Policy for the Safe Management and Administration of Injectable Medicines

Previously known as: Policy for the Safe Management and Administration of Intravenous Medicines

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Purpose of Agreement	This policy describes good practice for the preparation, prescribing, administration and monitoring of injectable medicines in clinical and community areas. It applies to all practitioners who prescribe, handle, supply or administer injectable medicines in the course of their duties. It informs staff of the Trust's position on the administration of injectable medicines with particular focus on intravenous (IV) medicines and the procedures which must be followed before administration can occur.
Document Type	x Policy
Reference Number	Solent NHST/Policy/ MMT008
Version	5
Name of Approving Committees/Groups	Solent NHS Trust Medicines Management Group, Solent NHS Trust Policy Steering Group Solent NHS Trust Clinical Executive Group
Operational Date	November 2022
Document Review Date	November 2025
Document Sponsor (Job Title)	Chief Pharmacist
Document Manager (Job Title)	Deputy Chief Pharmacist
Document developed in consultation with	Solent NHS Trust Medicines Management Group, Solent NHS Trust Policy Steering Group Solent NHS Trust Clinical Executive Group

Intranet Location	Business Zone > Policies, SOPs and Clinical Guidelines
Website Location	FOI Publication Scheme
Keywords (for website/intranet uploading)	Intravenous, IV, IVI, peripheral, medication, drug, administration, MMT008, Policy

Amendments Summary:

Amend No	Issued	Page	Subject	Action Date
1	April 2016	All	Complete re-write of Policy	1st May 2016
2	June 2018	ALL	New Policy template, including new logo.	24/10/18
3	Dec 18	3	Summary of Policy- final paragraph deleted. No longer relevant.	24/10/18
4	Dec 18	4	Appendix 7 removed from Content page. Appendix 8 changed to appendix 7	24/10/18
5	Dec 18	7	4.1.2 typo changed to manager	24/10/18
6	Dec 18	7	Medusa login details added	24/10/18
7	Dec 18	8	Deleted –list of drugs that can be administered in that locality.	24/10/18
8	Dec 18	8	Deleted 4.3.4- Team managers procedure for ensuring list of IV drugs that can be given in that locality- no longer relevant	24/10/18
9	Dec 18	8	4.4.1a) Added the words electronic prescribing system. c)Deleted-details of local IV drug list	24/10/18
10	Dec 18	9	4.5.2 Deleted- details of local IV drug list	24/10/18
11	Dec 18	9	5.1, 5.2, 5.3, 5.4 deleted details of local IV drug list and process for requesting of inclusion of drugs.	24/10/18
12	Dec 18	10	7.3 – Added -Aseptic Non-Touch Technique (ANTT)	24/10/18
13	Dec 18	11	8.2 a) Deleted- related to local procedure & list for locality.	24/10/18

14	Dec 18	13	9.2 addition- or to the clinician responsible for the care of the patient as soon as possible	24/10/18
15	Dec 18	14	9.11- Addition - Vascular access devices must be replaced by a doctor or dentist or by any practitioner trained, competent and authorised by their manager to remove/replace VADs.	24/10/18
16	Dec 18	14	9.12- Addition 0.2%	24/10/18
17	Dec 18	15	9.13 Addition - Vascular access devices must be replaced by a doctor or dentist or by any	24/10/18
			practitioner trained, competent and authorised by their manager to remove/replace VADs.	
18	Dec 18	17	10.6 Addition- and the clinician responsible for the care of the patient	24/10/18
19	Dec 18	18	12.5 Addition - Any complications of IV drug administration experienced by a patient must be reported to the clinician responsible for the care of the patient and also according to the Trust's incident reporting procedures.	24/10/18
20	Dec 18	19	13.3 & 13.4 Deleted- no longer relevant locality IV drug list	24/10/18
21	Dec 18	19	14.2 Addition e-learning	24/10/18
22	Dec 18	19	14.3 Addition -Deteriorating and Resuscitation Training	24/10/18
23	Dec 18	21	Update of References	24/10/18
24	Dec 18	23	Appendix 1 – Additional 2 paragraphs added	24/10/18
25	Dec 18	24	Appendix 2 – A2.1.10-Addition to items required :blunt end drawing up needles & Clinical Waste Bag	24/10/18

26	Dec 18	26	Appendix 2 A2.3.15 with a bung or sheathed unused needle or blunt drawing up needle to prevent contamination	24/10/18
27	Dec 18	39	Appendix 7 – Delete – IV Drug Locality Request Form	24/10/18
28	Jan 19	42	Appendix 4 -Updated	20/2/19
Version 5	July 2022	Various	Update review for references, education and training, addition of IM injection information and new appendix re IM injection, scope widened for all injectable medicines, Infection control advice updated.	

Review Log:

Version Number	Review Date	Lead Name	Ratification Process	Notes
2	April 2016	Steve West	Medicines Committee, Policy Steering Group	Complete rewrite of version 1 of Policy
3	June 2018	Steve West	Medicines Management Committee.	
3	January 2019	Jennifer Etherington	Policy Steering Committee	
4	April 2022	Luke Groves	Chair's action approved extension request for 6 months (to November 2022) to allow time to review and broaden Policy)	Content is safe to extend
5	July 2022	Luke Groves	Medicines Management Group, (consultation includes: Gillian Ritchie (Specialist Pharmacist), Oti Machie (Medicines Safety Officer), Sophie McCadie (Clinical Education Lead), Susan Clarke (Sexual Health Pharmacist), Luke Groves (Chief Pharmacist), Susan Oborne (Quality and Development Lead Adults Southampton), Sanjeev Sharma (Senior Dental Officer)) Policy Steering Group, Clinical Executive Group	Changes outlined in above amendment table

Contents

SUMMARY OF POLICY

The aim of this policy is to describe good practice for the safe preparation, checking, labelling, prescribing, administration and monitoring of injectable medicines for all clinical areas within Solent NHS Trust:

- To reduce risk and prevent harm to patients from injectable medicines
- To educate clinical staff on good injectable medicines practice
- To standardise injectable medicine practice across Solent NHS Trust
- To comply with the NPSA (now NHS England) guidance.

A variety of staff may be involved in the delivery of medicines to patients via injectable routes. The intravenous (IV) route carries the highest risk and this policy focuses primarily on IV injections however the principles can also be applied to other common injectable routes such as subcutaneous (SC) and intramuscular (IM).

Doctors, dentists and non-medical prescribers are responsible for prescribing injectable drugs, together with the appropriate infusion fluid when required. Competent and designated practitioners are responsible for the administration of injectable medicines in accordance with the prescription (IV medicines must be administered by registered practitioners) and clinical pharmacy staff are responsible for providing information regarding injectable medicines administration, potential drugs interactions and reactions that patients may have.

The Policy lays out requirements for prescriptions for injectable medicines for prescribers to follow, including prescriptions for IV flushes.

Injectable medicines can be administered to patients in Solent NHS Trust wards and departments or to patients in their own homes attended by Trust community nursing staff.

For injectable medicines departments must have a suitable area for preparation which is clean, quiet and uncluttered and with adequate lighting. Community nurses must endeavour to find a similar area for injectable preparation in patient's own homes for safe administration to proceed. Injectable medicines must never be prepared at the patient's bedside.

In the ward environment IV drug administration must always be undertaken by two staff members, one of which (but preferably both) must be trained and authorised to administer IV medicines. In the community setting a suitably trained registered practitioner may administer IV medicines on their own, in accordance with the Royal Pharmaceutical Societies Professional Guidance on the safe and Secure Handling Of Medicines (https://www.rpharms.com/recognition/setting-professional-standards/safe-and-secure-handling-of-medicines/professional-guidance-on-the-safe-and-secure-handling-of-medicines) and The Professional Guidance on the Administration in Healthcare Settings (https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Professional%20standards/SSHM%20and%20Admin/Admin%20of%20Meds%20prof%20guidance.pdf?ver=2019-01-23-145026-567), but are strongly advised to get a second check prior to the first administration or in circumstances where the IV administration contains high risk drugs or is complicated, for instance, by calculation. Strict no-touch aseptic techniques must be used throughout IV administration.

