed by the Intercollegiate Committee for Standards for Children and Young People in Emergency care Settings. UK. RCPCH.
- Royal Marsden Manual of Nursing Procedures (2020) Tenth edition (online)
  Chapter 13.1: Venepuncture (Appendix 1) accessed 01/11/2022
  Chapter 17.4 Peripheral Cannula Insertion accessed 01/11/2022
- Sherwood Forest Hospitals NHS Foundation Trust (2019) V2.0 Role Development Policy. UK. SFHNHSUK.
- Supporting NHS providers: right skills, right staff, right place, right time (NHSI, 2016) Expectation 2: Right skills found at https://www.england.nhs.uk/wp-content/uploads/2013/04/nqb-guidance.pdf accessed 07/05/2019

10.2 Related SFHFT Documents:

- Aseptic Non-Touch Technique Policy (IPC 39)
- Policy for the Care of Suspected or Confirmed Patient with a Blood Borne Virus (ICP 29)
- Blood Cultures from Patient with Suspected or Confirmed Infections Policy (ICP 32)
- Clinical Record Keeping Standards Policy
- Consent to Examination, Treatment and Care Policy

- Difficult Intravenous Access in the Emergency Department Pathway
- Hand Hygiene Policy (ICP 17)
- Health and Safety Policy
- HIV / Post-exposure prophylaxis (PEP) Policy Following Occupational Exposure to HIV in the Healthcare Setting
- Incident Reporting Policy
- IV Policy – IV Medication and Fluid Therapy Administration Through a Peripheral Venous Cannula Policy
- IV Policy – IV Medication and Fluid Therapy Administration Through a Central Venous Access Device (CVAD) Policy
- Lone Working Policy
- Medical Device Management Policy
- Medical Equipment User Training Policy
- Medicines Policy
- Mental Capacity Act (MCA) Policy
- Operating Policy for Infection Prevention and Control (ICP 1)
- Personal Protective Equipment (PPE) Policy (ICP 9)
- CCU Policy - Policy for Obtaining Blood Samples using Written and the Electronic Requesting System (ICE)
- Positive Patient Identification Policy
- Role Development Policy
- Sepsis Guideline – recognition, diagnosis and early management
- Sharps and Needlestick Policy
- Transfusion Policy, Procedures and Guidelines
- Vascular Access Assistance Policy
- Waste Policy

10.3 Related guidelines and procedures

- Removal of peripheral cannula https://www.rmmonline.co.uk/manual/c17-sec-0104

10.4 Keywords

Process, procedure, obtaining blood, IV access, PVC, VIP, VIPS, vascular, procedural guidance, equipment, complications, blood order of draw, removal, documentation, invasive

11.0 APPENDICES

As per contents table

Appendix 1

11.1 Venepuncture: Procedural Guidance (adults) (Royal Marsden, 2020)

Equipment

- Clean procedure tray or trolley
- Tourniquet (single use where possible)
- Chlorhexidine in 70% alcohol swab, or Isopropyl alcohol 70% on sterile gauze (check the patients allergy status)
- 21 gauge multiple sample safety needle or 21/23 gauge winged safety infusion device and multiple sample Luer adaptor
- Vacutainer / blood collection tube holder (checked expiry dates)
- Appropriate vacuumed specimen tubes
- Low-linting gauze swabs
- Sterile adhesive plaster or hypoallergenic tape (check the patients allergy status when selecting dressings)
- Specimen request form/s
- Non-sterile, well-fitting gloves
- Plastic apron
- Sharps bin

Procedure

1. Clean tray and gather required equipment (specified above).

2. ICE label/s (or a completed request form –Blood Transfusion Purposes) should be obtained before you approach your patient to aid positive patient identification

3. Confirm the identification of the patient as per the Trust's Policy & Procedure for the Positive Identification of Patients.

4. Explain and discuss the procedure with the patient. Allow them time to ask questions where appropriate and discuss any problems which have arisen with venepuncture previously. Obtain verbal consent to proceed. If the patient lacks capacity, complete a Mental Capacity Act 2 stage test and Best Interests Checklist.

5. Ensure that the patient's privacy is maintained. Ensure that the area is well lit. Ask/assist the patient to position themselves to maximise their comfort during the procedure.

6. Perform hand hygiene and put on clean gloves.

7. Using the principles of Aseptic None Touch Technique (ANTT) prepare and assemble the equipment necessary for venepuncture on the clean tray or receiver.