The policy gives detailed instructions on the preparation of IV medicines and the administration of those medicines to the patient by:-

a) Direct intermittent injection (IV push or bolus)
b) Peripheral IV administration

c) Administration via a Central Venous Line

After injectable medicine administration patients must be monitored for any reactions to the medicine given, particularly anaphylaxis, and action taken to mitigate the effects of the drug. Where relevant patients must also be monitored for possible complications of IV medicine administration; infiltration (or tissuing), extravasation, haematoma and air embolism.

Staff administering IV medicines must have been trained in all aspects of IV administration and have passed the assessment of competence at the end of the IV training course. Staff are also required to be authorised by their manager before administering IV medicines. The policy gives full details of the training required.

Policy for the Safe Management and Administration of Injectable Medicines

1. INTRODUCTION & PURPOSE

1.1 Solent NHS Trust accepts that special procedures need to be in place in relation to managing and administering injectable medicines. By following these procedures managers and staff who carry out these procedures will be complying with relevant legislation and best practice. Eg. Anaphylaxis kits, safer sharps and when to delegate injectable administration to non-registered staff for agents such as insulin and enoxaparin.

1.2 "The complexities associated with prescribing, preparing and administering injectable medicines means that there are greater potential risks for patients than for other routes of administration. Weak operating systems increase the potential risk of harm and safe systems of work are needed to minimise these risks." (NPSA March 2007)

1.3 The aim of this policy is to describe good practice for the safe preparation, checking, labelling, prescribing, administration and monitoring of injectable medicines in all clinical areas in order:

- To reduce risk and prevent harm to patients from injectable medicines
- To educate clinical staff on good injectable medicines practice
- To standardise injectable medicine practice across Solent NHS Trust
- To comply with the NPSA (now NHS England patient safety alerts issued via Central Alerting System (CAS) guidance.

It also describes the procedures which must be followed and the training and competencies which must be undertaken before injectable administration can take place.

2. SCOPE & DEFINITIONS

2.1 This policy applies to bank, locum, permanent and fixed term contract employees (including apprentices) who hold a contract of employment or engagement with the Trust, and secondees (including students), Non-Executive Directors, and those undertaking research working within Solent NHS Trust, in line with Solent NHS Trust's Equality, Diversity and Human Rights Policy. It also applies to external contractors, Agency workers, and other workers who are assigned to Solent NHS Trust.

2.2 In the event of an infection outbreak, pandemic or major incident, the Trust recognises that it may not be possible to adhere to all aspects of this document. In such circumstances, staff should take advice from their manager and all possible action must be taken to maintain ongoing patient and staff safety.

2.3 Solent NHS Trust is committed to the principles of Equality and Diversity and will strive to eliminate unlawful discrimination in all its forms. We will strive towards demonstrating fairness and Equal Opportunities for users of services, carers, the wider community and our staff. The most up to date version of this policy is available on the Solent NHS Trust intranet. For ease of use each ward and each clinical team that administers injectable medicines may keep a printed version of the Policy, but care must be taken to ensure this is maintained as up to date.

2.4 DEFINITIONS

2.4.1 **Intravenous (IV)** - directly into the vein.

2.4.2 **Continuous Infusion** - the IV delivery of a medication or fluid at a constant rate over a prescribed period, ranging from several hours to days to achieve a controlled therapeutic response.

2.4.3 **Intermittent Infusion** - the administration of a small-volume infusion, generally 50 –250 ml, over a period of between 20 minutes and 2 hours.

2.4.4 **Direct Intermittent Injection** (also known as IV Push or Bolus) - the injection of a drug from a syringe into the injection port of the administration set or directly into a vascular access device.

2.4.5 **Vascular Access Device (VAD)** - a device inserted into a vein, which permits administration of intermittent or continuous infusion of parenteral solutions or medications. Also known as a cannula or venflon. These must be changed every 72 hours or before if there are two signs of phlebitis (see VIP score Appendix 5).

2.4.6 **Phlebitis –**inflammation of the walls of a vein.

2.4.7 **Peripheral IV Line (PVC or PIV)** - a short catheter inserted through the skin into a peripheral vein (any vein not inside the chest or abdomen).

2.4.8 **Mid-Line** – an intravenous catheter inserted into a large vein in the upper arm

2.4.9 **Central IV Line** - a catheter with its tip within a large vein, usually the superior vena cava or inferior vena cava, or within the right atrium of the heart.

2.4.10 **Central Venous Catheter (CVC)** - an indwelling catheter whose tip lies in the central venous system (lower third of Superior Vena Cava (SVC) or right atrium) with an external catheter for access. This type of catheter is often tunnelled under the skin to a separate exit site where it emerges from underneath the skin. Passing the catheter under the skin helps to prevent infection and provides stability. There are many different types of central venous catheters available but within Solent NHS Trust only the following will be used: -

- Single lumen Leader Cuff lines
- Double lumen Hickman lines
- Single lumen Broviac lines
- Groshong lines – these have an internal valve and no clamp and could be either single or double lumen
- Peripherally Inserted Central Catheter (PICC) lines

2.4.11 **Visual Infusion Phlebitis Score (VIP)** – a system for recognising signs or risks of infection at venous access sites (see Appendix 5).

2.4.12 **Intramuscular (IM)** – injection into a muscle

2.4.13 **Subcutaneous (SC)** – injection under the skin

3. PROCESS/REQUIREMENTS

3.1 PROCEDURES

It is recommended that service lines administering injectable medicines as a routine part of their service produce a service-line specific Standard Operating Procedure (SOP) relating to injectable drug administration. This SOP may include specific details of medicines administered and excluded from the service-line's practice in-addition to specific monitoring and safety practices adopted within that service-line in relation to injectable medicines administration. Service-line specific SOPs for injectable administration must complement and not duplicate or contradict this policy. It must be written in conjunction with the Medicines Management Team and be ratified at the Medicines Management Group.

3.2 PRESCRIPTIONS FOR INJECTABLE MEDICINES

Prescribers must ensure that prescriptions for injectable medicines state all the relevant particulars to ensure safe administration of the medicine. These will, include:

a) Name and details of the patient eg. NHS number, DOB, etc
b) Any drug sensitivities or states 'None Known'
c) Date and prescriber's signature
d) Name of the drug to be administered.
e) Dose
f) Frequency of administration
g) Duration of treatment or when the injectable medicine will next be reviewed
h) Details of the precise route of administration
i) The IV fluid to be used if appropriate, and the quantity to be infused
j) Where relevant the type of diluent/reconstitution solution and its quantity
k) The concentration of administration (if outside the normal)
l) The rate of administration where relevant
m) The weight and if relevant the surface area of the patient must be added to the prescription when this information is vital for calculating doses. For example staff who administer cytotoxic drugs in the Paediatric Nursing Service.

3.2.1 If a flush fluid is to be used, this must also be prescribed, or administered according to Trust approved patient group direction.

3.2.2 Any additional instructions, including particulars for patient monitoring and any subsequent tests required, to aid safe and effective administration of the drug must be given in the patient's notes.

3.3 GENERAL STANDARDS FOR IV ADMINISTRATION

3.3.1 All areas where IV drugs are to be administered must be risk assessed to ensure that all medications given intravenously will be prepared in an appropriate environment – see Section 3. 9. Preparation of injectable medicines must not be undertaken at the patients' bedside due to the increased risk of microbial contamination and higher risk of error if the lighting is poor.

3.3.2 In domiciliary settings, a clean area in which to prepare medicines must be available when administering via the IV route. If no such area is available, a risk assessment must be carried out and the results recorded in the patient's notes. If a decision has been made not to continue with administration, the prescriber must be informed immediately.

3.3.3 When administering IV medicines, Aseptic Non-Touch Technique (ANTT) must be observed by all participants throughout the procedures where the key parts of equipment are not permitted to come into contact with surfaces, hands or anything that might possibly be contaminated.

3.3.4 Injectable medicines mixed in clinical areas and domiciliary settings are for immediate use only and, once prepared, must not be stored for use later.

3.3.5 In the ward environment IV drug administration must always be undertaken by two staff members. The lead staff member administering the drug must be a suitably trained registered practitioner (see section 5). Wherever possible the second member of staff should also be a registered practitioner.

In the community setting:

a) A suitably trained registered practitioner (see section 5), may administer IV medicines on their own, in accordance with the Royal Pharmaceutical Societies Professional Guidance on the safe and Secure Handling Of Medicines (https://www.rpharms.com/recognition/setting-professional-standards/safe-and-secure-handling-of-medicines/professional-guidance-on-the-safe-and-secure-handling-of-medicines) and The Professional Guidance on the Administration in Healthcare Settings (https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Professional%20standards/SSHM%20and%20Admin/Admin%20of%20Meds%20prof%20guidance.pdf?ver=2019-01-23-145026-567) .

b) In the following scenarios it is strongly advised that IV administration is subject to a second check:
   - On administration of first dose
   - IV administration of controlled drugs
   - Infusion of ready prepared potassium salts
   - If complex calculations are required. Calculations must be written down so that practitioners can compare answers and calculation methods.

3.3.6 Cytotoxic drugs must only be checked and administered by registered practitioners who have undertaken additional training in cytotoxic drug therapy.

3.3.7 Administration of medicines via a syringe driver must have a second check.

3.3.8 No registered practitioner can check a medication if they are unfamiliar with the drug, its effects and usual method of preparation/administration. If it is beyond their sphere of competence they must decline to check, without fear of reprisal, and an alternative checker be found.

3.3.9 When a second check is used medications must be checked by both practitioners at the time of administration as detailed in Appendix 1. It is not acceptable practice for one practitioner to check the vials and ampoules and then leave them for the second checker to prepare and administer alone later.

Flushing:

IV access devices should be regularly flushed to maintain the patency (see specific manufacturer's instructions for frequency - this is usually and ideally daily) and immediately before and after administration of a medicine, and between doses of different medicines administered consecutively.
Flushes to maintain the patency of the line should be prescribed on the prescription chart stating the flush to be used, volume and times of administration. Flushes administered pre and post drug administration are an integral part of the intravenous drug administration process. Therefore an appropriate flush should be administered as standard pre and post drug administration, these will not be prescribed.

3.4 PREPARING TO ADMINISTER AN INJECTABLE MEDICINE

3.4.1 Before a registered practitioner proceeds with administration of any injectable medication they must have read the prescription and any additional notes carefully and be confident that the treatment and dosage prescribed is correct and appropriate for that patient.

3.4.2 The registered practitioner must also ensure that:

a) They have the necessary skills, competence and training or accreditation to administer that particular medication.

b) They have the necessary skills, competence and training or accreditation to administer medication via the route specified.

c) They are certain that they have up to date information on the patient's clinical condition.

d) They have checked and prepared the medications correctly according to the relevant guidelines and any service-line specific SOPs.

e) They have all the equipment necessary for safe administration and monitoring ready to take to the patient's bedside.

f) They observe strict standard infection prevention guidelines and use aseptic non-touch technique.

3.4.3 If in doubt further technical information on administration of medicines is available from:

Medusa Injectable Medicines Guide available on the Solent NHS Trust intranet page (see section 4.2.1)

Summary of Product Characteristics supplied with the product or available at www.medicines.org.uk

Further information is available through Medicines Information at University Hospitals, Southampton (Tel 02381 206908/9).

3.4.4 Whenever possible, commercial or pharmacy prepared infusions [CIVAS] must be used. Any other IV preparations prepared on the wards or in the community must be mixed immediately before administration. All medications added to infusion fluids must be well mixed before administration.

3.4.5 IV medicines must not be added to containers of blood or blood products.

3.4.6 If more than one medicine is prescribed to be added to an infusion, a specific entry in the medical notes must indicate that the medications to be added are compatible with each other and with the infusion fluid to which they are to be mixed. If not checked or unclear compatibilities should be checked with a pharmacist.

3.4.7 A registered practitioner must never administer medication that they have not witnessed being prepared except for pre-prepared medication from a pharmacy manufacturing unit.

3.4.8 Unless a drug is to be injected immediately by bolus injection, it must be labelled immediately after preparation. No syringes or bags are to be left unsupervised or unlabelled. The labels for intermittent and continuous infusion containers need to contain:

- the patient's name, DOB and NHS number
- the name of the drug
- the dose of the drug
- the name and volume of any diluent used
- the total volume of the infusion solution
- the date and time of commencement of infusion
- the name of the person(s) who prepared and administered it and the date and time it was administered

3.4.9 The label must be applied so that it does not obliterate the graduation markings on the syringe, and in such a way as to remain visible throughout the administration process, especially if used in a syringe driver or pump.

3.4.10 All the injectable medicines required for an individual patient must be prepared, labelled (unless being given by bolus injection) and administered BEFORE preparing medicines for another patient. If more than one injectable medicine is required for an individual patient, all the medications can be made one after the other, PROVIDED each syringe, including flushing solutions, is labelled immediately after drawing up. Under no circumstances shall any practitioner be in possession of more than one unlabelled syringe at any one time, even if the syringes appear easily distinguishable by other means (e.g. size, colour of contents, etc.)

3.4.11 Medication syringes must never be left attached to the vials using the needle as a means of identification instead of labelling an item as there is an increased risk of microbial contamination.

3.5. ADMINISTRATION OF IV MEDICINES

3.5.1 Explain the procedure to the patient and/or carer and answer any questions they may have at a level and pace taking into consideration:

- their level of understanding,
- their culture and background
- their preferred way of communicating
- their needs.

3.5.2 Assess their understanding of the procedure/treatment and if possible gain their verbal consent. Refusal of treatment must be documented and reported to the prescribing medical practitioner or to the clinician responsible for the care of the patient as soon as possible. Refer to the Medicines Policy if the patient lacks capacity to give consent.

3.5.3 If possible, confirm the patient's identity by obtaining verbal confirmation of personal details from the patient. Then check the details on the wristband (if applicable) against the details on the prescription. Do not administer a medication if there is any question about the patient's identity.

3.5.4 Check the patient's allergy status by checking the wristband (if applicable) and prescription chart/electronic prescription.

3.5.5 Confirm the patient's clinical condition, their specific care pathway, observation charts and if necessary, laboratory test results. Record baseline observations if required.

3.5.6 Perform a final check of the prescription to ensure that it is unambiguous and signed in accordance with the Trust Medicines Policy; that the medication is due and has not already been given and that the practitioner is authorised to administer via this route. It is essential that the practitioner is familiar with the medicine to be administered including its therapeutic uses, normal dosages and frequency, side-effects, cautions, contra-indications and the need for any monitoring pre- and post-administration.

3.5.7 Perform a final check of the medication, checking all empty vials and ampoules, any calculations made, the syringes are labelled correctly and that there is no particulate contamination. Do not prepare the IV medicine at the patient's bedside.

3.5.8 Bedside checks of identity and administration are often undertaken at night. Ensure that there is adequate light to do them safely.

3.5.9 Assist the patient into a comfortable position, preserving privacy, dignity and warmth.

3.5.10 Wash your hands according to Trust policy and put on fresh gloves and aprons. Use any other Personal Protective Equipment (PPE) following mandated requirements and risk assessment.

3.5.11 Select and expose the desired administration site and examine it. The site may be an area of skin or there may already be an existing access device in situ. If an existing device this must be exposed

and examined before giving an IV injection. Should there be evidence of local inflammatory response, or of leakage around the cannula insertion site, the medication must not be given and the prescribing doctor, Non-medical Prescriber (NMP) or dentist must be informed so the device can be removed/ or replaced. Vascular access devices (VAD) must be changed at least every 72 hours or earlier if there are two signs of phlebitis (see VIP score – Appendix 5). Vascular access devices must be replaced by a doctor or dentist or by any practitioner trained, competent and authorised by their manager to remove/replace VADs.

3.5.12 Prior to accessing, ports and needle free connectors must be decontaminated with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention.

Povidone iodine should be used if a patient is sensitive to chlorhexidine.

3.5.13 The patency of a cannula must always be checked prior to the injection, either by increasing the infusion rate, or by the administration of Sodium Chloride 0.9% flush. Maintenance of their patency is important to reduce the discomfort and expense of replacement. The Sodium Chloride 0.9% flush must be prescribed in the normal way for IV administration or be administered under a Trust approved Patient Group Direction. Should there be any doubt as to the patency of the cannula, the medication must not be administered and if necessary the prescribing doctor, NMP or dentist informed so the VAD can be removed/replaced to enable appropriate administration of the medication. Vascular access devices must be replaced by a doctor or dentist or by any practitioner trained, competent and authorised by their manager to remove/replace VADs. Heparin 50 units in Sodium Chloride 0.9% IV Flush is occasionally used instead of Sodium Chloride 0.9% Injection for flushing of cannulae but has several disadvantages over Sodium Chloride 0.9% Injection. Heparin 50 units in Sodium Chloride 0.9% IV Flush must be prescribed if it is to be used or be administered under a Trust approved Patient Group Direction.