8. Perform a visual check of the patient's veins, starting with those in the antecubital fossa, looking for a prominent vein that runs under the skin surface that is easy to palpate, assessing the size, depth and condition according to the amount of blood required. Peripheral veins in the hands and feet should be the last choice for venepuncture as they are painful for the patient (Infection Prevention Society, 2015)

9. Select the device, based on vein size, site and volume of blood required. Use a 23 gauge winged infusion device for small veins, metacarpal or feet veins

10. Place and support the patient's arm on a clean pillow.

11. Apply a tourniquet to the upper arm on the chosen side, making sure that it does not obstruct arterial flow. If the radial pulse cannot be palpated then the tourniquet is too tight. The position of the tourniquet should be varied according to the site of venepuncture; for example, if a vein in the hand is to be used it may be placed on the forearm.

12. Observe and palpate for a dilated vein. If the tourniquet does not improve venous access, the following methods can be used to improve venous access.

    Either:
    Place the arm in a dependent position with the palm facing upwards and ask them to gently clench their fist.

    Or:
    Tap or gently stroke the vein.

    Or:
    Remove the tourniquet and apply moist heat, for example a warm compress, soak limb in warm water or, with prescription, apply Glyceryl Trinitrate ointment/patch.

If there is any delay in performing the procedure the tourniquet must be released and steps 7-9 should be repeated.

13. Clean the patient's skin carefully for 30 seconds using a Chlorhexidine in 70% alcohol swab / Isopropyl alcohol 70% on sterile gauze (check the patients allergy status) and allow to air dry for 30 seconds. If you need to re-palpate or touch the skin the area will need cleaning again. Remove the cover from the needle and inspect the device carefully checking for any faults before starting the procedure (e.g. bent needles, broken or faulty safety closure). If any faults are present isolate the equipment, record the batch details and return to the manufacturer via the Trust procurement team.

14. Reassure the patient and anchor the vein by applying manual traction on the skin a few centimetres below the proposed insertion site.

15. Insert the needle smoothly at an angle of approximately 30°. Reduce the angle of descent of the needle as soon as a flashback of blood is seen in the tubing of a

winged infusion device or when puncture of the vein wall is anticipated when using a vacutainer system.

16. Slightly advance the needle into the vein if possible in order to stabilise its position. Take care not to place any pressure on the needle itself.

17. Withdraw the required amount of blood using vacuumed blood collection specimen tubes. Consider if the tourniquet needs releasing prior to sampling to prevent inaccurate sampling measurements due to haemostasis e.g. calcium levels. Samples should be collected in the following order outlined in Appendix 2.

    1st. Blood cultures
    2nd Coagulation
    3rd. Serum tube with or without clot activator or gel separator (glass, non-additive tubes can be filled before the coagulation tube)

    Additive tubes such as:
    4th. Gel separator tubes (may contain clot activator or heparin)
    5th. Heparin tubes
    6th. EDTA
    7th. All other tubes.

18. Release the tourniquet if not already done. Remove the last sample tube from the vacutainer tube.

19. Place a low-linting swab over the puncture point and remove the needle but do not apply pressure until the needle has been fully removed from the vein.

20. Activate the vacutainer safety device to prevent sharps injury and then discard the needle immediately into a sharps bin.

21. Apply digital pressure directly over the puncture sit until bleeding has ceased; (approximately 1 minute, longer may be required if current disease or treatment affects the patients clotting mechanisms).

22. If able, the patient may apply continued pressure with a finger but should be discouraged from bending the arm if a vein in the antecubital fossa is used.

23. Gently invert the filled sample tubes at least six times.

24. Check and confirm patient details again before applying the printed ICE label/s to the blood bottles. If you have not been able to print the ICE labels before bleeding the patient OR you have taken sample/s for Blood Transfusion hand label the blood bottles with the relevant details at the patient's side as per the CCU Policy - Policy for Obtaining Blood Samples using Written and the Electronic Requesting System (ICE) in order to ensure that the specimens from the right patient are delivered to the

laboratory, the requested tests are performed and the results returned to the correct patient's records.

Post-procedure

25. Perform a final check of the puncture point.

26. Confirm whether the patient is allergic to adhesive plasters. Apply an adhesive plaster or alternative dressing as indicated.