3.5.14 Any infusion device or pump being used must also be checked to ensure that:

- it has been set up and programmed correctly
- it is delivering the correct volume
- it is clean
- it has not been tampered with

3.5.15 Commence the administration of the medication by either:

- IV bolus of medication or flushing solution. Any device CVAD or VAD must be flushed prior to any administration of medication
- Intermittent infusion of IV medication
- Continuous infusion of IV medication

3.5.16 Monitor the patient and the administration site closely during administration as well as afterwards.

3.5.17 Act swiftly to stop, alter or titrate administration according to patient's clinical condition and response to the medication.

3.5.18 During and prior to administration the infusion set, container and its contents must be monitored, looking for:

- Contamination
- Damage
- Occlusion
- Discolouration of the solution
- Particles or precipitate in the solution or giving set
- The amount of volume remaining in the container

3.5.19 Once finished, ports and needle free connectors must be decontaminated with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine.)

3.5.20 Assist the patient into a comfortable position and readjust clothing if necessary. Maintain privacy and dignity.

3.5.21 Ask the patient/carer if they require more information. Reiterate important pieces of information and give reassurance if required. Explain the need for any subsequent monitoring that the patient will require.

3.5.22 Dispose of used equipment and personal protective clothing in accordance with the Trust Waste Management Policy. (http://intranet.solent.nhs.uk/DocumentCentre/PublishedPolicies/HS09%20Policy%20for%20Safe%20Handling%20and%20Disposal%20of%20Healthcare%20Waste%20v4.pdf#search=waste).

3.5.23 Wash hands thoroughly in accordance with the Trust hand hygiene policy (http://intranet.solent.nhs.uk/DocumentCentre/PublishedPolicies/IPC05%20Hand%20Hygiene%20Policy%20v7.pdf#search=hand%20hygiene%20policy).

3.5.24 Make a clear record of the administration on the prescription chart. Administration may also need to be recorded in the patient's notes along with the insertion/removal of venous access devices, specific instructions from medical staff, the patient's response etc. It is the administering practitioner who is responsible for making the record.

3.5.26 Communicate to other relevant staff members involved in the patient's care that medication has been administered.

3.6 AFTER ADMINISTRATION OF AN IV MEDICINE

3.6.1 A patient who is receiving or has received an injectable medication must be observed for signs of any reaction to the medication (usually for time period specified in the medicine information):

a) Signs and symptoms of anaphylaxis
b) Changes in vital signs
c) Changes in alertness or orientation
d) Changes in fluid balance
e) Unpleasant side-effects from medication
f) Expected/desired effects of the medication

The administering practitioner is accountable for ensuring that this is carried out, either by monitoring themselves or delegating clearly to another competent practitioner.

3.6.2 The injection site or venous access device or cannula, also must continue to be monitored, looking for signs of:

a) Infection and sepsis
b) Occlusion
c) Infiltration (see also 3.8)
d) Extravasation (see also 3.8)
e) Pain
f) Contamination
g) Phlebitis
h) Thrombophlebitis

3.6.3 Certain drug regimens require specific monitoring. Any such regimen must be documented in the patient's notes as must the stage at which a medical review must be obtained.

3.6.4 The registered practitioner must record the results of monitoring in the patient's notes, on the observation and fluid balance charts and on any locally agreed Trust monitoring document. Include any deviations from the monitoring regime and communicate the results to the appropriate professional colleagues.

3.6.5 It is essential that the practitioner is familiar with the local escalation procedures within and out-of-hours should the patient's condition deteriorate.

3.6.6 The registered practitioner must report errors and adverse events in accordance with the Trust Incident reporting policy and complete an incident report form. Ensure senior staff and the clinician responsible for the care of the patient have been informed of any adverse event as well as the prescriber of the medication.

3.7 METHODS OF IV ADMINISTRATION

3.7.1 Direct Intermittent Injection (IV Push or Bolus)

3.7.1.1 Administration by direct intermittent injection is where small volumes of drugs are given directly into the cannula, via:

- A closed needle free IV access system such as a closed needle free device (one or two lumen)
- The injection port of the cannula (only in an emergency)
- A pump

3.7.1. 2 Manufacturers' recommendations must be followed as most drugs given this way have to be administered over a set period of time, unless in an emergency e.g. cardiac arrest. Rapid administration of medication can cause the patient to go into 'speed shock'.

3.7.2 Peripheral IV Administration

3.7.2.1 The methods of administration of peripheral IV medication are:

- By the addition of the drug to an IV fluid container
- By injection of the drug through the injection port of an IV giving set.
- Intermittently through an indwelling needle or cannula
- By a syringe driver, pump or other infusion device

3.7.3 Administration via a Central Venous Line

3.7.3.1 Administration of medicines via a central venous line requires a specific authorisation and evidence of achieved competency. Central line administration must not occur unless specific training has been undertaken by the practitioners involved in administering.

3.7.3.2 Administration via a central venous line must be carried out in such a way as to minimise the risk of air embolism.

3.8. COMPLICATIONS OF IV DRUG ADMINISTRATION

3.8.1 Infiltration or 'tissuing' - can be defined as the inadvertent administration of a non-toxic or nonvesicant solution/medication into the surrounding tissues instead of the vein (IV Nursing Society 2006). The infusion must be stopped immediately and the patient's doctor, NMP or dentist informed. Treatment will depend on the severity of the infiltration.

3.8.2 Extravasation -The inadvertent administration or leakage of a toxic or vesicant drug into surrounding tissues, which can lead to tissue necrosis. A vesicant is any drug, which has the potential to cause tissue damage, while irritant drugs may cause local tissue inflammation and discomfort, but do not result in necrosis and therefore tend to be dealt with more conservatively.

3.8.3 Initially, extravasation may cause pain and swelling at the injection site. Tissue damage including necrosis and/or sloughing of the skin may occur, particularly if the solution is concentrated

(hypertonic), highly acidic or markedly alkaline. Drugs likely to cause tissue necrosis include calcium, sodium bicarbonate and cytotoxic agents used in cancer chemotherapy. In severe cases the patient may need a skin graft.

3.8.4 Extravasation must be dealt with rapidly to minimise damage, discomfort and long-term effects. Administration must be stopped as soon as extravasation is suspected and appropriate supportive therapy started according to local procedure. It may be appropriate to leave the cannula in place so that the drug can be aspirated and an antidote can be administered. Special care is needed with cytotoxics as the treatment varies according to the drug involved. Special care and instructions should be sought from the local acute Trust specialist team/The team who initiated the patient's cytotoxic treatment.

3.8.5 Haematoma - If blood leaks into the tissue surrounding a venepuncture site a haematoma may form. Patients receiving anticoagulants or thrombolytic (e.g. streptokinase or alteplase) may be at particular risk. Pressure applied to the site for 3 to 4 minutes after the removal of a cannula can help to prevent the formation of a haematoma.

3.8.6 Air Embolism - Although it is often impossible to remove absolutely every air bubble from IV administration, it is important to minimise the amount of air administered. A fatal air embolism can occur when small air bubbles accumulate and block the pulmonary circulation. Ensuring the giving set is primed is an important step when preparing an IV infusion and pump. There is also a risk of air embolism when caring for central lines.

3.8.7 Any complications of IV drug administration experienced by a patient must be reported to the clinician responsible for the care of the patient and also according to the Trust's incident reporting procedures.

3.9 SPECIFIC INFORMATION FOR INTRAMUSCULAR INJECTIONS

3.9.1 Sites for intramuscular injection. Possible sites for IM injection are:

- Deltoid
- Dorsogluteal
- Rectus Femoris
- Vastus lateralis
- Ventrogluteal

3.9.2 Maximum injectable volume of IM injections per site in adults

Site	**Maximum volume**
Deltoid	1mL
Dorsogluteal	4mL
Rectus Femoris	5mL
Vastus lateralis	5mL
Ventrogluteal	5mL (but ideally split any volume over 2.5mL between two sites)

3.9.3 Selection of site for IM injections

The following factors need to be considered when deciding the appropriate site to administer an IM injection

- The medicine may be licensed for only specific IM sites. This can be checked from the leaflet provided with the medicine, by accessing www.medicines.org.uk/emc or in Medusa (see 4.2.1).
- The volume of injection to be administered (it may be necessary to split large volumes between two sites).
- The registered practitioner administering the IM injection must be competent to administer at the chosen site.