27. Ensure that the patient is comfortable.

28. Remove gloves and discard waste as per the Trust Waste Policy.

29. Perform hand hygiene.

30. If ICE labels were not available pre-procedure return to a printer to print. **N.B** Check the patient details that you have written on the blood bottles are identical to those on the ICE labels before applying to the blood bottles/s. Similarly if a request form was not completed prior to the venepuncture ensure the patient details match exactly with those on the sample bottle

31. Facilitate the prompt despatch of samples to the laboratory for processing according to the patients need/level of urgency.

32. Document the procedure in the patient's records

11.2 Complications associated with Venepuncture

Complications that may occur when venepuncture is performed may include arterial puncture, injury to the surrounding nerves, formation of a haematoma, vaso-vagal attacks and infection to the sample site.

Careful assessment and preparation will minimise the risks but should they occur then refer to the following guidance and take action immediately.

11.2.1 Inadvertent Arterial puncture

To prevent an arterial puncture, careful vein selection is necessary (Infection Prevention Society, 2015) and the following points should be considered;

- The Practitioner should palpate the vein before needle insertion to confirm the absence of a pulse.
- The angle of insertion should be less than 40° and in the event of failure to bleed, further probing with the needle should be avoided.
- An arterial puncture can be identified by bright red blood, rapid pulsatile blood flow and pain. The needle should be removed immediately and pressure applied for 5 minutes by

the practitioner. A pressure dressing must be applied and the patient should receive advice to follow in the event of increased pain, swelling or loss of sensation.
- No tourniquet or blood pressure cuff should be reapplied to the arm for 24 hours.
- The incident should be documented in the patient's notes and recorded using the Trust DATIX system for incident reporting.

11.2.3 Nerve injury

Care when selecting the correct size device for use and insertion of the needle should minimise the risk of nerve injury (Infection Prevention Society, 2015)

- The angle of insertion should be less than 40° and blind probing should be avoided.
- The practitioner should suspect an injury to the nerve if the patient complains of the following; a sharp shooting pain, burning or electric shock –like sensation that radiates down the arm which may be accompanied by altered sensation or numbness/tingling in the fingers. In these circumstances the needle should be removed immediately to prevent further nerve damage.
- The patient should receive advice to follow if the pain/numbness continues for more than a few hours.
- The incident should be documented in the patient's notes and recorded using the Trust DATIX system for incident reporting.

11.2.4 Haematoma

Haematoma formation is the commonest complication of venepuncture. A haematoma develops when blood leaks from the vein into the surrounding tissues. It may be caused by the needle penetrating completely through the vein wall, the needle only being partially inserted, or as a result of applying insufficient pressure on the site when the needle is removed. If a haematoma develops,

- The needle should be removed immediately and pressure applied.
  In the event of a large haematoma developing, the Practitioner can apply an ice pack to relieve pain and swelling.
- The patient should receive aftercare advice as a large haematoma may lead to a compression injury to the nerve.
- The occurrence should be documented in the patient's notes and recorded using the Trust DATIX system for incident reporting.
- Patients who are discharged should be given advice about when and who to contact if the haematoma gets worse or they develop any numbness in the limb.

11.2.5 Vaso –vagal episodes (fainting)

Fainting may occur during or immediately following venepuncture. The patient may complain of feeling light-headed and appear pale and sweaty. Loss of consciousness may occur suddenly so the Practitioner should be vigilant throughout the procedure and routinely

confirm with the patient that they do not feel unwell or faint. In the event of the patient feeling faint;

- The procedure should be abandoned immediately, pressure applied to the site and the patient should be encouraged to lay down/lower their head and breathe deeply. The use of Oxygen should be considered as part of the ABCDE assessment of the patient.
- If the patient suffers a loss of consciousness, the Practitioner should call for assistance and ensure the patient's safety until they recover.
- The patient should not be allowed to leave the ward/department until fully recovered and be discharged to the care of a third party where possible.
- Prolonged or repeated episodes should prompt a medical review following initial first aid measures.

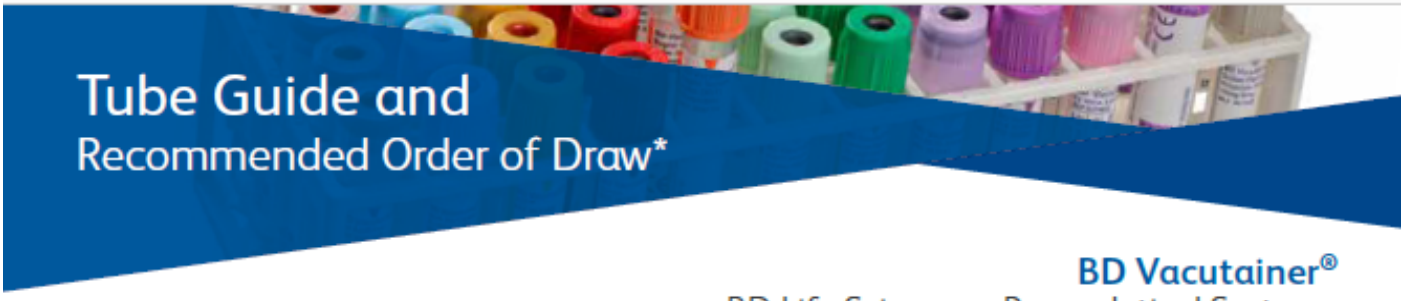
11.2.6 Infection

Infection at the venepuncture site is a rare occurrence. Aseptic technique should be maintained with careful attention to hand washing and skin preparation. The venepuncture site should not be re-palpated after cleaning and the site should be kept covered after being bled. For inpatients where there is suspicion of infection;

- Swabs and a medical review should be instigated.
- Where an infection is confirmed this should be recorded using the Trust DATIX system for incident reporting.
- Patients who leave the hospital following venepuncture should receive advice on care of the site of venepuncture and the dressing.

Appendix 2 Blood order of draw (adults)

(For paediatrics see Section 15 and Neonates see Section 16)



Tube Guide and Recommended Order of Draw*

BD Vacutainer®
BD Life Sciences - Preanalytical Systems

Cap Colour	Cat. No.	Tube Type	Determinations	Special instructions	
	442192 442265	Blood Cultures	Aerobic followed by anaerobic- if insufficient blood for both culture bottles, use aerobic bottle only		
	Cat. No. 367691 Draw Volume 4.5 ml	Sodium Citrate	All coagulation tests- APTTs, Clotting Screens, D-Dimers, INRs, Lupus Anticoagulant, Thrombophilias	4 tubes required for Lupus A/C & Thrombophilia Investigation	Mix 3-4 Times
	Cat. No. 368975 Draw Volume 4 ml	Serum	Clozapine, Clonazepam, Samples for Bone Bank. Other tests as advised by the laboratory.		Mix 5-6 Times
	Cat. No. 367954 Draw Volume 5ml	SST™ II	Routine Clinical Chemistry Investigations and Basic Endocrinology. Growth Hormone, Haematinics, IGF-1, Insulin and C-peptide (send within 30 min to lab). Routine Immunology, Serological Tests, Vitamin A and E (protect from light), Vitamin D, Routine tumour Markers, Haptoglobins, Therapeutic Drugs, Protein Electrophoresis, Troponin T, NT-pro BNP, Gastrin (on ice within 15 mins), Clonazepam		Mix 6 Times
	Cat. No. 367375 Draw Volume 4.5 ml	PST™ II	Fast Track Bloods, Biotinidase, Amino Acids, Acylcarnitine Profile, Calcitonin (fasting sample, on ice within 15 mins), VLCFA, Galactose-1-Phosphate Uridyl Transferase		Mix 8-10 Times
	Cat. No. 367839 Draw Volume 4 ml	EDTA	Renin (sent within 8h to lab), PTH (add. tube req. if FBC requested), Complement C3d (sent within 1h to lab), Cyclosporin, Tacrolimus, ESR, FBC, Haemoglobinopathy and Thalassaemia Studies, Fluids for white cells, HbA1c, HLA, Immunophenotyping, Bacterial/Viral PCR, Red Cell Enzymes, Retics, Malaria, Chromium, Cobalt, Lead, ACTH (sent within 4h to lab), Ammonia (please contact lab ext 4082 prior to taking sample), Gut Hormone Profile (fasting, on ice within 15 min, 2 tubes required), TPMT, Azathioprine Metabolites		Mix 8-10 Times
	Cat. No. 367941 Draw Volume 6 ml	EDTA Crossmatch	Group and Screen, X-Match, Kleihauer, DAT, Maternal and Cord Delivery Samples, Cold Agglutinins Screen		Mix 8-10 Times
	Cat. No. 368920 Draw Volume 2 ml	Fluoride Oxalate	Alcohol, Blood Glucose, CSF Glucose, CSF Lactate, Fluid Glucose		Mix 8-10 Times
	Cat. No. 368380 Draw Volume 6 ml	Trace Element	Trace metal analysis (Cu, Zn, Se)		Mix 8-10 Times

Determinations and Special Instructions contained within this guide have been provided by the named institute and are not BD recommendations or instructions for the BD products described. Please consult your organisation's guidelines or contact BD should you have any questions.