3.9.4 Service line SOPs

It is recommended that service lines administering IM medicines as a routine part of their service produce a service-line specific SOP relating to IM drug administration and the risks relating to this in their service. This SOP should include specific details of medicines administered and appropriate sites of IM administration for those medicines. Consideration should also be given to including information in the service-line SOP around the length of administration time, whether to Z track or not (see 3.9.5), and if aspiration is needed relevant to the medicines administered.

Service-line specific SOPs for IM administration must complement and not duplicate or contradict this policy. It must be written in conjunction with the Medicines Management Team and be ratified at the Medicines Management Group.

3.9.5 If injecting large volumes into the vastus lateralis muscle, ventrogluteal or dorsogluteal z tracking is considered as a method of reducing drug leakage into the subcutaneous tissues, minimising skin irritation and ensuring that patients receive the correct dose.

3.10 RISK ASSESSMENT

3.10.1 All ward and clinic areas where injectable drugs are to be administered must undertake a risk assessment to ensure that all injectable medications will be prepared in an appropriate environment. This risk assessment must be carried out by the ward/team manager with assistance from a pharmacist if required. Each department must have a clean, quiet and uncluttered area with adequate lighting suitable for the preparation of injectable medicines. Preparation of injectable medicines must not be undertaken at the patient's bedside due to lack of space, the increased risk of microbial contamination, greater likelihood of interruptions and higher risk of error if the lighting is poor.

3.10.2 In domiciliary settings, a clean, quiet and uncluttered area with adequate lighting in which to prepare medicines must be available when administering via the IV route. If no such area is available this must be recorded in the patient's notes. If a decision has been made not to continue with administration, the prescriber must be informed immediately.

3.10.3 Injectable medicines are purchased by the supplying Pharmacy Service (either in house or subcontracted) to the Trust. This means that where possible, licensed drugs from reputable suppliers are purchased, and that products are ready to use and require no further manipulation

prior to administration. In some cases ready-made infusions will be purchased rather than products requiring dilution.

4. ROLES AND RESPONSIBILITIES

4.1 All Staff

4.1.1 Each registered practitioner is accountable for their practice and must be aware of their legal and professional responsibilities relating to their competence in the prescribing, preparing, labelling, checking, administering, recording and monitoring of injectable medicines. Registered practitioners should also know the process for reporting adverse reactions as well as prescribing or administration errors and how to manage them.

4.1.2 Before administering any IV medicine or fluid all registered practitioners, apart from doctors and dentists, must have completed the Trust approved IV training and have been deemed competent to administer IV medicines by a registered Practitioner who has already gained competence in the area and if appropriate or needed their manager should then be notified. New staff transferring from other trusts that have previously been deemed competent to administer IV medicines must provide evidence of training and be assessed by a registered Practitioner who has already gained competence in the area and if appropriate or needed their manager should then be notified before administering IV medicines within Solent NHS Trust. A competence assessment form is provided at Appendix 4 and once completed must be filed on the staff members record.

4.1.3 Every member of staff involved in the injectable medicines process must acquaint themselves with this policy.

4.2 Doctors, Dentists and Non-Medical Prescribers

4.2.1 Before prescribing the prescriber must satisfy him/herself that it is essential and safe for the drug to be given by the injectable method chosen, checking to ensure the compatibility of the drug with any infusion fluid used and the compatibility of any medicines that have been mixed together. In most instances the Medusa Injectable Medicines Guide (available via the Trust Intranet) or at http://www.injguide.nhs.uk/ will provide all the required information.

Direct Log-In Details for Medusa:

(if unable to access Solent Intranet, or in case you accidentally log out)

Website: http://medusa.wales.nhs.uk/IVGuideDisplay.asp

Username: **NurseSolent**
Password: **WCH2014**

If unsure, the relevant clinical pharmacist or the local Medicines Information Centre or, out of hours, the on-call hospital pharmacist must be contacted.

4.2.2 Before commencing injectable treatment the prescriber must ensure that there are competent staff available for the perceived duration of treatment to administer, monitor and deal with any problems which might arise.

4.2.3 For IV treatment an indwelling needle/cannula must be inserted by a doctor, dentist or a designated nurse who has received appropriate instruction and been assessed as competent.

4.2.4 The prescriber must prescribe the medicine required on the patient's prescription chart, or electronic prescription, in accordance with the Trust's Medicines Management and Safety Policy and provide any additional written instructions concerning administration.

4.2.5 Where appropriately trained and competent practitioners are not available to administer an IV medicine, or where the IV medicine prescribed has been risk assessed and deemed beyond the scope of practitioners to administer, then a doctor or dentist must administer the prescribed medicine.

4.3 Ward/Team Managers

4.3.1 Ward/Team Managers are responsible for ensuring that appropriate staff meet required competencies for the administration of injectable medicines. It is every manager's responsibility to ensure that all their staff are informed as to which members of the team are assessed as competent to administer injectable/IV medicines.

4.3.2 For in-patient units, Ward/Team Managers are also responsible for ensuring injectable medicines can be prepared in a clean and safe environment with sufficient light and space free from clutter and equipment that might compromise safe preparation. In domiciliary settings the responsibility lies with the administering nurse who must discuss any concerns with his/her manager.

4.3.3 Ward/Team Managers are responsible for ensuring that information, facilities and resources are available to allow staff to meet required competencies for the safe preparation, checking, administration and monitoring of injectable medicines therapy in accordance with this policy and any service-line specific SOPs. The principal Guide used within the Trust is the Medusa Injectable Medicines Guide, available on the Trust Intranet, see 4.2.1 for details.

4.4 Registered Practitioners Administering injectable Medicines

4.4.1 Before administering any injectable medicine, the registered practitioner must:

a) Ensure that a clear, legal and complete prescription has been entered either electronically (in the Trust's electronic prescribing system) or on the appropriate prescription stationary and has been signed by the prescriber.

b) Ensure that any additional instructions concerning the administration of the medicine are clear.

c) Ensure that they have all necessary information regarding the administration of the drug (see 3.2) and any subsequent monitoring and ensure that all steps are within the bounds of their professional competence.

4.4.2 In any situation where the administration instructions are unclear or doubts exist concerning the safety or efficacy of the stated dose or method of administration, or their competence to proceed with the administration, the registered practitioner must inform the prescriber and must not administer the medication until they are satisfied that it is safe to do so.

4.4.3 When preparing medicines to be given by the injectable route, the registered practitioner must ensure that these are prepared and administered on an individual basis for each named patient.

4.4.4 If the medication is added to an IV infusion fluid, the infusion container must be labelled with the date and time of the addition, name and quantity of the medicine, name of the patient and the legible signature of the registered practitioner or both practitioners where administration is checked by a colleague (see 3.4.8).

4.4.5 The registered practitioner is responsible for administering injectable medicines and monitoring patients in accordance with this policy, the prescription, any locality procedures and their own professional standards for safe injectable administration.

4.5 Medicines Management Team

4.5.1 The Medicines Management Team is responsible for the preparation, communication and monitoring and updating this policy.

4.5.2 The Medicines Management Team will be responsible for ensuring that up to date supporting information is available to practitioners relating to injectable medicines.

Clinical Pharmacists, working within ward areas and with services, are responsible for:

a) Ensuring the safe, clinically appropriate and cost effective use of injectable medicines through involvement at all stages of medicines usage and management.
b) Providing up-to-date information and guidance to other registered practitioners on all pharmaceutical aspects of injectable drug therapy, pharmaceutical care and medicines management.
c) Ensuring legal requirements are met.
d) Advising on the individualisation of patient IV therapy.
e) Advising on patient monitoring of drug effects and side effects.
f) Education and counselling of patients, carers and hospital staff on the safe and correct use of injectable medicines.
g) Advising on drug to drug and drug to fluid interactions and compatibilities in IV fluids.
h) Assisting with risk assessments of injectable medicines and assisting in the assessment of those localities for safe administration of IV medicines.