*Clinical and Laboratory Standards Institute (CLSI) Guidelines GP41-Ed7 (formerly H3-A6, 6th Edition)

IMPORTANT MIXING GUIDELINES
All BD Vacutainer® tubes require immediate mixing following collection. Insufficient mixing can result in inaccurate test results and the need to re-draw. Correct mixing technique is to gently invert (180° and back) each tube the recommended number of times shown on the right hand side of the table.

0118 921 6000
1030 Eskdale Rd, Winnersh, Wokingham RG41, UK
bd.com/en-uk

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Sherwood Forest Hospitals
NHS Foundation Trust

BD

Appendix 3

13.0 Peripheral Venous Cannulation Procedural Guidance (adults) (Royal Marsden, 2020)

Equipment

- Clean procedure tray or trolley.
- A selection of various gauges of peripheral cannulas
- Alcohol based hand rub
- Chlorhexadine 2% in 70% alcohol swabs or Isopropyl alcohol 70% on sterile gauze (check the patients allergy status)
- Torniquet
- Needle free access device.
- Extension set.
- Gloves and apron.
- Semi-permeable dressing (check the patients allergy status when selecting dressings)
- Hypoallergenic tape.
- 10ml Syringe
- Blunt fill needle with filter
- 0.9% Saline/or Posiflush ® device
- Sharps bin

Optional Equipment - according to the patients need.

Topical local anaesthetic and an occlusive dressing (check the patients allergy status).

Procedure

1. Clean tray and gather required equipment (specified above).

2. Confirm the identification of the patient as per the Trusts Positive Patient Identification Policy

3. Explain and discuss the procedure with the patient. Allow them time to ask questions where appropriate and discuss any problems which have arisen with cannulation previously. Obtain their verbal consent to proceed. If the patient lacks capacity, complete a Mental Capacity Act 2 stage test and Best Interests Checklist.

4. Assist the patient to find a comfortable and stable position to rest. If the patient requires a prescribed topical; local anaesthetic, apply it to the potential peripheral cannulation site/s and apply occlusive dressing/s. Use in advance of cannulation as prescribed according to the manufacturer's instructions.

5. Perform hand hygiene in and put on clean gloves.

6. Using the principles of ANTT check, prepare and assemble the equipment necessary for cannulation on the clean tray or trolley and move them to the patient area. Prime the extension set with a syringe of 0.9% sodium chloride (unless taking blood samples immediately after cannulation).

7. Ensure that the patient's privacy is maintained. Ensure that the area is well lit. Ask/assist the patient to position themselves to maximise their comfort during the procedure.

8. Place and support the patient's chosen limb for cannulation on a clean pillow.

9. Apply a tourniquet to the upper arm on the chosen side, making sure that it does not obstruct arterial flow. (If the radial pulse cannot be palpated then the tourniquet is too tight). The position of the tourniquet should be varied according to the site of venepuncture; for example, if a vein in the hand is to be used it may be placed on the forearm.

10. Observe and palpate for a dilated vein. If the tourniquet does not improve venous access, the following methods can be used to improve venous access.

Either:

Place the arm in a dependent position and ask them to gently clench their fist.

Or:

Tap or gently stroke the vein.

Or:

Remove the tourniquet and apply moist heat, for example a warm compress, soak limb in warm water or, with prescription, apply Glyceryl Trinitrate ointment/patch.

11. Assess and select the vein.

12. Select the device based on the vein size**,** purpose and intended length of use. The decision should also be based on pH of any medication to be introduced.(Infection Prevention Society, 2015)

13. Perform hand hygiene. Put on clean gloves, place gauze and a dressing onto the tray/trolley.

14. Prepare a clean working area near to the patient, place a sterile dressing towel under the patients arm/limb selected for cannulation.

15. Apply gloves.

16. Clean the patient's skin and the selected vein for at least 30 seconds using 2% Chlorhexidine 70% alcohol swab using back-and-forth strokes with friction and allow to dry for 30 seconds. Do not re-palpate the vein or touch the skin.

17. Remove the cover from the needle and inspect the device carefully checking for any faults before starting the procedure (eg bent needles, broken or faulty safety closure) If any faults are present isolate the equipment, record the batch details and return to the manufacturer via the Trust procurement team.

18. Reassure the patient and anchor the selected vein for use with the non-dominant hand by applying manual traction on the skin a few centimetres below the proposed site of insertion.

19. Holding the cannula in the dominant hand, ensure that it is in the bevel-up position and place the device directly over the vein; insert the cannula through the skin at the selected angle (approximately 30 degrees) according to the depth of the vein.

20. Wait for the first flashback of blood in the flashback chamber of the needle as an indication that the vein has been reached.

21. Level the device by gently decreasing the angle between the cannula and the skin. Advance the cannula slightly to ensure entry into the lumen of the vein.

22. Withdraw the needle of the cannula slightly with the dominant hand and a second flashback of blood will be seen along the shaft of the cannula.

23. Maintaining skin traction with the non-dominant hand and using the dominant hand, slowly advance the cannula off the needle and into the vein.

24. Release the tourniquet.

25. Apply digital pressure to the vein above the cannula tip and remove the needle.

26. Immediately dispose of the needle into the sharps bin.

27. If blood samples are required, take them at this point. (refer to Appendix 1 and Appendix 2) **Blood Culture samples must never be taken from peripheral venous cannulas.**

28. Attach the closed primed extension set, needle free access device or administration set to the end of the cannula.

29. Secure the cannula using an IV cannula dressing and enter the date of insertion on the dressing and on the VIPS chart**.**

30. Aspirate the cannula to check for patency, observing for blood flashback, then flush the cannula with 0.9% Sodium Chloride/Posiflush® device using a pulsatile flush ending with positive pressure. **Band 3 and Band 4 staff must only deliver flushes using the Posiflush® system.**

31. Observe the site for signs of swelling or leakage and ask the patient if they are experiencing any discomfort or pain.

32. Check that the device is secured. Remind the patient to take care of the cannula and the site whilst in situ. Ensure that the needle free access device lines are clamped**.**

Post-procedure

33. Remove gloves and discard waste as per the Trust Waste Policy

34. Document date and time of insertion, site and size of cannula, number of attempts and sign in patient's notes or care plan. Document date/time of insertion on the cannula dressing. Ensure that a VIPS chart is commenced for each new cannula.

35. The cannula should be secured using a specific IV Cannula semi-permeable dressing. Non-sterile tape should be used to a minimum and not cover the insertion site, taping should enable the site to remain visible at all times.

13.1 Ongoing care

Cannulas can cause complications for the patient which can include the risk of infection at the site of insertion or, more seriously, bloodstream infections .Such infections are largely avoidable with correct maintenance of devices whilst in use. The site should also be inspected for signs of infiltration, extravasation and leakage during and after administration of medicines/infusions.

As required by the Trust Infection Control VIP Management Guidance

All patients with an intravenous cannula in place must have

- The subsequent score and action(s) taken (if any) must be documented.
- The IV site checked each time it is used or at a minimum of 8 –hourly intervals for signs of infusion phlebitis and the frequency changed to 2 hourly if scoring 1.

Key to V.I.P. Score			
0	No sign of phlebitis • observe cannula	3	Medium stage of phlebitis • resite cannula • consider treatment
1	Possible first signs of phlebitis • observe cannula	4	Advanced stage of phlebitis or start of thrombophlebitis • resite cannula • consider treatment
2	Early stage of phlebitis • resite cannula	5	Advanced stage of thrombophlebitis • initiate treatment • resite cannula

The incidence of infusion phlebitis varies. The following points may assist in reducing the incidence:

- Replace loose or contaminated dressings.
- Insert cannulas away from the joints whenever possible.
- Aseptic technique must be followed.
- Use the smallest gauge cannula most suitable for the patient's needs.
- Replace the cannula at the first indication of infusion phlebitis (stage 2 on the VIPS)

A peripheral cannula should be flushed before and after each use to check for patency prior to administration of a medication and at least daily if not in use, using 0.9% sodium chloride.