5. TRAINING

5.1 Solent NHS Trust recognises the importance of appropriate training for staff. Appropriate training courses to meet the requirements for injectable drug administration are provided through the Trust's Learning and Development Department.

5.2 All staff who administer or check injectable medicines must undertake the Trust's annual Medicines Management e-learning update training session as part of their induction to the Trust for their specific area of practice.

5.3 All staff who administer injectable medicines must attend annual Deteriorating patient and resuscitation training.

5.4 Before commencing administration of IV medicines for the first time, all staff must attend a Trust arranged IV Drug Administration and Therapy one day course and pass the maths assessment at the end of that course. Dentists who have completed the IV sedation course are permitted to administer IV medicines as all relevant competencies are covered as part of this training.

5.5 Staff who have undertaken IV Drug Administration training in another Trust before coming to work for Solent must undertake the Trust arranged IV Therapy Training Update and pass the maths assessment at the end of the course before commencing administration of IV medicines. Staff should attend an IV update every 3 years or if there has been a significant break in practice such as maternity leave or following a training needs analysis (following an incident.)

5.6 At the end of both the IV Drug Administration and Therapy whole day course staff will receive a competency tool to record supervised clinical practice and record achieved competence. This competency tool will indicate if they have achieved the maths assessment during the theoretical Trust session.

5.7 Managers of wards/clinics/localities will maintain a record of the staff that are competent and authorised to administer IV medicines.

5.8 Staff who administer cytotoxic drugs within the Community Paediatric Nursing Service must undertake specific training in conjunction with the relevant acute Trust managing the care of the patient before they are able to administer these drugs. A record of their training will be kept on their personal file and competencies will be checked by a registered Practitioner that is competent.

6. EQUALITY IMPACT ASSESSMENT AND MENTAL CAPACITY

An Equality impact and Mental Capacity Act Assessment was conducted in relation to this Policy (see Appendix 6). The result of the assessment was no negative impact on any patient group or staff group as this policy is to ensure equality of practice across the organisation.

7. SUCCESS CRITERIA / MONITORING EFFECTIVENESS

7.1 The policy will be monitored through various methods including adverse incident reporting, significant event review, other medicines management audits and clinical prescribing audits, as required and agreed on a regular basis. Audits will be completed on an annual basis.

7.2 The effectiveness of this policy will be reviewed by audit and presentation to the Medicines Management Group and will be discussed prior to the stipulated review timeframe at the Medicines Management Group meeting. Details of these discussions will be documented in the minutes.

8. REVIEW

This document may be reviewed at any time at the request of either staff side or management. However, it will automatically be reviewed three years from initial approval and thereafter on a triennial basis unless organisational changes, legislation, guidance or non-compliance prompt an earlier review.

9. REFERENCES AND LINKS TO OTHER DOCUMENTS

National Patient Safety Agency (NPSA), 2007, Patient Safety Alert: 20 - Promoting Safer Use of Injectable Medicines (https://healthcareea.vctms.co.uk/assets/content/9652/4759/content/injectable.pdf).

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Infusion Nurses Society (2006) Infusion Nursing Standards of Practice, Journal of Infusion Nursing, 29 (S1) Suppl)ement S1-S92

Medusa Injectable Medicines Guide accessed via www.medusa.wales.nhs.uk, 15th June 2018

The Royal Pharmaceutical Societies Professional Guidance on the safe and Secure Handling Of Medicines (https://www.rpharms.com/recognition/setting-professional-standards/safe-and-secure-handling-of-medicines/professional-guidance-on-the-safe-and-secure-handling-of-medicines) and The Professional Guidance on the Administration in Healthcare Settings (https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Professional%20standards/SSHM%20and%20Admin/Admin%20of%20Meds%20prof%20guidance.pdf?ver=2019-01-23-145026-567).

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Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England. *Journal of Hospital Infection*, supplement S1-S70

Royal College of Nursing (2010) Standards for Infusion Therapy 3rd edition. RCN, London

UHS intranet: Marsden Manuel Chapter 12: Drug Administration

UHS Policy on the Prescribing, Acquisition, Storage and Administration of Medicines

Lister S et al (2020) The Royal Marsden Hospital
Manual of Clinical Nursing Procedures. WileyBlackwell and Hopkins U and C Arias (2013)

Large-volume IM injections: A review of best practices. Oncology nurse advisor 22 available online at : https://www.oncologynurseadvisor.com/home/hot-topics/chemotherapy/large-volume-im-injections-%E2%80%A8a-review-of-best-practices/

Shepherd E (2022) Injection technique 1: administering drugs via the intramuscular route. Nursing Times [online]; 118: 4, 23-25.

Links to other key Trust documents:

- Medicines Policy
- Controlled Drugs Policy and associated SOPs
- Community Adult Nursing IV drugs list
- Community Children's Nursing IV Drugs List
- Policy for the Safe Handling and Disposal of Healthcare Waste
- Hand Hygiene Policy
- Policy for Aseptic Technique and Aseptic Non-touch Technique Policy
- Sharps Safety Policy Management of Sharps and Inoculation Policy
- Policy for Infection Prevention and Control Standard Precaution Policy
- Consent to Examination and Treatment Policy
- Clinical Policy for Peripheral Venous Cannula Insertion and Management (Adults)
- Anaphylaxis Policy
- Mental Capacity Policy and Toolkit
- Procedure for the Administration of IV Cytarabine via a Central Venous Catheter to Children
- Standard Operating Procedure for the Purchase of Medicines for Safety
- Standard Operating Procedure for PICC Lines
- Standard Operating Procedure for the Administration of Medicines by Continuous Infusion via a Syringe Driver as part of Palliative Care

APPENDIX 1 – A Guide for Safe Independent Checking of IV Medicines.

In the ward environment IV drug administration must always be undertaken by two staff members. The lead staff member administering the drug must be a suitably trained registered practitioner (see section 5). Wherever possible the second member of staff should also be a registered practitioner. When checking the administration of an IV medicine the following guide should be used

1. Ensure your checking partner is competent to check the medication.
2. Remember that you (and your checking partner) are human and all humans will make mistakes from time to time, even if it is a task they are competent in and have performed many times.
3. Do not automatically assume that your checking partner has got it right. Assume that they might have got it wrong this time and it is your job to make sure they have not.
4. Check the prescription and the medication as carefully as you would if you were performing the task alone.
5. Check all parts of the prescription chart including the patients' identity, allergy status and concurrent medications. Do not just check the prescription for the intended medication.
6. Avoid reading the prescription out loud together or pointing to the text that you want your checking partner to read. This can "put words into the second checkers mouth" and simply compound any error made.
7. Perform your checks in silence, independently from each other and confirm that it is correct afterwards.
8. Likewise, calculations must be made independently as calculations made together are likely to show the same errors, especially if one checker is not confident with mathematical skills.
9. Ensure all aids to checking are to hand (such as a calculator, the BNF, locally used displacement values etc.)
10. Consider the experience and knowledge of your checking partner. They may require more time to check accurately and this must be permitted without question even during busy periods.

In the community setting a suitably trained registered practitioner (see section 5), may administer IV medicines on their own, in accordance with the Royal Pharmaceutical Society'sProfessional Guidance on the safe and Secure Handling Of Medicines (https://www.rpharms.com/recognition/setting-professional-standards/safe-and-secure-handling-of-medicines/professional-guidance-on-the-safe-and-secure-handling-of-medicines) and The Professional Guidance on the Administration in Healthcare Settings (https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Professional%20standards/SSHM%20and%20Admin/Admin%20of%20Meds%20prof%20guidance.pdf?ver=2019-01-23-145026-567) When doing so, practitioners are strongly recommended to conduct a check of their own work as if they were a checking practitioner using the principle in the guide above. In the following scenarios it is strongly advised that IV administration is subject to a second check if possible:

- IV administration of controlled drugs
- Infusion of ready prepared potassium salts
- If complex calculations are required. Calculations must be written down so that practitioners can compare answers and calculation methods.

APPENDIX 2 – Detailed Procedure for Preparation of Injectable Medicines

A2.1 Before Preparing the Medication

A2.1.1 Read the prescription chart carefully and check that it has been written in accordance with Trust's Medicines Policy.

A2.1.2 Check the patient's details (Name, DOB, NHS number) and allergy status.

A2.1.3 Check that the medication is due and has not already been given.