Refer to the following policies:

- IV Policy – IV Medication and Fluid Therapy Administration Through a Peripheral Venous Cannula Policy
- IV Policy – IV Medication and Fluid Therapy Administration Through a Central Venous Access Device (CVAD) Policy

13.2 Removal of a peripheral venous cannula

Equipment

- Clean procedure tray or receiver
- Alcohol based hand rub
- Clean gloves
- Adhesive dressing / sterile low- linting swab (check the patients allergy status when selecting a dressing)
- Gauze or dental roll if a small pressure dressing is required.
- Hypoallergenic tape

Procedure

1. Clean tray and gather required equipment (specified above).

2. Confirm the identification of the patient as per the Trust's Positive Patient Identification Policy

3. Explain and discuss the procedure with the patient. Allow them time to ask questions where appropriate and discuss any problems which have previously occurred during cannula removal. Obtain their verbal consent to proceed. If the patient lacks capacity, complete a Mental Capacity Act 2 stage test and Best Interests Checklist.

4. Assist the patient to find a comfortable and stable position to rest.

5. Perform hand hygiene in and put on clean gloves.

6. Loosen the semi-permeable dressing from around the cannula site.

7. The cannula should be removed carefully using a slow, steady movement whilst observing and giving the patient reassurance.

8. Once the cannula is removed, pressure should be applied until haemostasis is achieved. This pressure should be firm and not involve any rubbing movement. A haematoma will occur if the device is carelessly removed, causing discomfort and a focus for infection.

9. The cannula integrity should be checked to ensure the complete device has been removed. A medical review should be sought immediately if there is any suspicion of any part of the cannula having been inadvertently left in situ.

Removal of the intravenous device or cannula should be an aseptic procedure. The site should be quickly inspected to ensure bleeding has stopped and should then be covered with a sterile dressing. A small pressure dressing may be used on top of this if required.

13.3 Documentation

On insertion, the Practitioner should complete a Cannulation Documentation Form. (A separate form must be used for each new cannula as it is sited). The form must be completed at every inspection of the cannula site and each time it is used.

This documentation ensures adequate records for the continued care of the device and patient as well as enabling audit of practice and compliance.

13.4 Complications associated with Peripheral Venous Cannulation

On insertion

13.4.1 Pain

Pain can be caused by the following:

- Tentative stop–start insertion (often associated with hesitant or new Practitioners)
- Hitting an artery, nerve or valve
- Poor technique – inadequate anchoring causes the skin to gather as the needle is inserted
- Alcohol based skin preparation is not allowed to dry adequately before insertion, resulting in stinging pain
- Using a frequently punctured, recently used or bruised vein
- An anxious patient with a low pain threshold
- Use of large-gauge device
- Use of veins in sensitive areas

Practitioners should take every opportunity to minimise pain for their patient including consideration of the prescription and use of local anaesthetic creams or injections where appropriate.

The Practitioner should avoid the use of bruised, used or sensitive areas. If the patient complains of pain, depending on the cause (e.g. a nerve or artery has been inadvertently injured), it may be necessary to remove the device immediately. Reassure the patient and ensure that they are provided with suitable pain relief and monitor pain levels until they have resolved. Document actions taken.

13.4.2 Haematoma

This is caused through leakage of blood into the tissues and is indicated by rapid swelling which occurs during the insertion procedure or after removal.

This can be caused by:

- Penetration of the posterior vein wall
- Incorrect choice of needle to vein size
- Fragile veins
- Patients receiving anticoagulant therapy
- Excessive or blind probing to locate the vein
- Spontaneous rupture of the vessel on application of the tourniquet or cleaning of the skin
- Inadequate pressure on venepuncture site following removal of the cannula

Prevention includes good vein and device selection and using a careful technique and the following points should be noted:

- Patients with fragile veins or those on anticoagulant therapy may be more challenging to cannulate and inexperienced Practitioners may require support with these individuals.
- A tourniquet should not be applied to a limb where recent venepuncture has occurred and the tourniquet should not be left in place for any longer than necessary.
- On removal of the cannula, adequate pressure should be applied to the site.
- Alcohol pads inhibit clotting and should not be used.
- In the event of a haematoma occurring, the needle should be removed immediately and pressure applied to the site for a few minutes. Elevate the extremity if appropriate and reassure the patient and explain the reason for the bruise. Apply a pressure dressing if required and an ice pack if bruising is extensive.
- In the event of a Haematoma forming, the incident should be documented in the patient's notes and recorded using the Trust DATIX system for incident reporting and the patient should be given reassurance and information.
- Patients who are discharged should be given advice about when and who to contact if the haematoma gets worse or they develop any numbness in the limb.

13.4.3 Inadvertent arterial puncture

This is characterized by pain and bright red blood caused by accidental puncture of an artery It can be prevented by adequate assessment and recognition of arteries prior to performing the procedure. It is rare when proper procedures are followed and can be associated with deep or blind probing.

However, should this happen;

- The cannula should be removed immediately and pressure applied to the puncture site for up to 5 minutes or until the bleeding has stopped.
- Reassure the patient but do not reapply the tourniquet to the affected limb. If an inadvertent arterial puncture goes undetected, accumulation of blood can result in compression injury and damage nearby nerves.

- The incident must be documented and the patient monitored further for any altered sensation in the limb. Patients who are discharged should be given advice about when and who to contact if they experience these symptoms.

13.4.4 Nerve injury

Inadvertently hitting a nerve during cannulation will result in pain – described as severe shooting pain, painful burning sensation or a sharp electric tingling sensation that radiates down the nerve. This can occur as a result of poor vein selection, inserting the needle too deeply or quickly or blind probing. It can lead to injury and possible permanent damage
Prevention is achieved by ensuring that the location of superficial nerves is known
In the event of touching a nerve:

- Release the tourniquet and remove the needle immediately.
- Reassure the patient and explain that the pain may last for a few hours and the area may feel numb.
- Ensure that the patient has adequate pain relief and monitor their pain level.
- Give explanations and reassurances and if discharged from hospital encourage them to seek medical advice if symptoms persist or worsen.

In situ

13.5.5 Phlebitis

This is inflammation of the intima of the vein which is characterized by pain and tenderness along the cannulated vein, erythema, warmth and streak formation with/without a palpable cord. The patient should be referred to the doctor if the phlebitis rating is over 3.

There are three main types.

- Bacterial - when the site becomes infected. If bacterial phlebitis is suspected then the insertion site should be cultured and the cannula tip sent to microbiology.

- Mechanical - related to irritation and damage to a vein by large-gauge cannulas, sited where there is movement, for example antecubital fossa, not secured adequately or increased dwell time.

- Chemical - related to chemical irritation from drugs with high or low pH there are numerous drugs that can cause this problem.

Influencing factors that increase the risk of phlebitis include being female, cannula dwell time, large-gauge cannulas, higher number of doses of irritating medications such as antibiotics,;

Prevention is key and includes appropriate device and vein selection, dilution of drugs and pharmacological methods, for example application of Glycerol Trinitrate (GTN) subject to prescription.

Treatment includes

- Discontinuing the infusion at the first signs of phlebitis (grade 1) and seeking a medical review.
- Using warm or cold compresses, applied to the affected site if mechanical or chemical cause.

*for information and guidance on Extravasation and infiltration refer to the following links

Extravasation Information Links - Medicines Information Centre, Pharmacy

IV Policy – IV Medication and Fluid Therapy Administration Through a Peripheral Venous Cannula Policy

14.0 APPENDIX 4 EQUALITY IMPACT ASSESSMENT FORM (EQIA)

Name of service/policy/procedure being reviewed: Venepuncture and Peripheral Venous Cannulation Policy			
New or existing service/policy/procedure: Existing			
Date of Assessment: February 2023			
For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)			
Protected Characteristic	**a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?**	**b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?**	**c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality**
The area of policy or its implementation being assessed:			
Race and Ethnicity	none	n/a	none
Gender	none	n/a	none
Age	none	n/a	none
Religion	none	n/a	none
Disability	none	n/a	none
Sexuality	none	n/a	none
Pregnancy and Maternity	none	n/a	none
Gender Reassignment	none	n/a	none

Marriage and Civil Partnership	none	n/a	none
Socio-Economic Factors (i.e. living in a poorer neighbourhood / social deprivation)	none	n/a	none

What consultation with protected characteristic groups including patient groups have you carried out?

- **None required**

What data or information did you use in support of this EqIA?

- **Job descriptions and person specifications**

As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments?

- **None**

Level of impact

From the information provided above and following EQIA guidance document Guidance on how to complete an EIA (click here), please indicate the perceived level of impact:

Low Level of Impact

For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.

Name of Responsible Person undertaking this assessment:

Signature:
Alison Davidson

Date:
16/02/2023