A2.1.4 Check that the medication is available. If unavailable attempt to locate the medication or contact the prescriber to prescribe an alternative if unable to locate. Urgency will be dictated by the type of medication prescribed and the patient's clinical condition.

A2.1.5 If necessary, refresh your knowledge of the medication to be administered by reading the accompanying product information and BNF.

A2.1.6 Verify the route of administration and ensure you have the necessary training to administer medication via that route.

A2.1.7 Verify the patient's clinical condition and the appropriateness of the prescribed treatment.

A2.1.8 Ensure the patient can receive the medication at the desired time since the medication, once prepared, cannot be stored.

A2.1.9 Obtain the assistance of a second checker if appropriate, depending on your setting.

A2.1.10 Clean the preparation area using detergent wipes , followed by drying. Assemble the medication(s) and equipment required, carefully checking labels and expiry dates and the packaging for any defects.

Items that may be required:

- The prescription chart(s)
- Prescribed medication
- Prescribed diluent
- 0.9% Sodium Chloride flush if required
- Appropriately sized blunt end drawing up needles
- Appropriately sized syringes
- Medication labels
- A clean dish or tray or sterile field
- Clinical Waste Bag
- Chlorhexidine 2% in denatured ethanol 70% wipe for decontaminating ampoules/vials
- Sharps bin
- Personal protective equipment
- IV fluid bag if required
- IV giving set if required
- Infusion device or pump if required
- Monitoring equipment

- Drip stand if required

A2.1.11 Calculate the dose, volume and flow rate required. Obtain an independent check from colleague if appropriate.

A2.1.12 Prepare the medication labels. (Do NOT apply the label to the syringe until the medication has been drawn up.)

A2.1.13 Decontaminate hands according to Solent NHS Trust Hand Hygiene Policy.

A2.1.14 Put on clean gloves.

A2.1.15 Observe strict "non-touch" technique throughout the preparation procedure.

A2.2 Withdrawing Medication or Flushing Solution from a Single Dose Ampoule (plastic or glass) into a Syringe

A2.2.1 Attach appropriately sized needle to syringe. Use a blunt needle with a filter for drawing up.

A2.2.2 Tap the ampoule gently to dislodge any medication in the neck.

A2.2.3 Decontaminate the neck of the ampoule with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine)

A2.2.4 Open the ampoule by twisting (plastic) or snapping (glass) the neck of the ampoule, where available an ampoule breaker should be used. Take care not to cut fingers or contaminate the product with glass.

A2.2.5 Unsheathe the needle and gently insert into the ampoule.

A2.2.6 Draw up the desired amount of the medication into the syringe tilting the ampoule if necessary.

A2.2.7 Remove the needle from the syringe and dispose of according to Trust policy. Do not resheath the needle.

A2.2.8 Gently tap the barrel of the syringe to accumulate air bubbles at the top of the syringe and expel the air carefully.

A2.2.9 Apply a fresh needle (with needle sheathed) appropriate for administration purposes/a sterile blind hub or insert syringe into a micro critical field (such as the syringe packaging).

A2.2.10 If not administering immediately, label your syringe.

A2.2.11 Inspect the solution for any particles. Discard if it appears contaminated.

A2.2.12 Place the full and labelled syringe onto a clean tray or dish.

- Keep the ampoule until administration to the patient is complete to enable further checking procedures to be undertaken.

A2.2.13 The medication is ready to administer. Obtain a second check as required and proceed to the patient.

A2.3 Withdrawing Solution or Suspension from a Vial into a Syringe

A2.3.1 Attach appropriately sized blunt needle with filter to syringe. Keep it sheathed at present.

A2.3.2 Remove the tamper-evident seal from the vial.

A2.3.3 Decontaminated the rubber bung with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine).

A2.3.4 Keeping the needle sheathed, draw up into the syringe a volume of air equal to the volume of the solution needed.

A2.3.5 Insert the needle into the vial through the rubber bung and inject the air from the syringe into the vial. Do not release the plunger yet.

A2.3.6 Holding the syringe upright with the vial inverted on the end, ensure the tip of the needle is below the level of the liquid.

A2.3.7 Release the plunger and the solution will flow into the syringe.

A2.3.8 If a larger volume of solution is required (in excess of 10mL) adopt the “push-pull” technique. Repeatedly inject small volumes of air and withdrawing equal volumes of solution thus keeping the pressure inside the vial at an acceptable level. Continue with this until the desired amount of solution drawn up.

A2.3.9 Once the desired amount is in the syringe, draw up a small amount of excess air and withdraw the needle.

A2.3.10 Remove the needle from the syringe and dispose of according to Trust policy.

A2.3.11 Gently tap the barrel of the syringe to accumulate air bubbles at the top of the syringe and expel the air carefully.

A2.3.12 Apply a fresh needle appropriate for administration purposes or a sterile blind hub.

A2.3.13 If not administering immediately, label your syringe.

A2.3.14 Inspect the solution for any particles. Discard if it appears contaminated.

A2.3.15 Place the full and labelled syringe onto a clean tray or dish with a bung or sheathed unused needle or blunt drawing up needle or insert into a micro critical field to prevent contamination.

- Keep the ampoule until administration to the patient is complete to enable further checking procedures to be undertaken.

A2.3.16 The medication is ready to administer. Obtain a second check as required and proceed to the patient.

A2.4 Reconstituting Powder in a Vial and Drawing up the Resulting Solution or Suspension into a Syringe

Injectable medicines in powder form need reconstituting with a specified diluent prior to use. The type and amount of diluent must be specified at the time of prescribing. The manufacturer may provide the diluent with the medication. Otherwise it may be provided by pharmacy or supplied from department stock. The manufacturer may also provide special equipment such as filtration needles with which to prepare the product. The practitioner needs to ensure they have read the accompanying instructions on how to use such equipment before starting.

If the patient requires only some of the total dose contained in the vial, (as is common with children and babies), it is important that the practitioner is aware of the displacement value of that medication and calculates accordingly. The clinical pharmacist or the medicines information service can give advice on displacement values.

A2.4.1 Draw up the diluent as described in A2.2 for an ampoule or A2.3 for a vial.

A2.4.2 Remove the tamper-evident seal from the vial and decontaminate the rubber bung with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine.)

A2.4.3 Inject the diluent from the syringe into the medication vial through the central inner ring of the rubber bung.

A2.4.4 Keeping the tip of the needle above the level of the diluent, release the plunger and the syringe should fill up with displaced air (unless product was vacuum packed.)

A2.4.5 If a large volume is required (over 10mls) adopt the push-pull technique as described in A2.3.8 above.

A2.4.6
With the syringe and needle still in place, gently swirl the vial(s) to dissolve all the powder

A2.4.7 Avoid vigorous shaking as this may cause the product to foam. Instead “swirl” the vial or invert it several times.

A2.4.8 inject the air from the syringe back into the vial. Do not release the plunger yet.

A2.4.9 Holding the syringe upright with the vial inverted on the end, ensure the tip of the needle is below the level of the liquid.

A2.4.10 Release the plunger and the solution will flow into the syringe.

A2.4.11 Once the desired amount is in the syringe, draw up a small amount of excess air and withdraw the needle.

A2.4.12 Remove the needle from the syringe and dispose of according to Trust policy.

A2.4.13 Gently tap the barrel of the syringe to accumulate air bubbles at the top of the syringe and expel the air carefully.

A2.4.14 Apply a fresh needle appropriate for administration purposes or a sterile blind hub.

A2.4.15 If not administering immediately, label your syringe.

A2.4.16 Inspect the solution for any particles or precipitate. If either is noted, do not use but retain securely along with the diluent used to show the pharmacist.

A2.4.17 Place the prepared and labelled syringe onto a clean tray or dish.

A2.4.18 The medication is ready to administer. Obtain a second check as required and proceed to the patient.

A2.5 Adding a Medicine to an Infusion Bag or Container

A2.5.1 Prepare the medication for injection according to the relevant sections A2.2, A2.3 or A2.4 above.

A2.5.2 Check the outer wrapper of the infusion bag for damage.

A2.5.3 Remove the outer wrapper and proceed to examine the infusion bag or container. Check it against a good light for cracks and leaks. Check that any tamper-evident seals are still in place.

A2.5.4 Check the expiry date of the infusion and the solution itself. The solution must not be hazy or cloudy or contain any particles or precipitate.

A2.5.5 Remove the tamper-evident seal from the additive port and decontaminate the port with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine.)

A2.5.6 A volume of infusion fluid equivalent to the volume of medicine solution to be added must be withdrawn from the infusion container first via the additive port using a needle and a syringe (e.g. if you need to add 12mL to a 250mL infusion bag – remove 12mL from the infusion bag first).

A2.5.7 Ensure an infusion bag is resting on a flat surface before adding or withdrawing any solution. Never try to add solution to an infusion bag that is in a hanging position.

A2.5.8 When injecting into or withdrawing solution from an infusion bag, insert the needle through the centre of the additive port being careful not to puncture the container or catch the needle on any part of it.

A2.5.9 Inject the medicine into the infusion bag and withdraw the needle and syringe and dispose of them in accordance with Trust policy.

A2.5.10 Invert the bag or container at least 5 times to ensure thorough mixing. If the solution is not adequately mixed, the medication may settle into a layer in the container and the patient could inadvertently receive a concentrated or rapid dose.

A2.5.11 Do not add anything to an infusion bag or container once it is hanging or infusing into the patient as adequate mixing becomes impossible.

A2.5.12 Label the infusion bag immediately.

A2.5.13 Check the solution again for cloudiness, discolouration, particles and precipitation.

A2.5.14 Decontaminate the giving set port of the container with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine.)

A2.5.15 Open the packaging of the giving set and check the tubing for damage. Close the roller clamp.

A2.5.16 Remove the cover to the spike of the giving set and insert it through the giving set port firmly but carefully, taking care not to perforate or damage the container.

A2.5.17 Ensure the spike of the giving set is fully inserted into the port. Otherwise, it can become contaminated and microbes may contaminate any subsequent infusions if the same giving set is used.

A2.5.18 Squeeze the chamber of the giving set gently and allow it to half fill with infusion fluid, leaving a clear space for the drops to be observed.

A2.5.19 Keep the Luer end of the giving set capped and sterile until it can be attached to the patient's venous access device.

A2.5.20 Open the roller clamp slowly and allow the infusion fluid to flow through the length of the tubing, expelling all the air ("priming the line"). Examine the tubing for air bubbles and ensure they are expelled.

A2.5.21 Close the clamp again once the giving set tubing is filled with infusion fluid.

A2.5.22 The medication is ready to administer. Obtain a second check as required and proceed to the patient.

- **Multiple use of injectable medicines**

Multiple use of an unpreserved injectable medicine should be avoided. Most injectable medicines are licensed for 'once-only' use. Unless the manufacturer's label specifically indicates that the injection contains a preservative, the container should only be used to prepare a single dose for a single patient on one occasion.

APPENDIX 3 – Detailed Procedure for Administration of IV Medicines

A3.1 Procedure for Administration of Drugs by Direct Injection (Bolus)

No.	Action	Rationale
1.	Check the prescription chart/record to ensure the right patient, the drug is correctly prescribed and there are no documented allergies.	Prevent drug being given to the wrong patient and an error from occurring on administration.
2.	Explain and discuss the procedure with the patient.	To reassure the patient and gain informed consent for procedure.
3.	Check any infusion in progress to ensure it is safe to interrupt whilst the drug is given.	Some IV infusions could be detrimental to the patient if stopped. Another cannula may have to be considered.
4.	Wash hands as directed in the Trust Hand Hygiene Policy . Dry with paper towels and put on non-sterile gloves as appropriate.	Infection prevention and gloves to protect yourself. Gloves should be used with discretion when performing infusion-related procedures. The use of non-sterile or sterile gloves will depend on the procedure being undertaken, contact with susceptible sites or clinical devices, the risks involved and the local organisational policies and procedures in place (Loveday et al., 2014). RCN standards for infusion 2018.
5.	Prepare drugs as recommended by the manufacturers' guidelines and as detailed in Appendix A2.	Prevent medication error from occurring.
6.	If more than one syringe is being used label eachsyringe with the drug name	To prevent errors in administering the wrong syringe
7.	Draw up a flush of Sodium Chloride 0.9% for injection and attach a new needle or sterile bung. Do not re-sheath needles.	To prevent sharp injury and contamination of the syringe.
8.	Place syringes in a clinically clean receptacle and collect any other necessary equipment, including a sharps bin. Remove gloves and wash hands thoroughly.	Infection Prevention.

9.	Proceed to the patient and, with a second nurse, silently check patient identity against the prescription chart and prepared drug. In domiciliary settings, one nurse should verbally check the patient's identity against the prescription record	To prevent the wrong drug being given to the wrong patient.
10.	Wash or gel hands and apply new non-sterile gloves.	Infection Prevention.
11.	Remove any bandages and inspect the insertion site of the cannula using the Visual Infusion Phlebitis (VIP) Score. See appendix 5	To prevent the development of Phlebitis
12.	Observe the infusion, if in progress and switch off.	To prevent the drug mixing with an in compatible fluid.
13.	Decontaminate the end of closed needle with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine.) Take care not to contaminate the cannula or any other connections.	To prevent the introduction of contamination or infection.
14.	Check patency of cannula by slowly injecting at last 5mLs Sodium Chloride 0.9% using push, pause and positive pressure flushing technique.	This flushing technique removes debris from the internal catheter wall and prevents reflux of blood (RCN, 2010) Additionally it confirms the presence of the cannula within the vessel(Loveday et al 2014).
15.	Check that no resistance is met, no pain or discomfort is felt by the patient and observe for any swelling or leakage.	To prevent infiltration.
16.	Administer medication using aseptic non-touch technique. Observe insertion site for swelling throughout procedure and ask the patient to advise of any discomfort or pain.	Prevent cross infection and early detection of any complications during administration. To prevent extravasation.

17.	Flush with at least 5mLs 0.9% Sodium Chloride between drugs (10mLs for central lines) and following last drug administered. Decontaminate the port with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine.) and restart infusion (if appropriate) at prescribed rate.	Prevent the cannula from becoming blocked. To prevent infection and continue with the patient's current treatment.
18.	Observe insertion site carefully. If indicated reapply bandage to cannula site.	Check for any signs of Phlebitis. Only bandage if patient is confused or a high risk of pulling cannula out.
19.	Discard all sharps into sharps bin. Do not resheath needles. Remove gloves and wash and dry hands.	As stated in the Trust Policy and prevent sharps injury. To prevent cross infection.
20.	Document procedure/sign drug chart and record the VIP Score. Check availability of drug for next dose.	As per drug administration policy to prevent Phlebitis. To prevent a late or missed dose from occurring.

A3.2 Administration of Drugs by Intermittent Infusion (peripheral or central)

Intermittent infusion is the administration of a small volume of infusion over a period of 20 minutes – 2 hours. The drug may be administered either as stat dose or repeated at specific time intervals.

- An intermittent infusion may be used when:-
- The pharmacology of the drug dictates this specific dilution and administration.
- The drug will not remain stable for the time required to administer a more diluted volume.
- When a patient is on restricted fluid intake
- Less likely to cause fluid overload than a continuous infusion

May be given along side an existing infusion, if compatible, via needle free IV access system such as a closed needle free device. Principles of asepsis must be followed during administration.

No.	Action	Rationale
1.	Check the prescription chart to ensure the right patient, the drug is correctly prescribed and there are no documented allergies.	Prevent drug being given to the wrong patient and an error from occurring on administration

2.	Explain and discuss the procedure with the patient.	To reassure the patient and gain informed consent for procedure.
3.	Check any infusion in progress for compatibility to ensure it is safe to stop whilst the drug is given.	Some IV infusions could be detrimental to the patient if stopped. Another cannula may have to be considered.
4.	Wash hands as directed in the Trust Hand Hygiene Policy . Dry with paper towels and put on non-sterile gloves as appropriate.	Infection prevention and gloves to protect yourself. Gloves should be used with discretion when performing infusion-related procedures. The use of non-sterile or sterile gloves will depend on the procedure being undertaken, contact with susceptible sites or clinical devices, the risks involved and the local organisational policies and procedures in place (Loveday et al., 2014). RCN standards for infusion 2018.
5.	Prepare drugs as recommended by the manufacturers' guidelines and detailed procedure in Appendix A2.	Prevent medication error from occurring.
6.	Complete IV additive label and apply to infusion fluid.	To prevent a medication error from occurring.

7.	Draw up a flush of at least 5mLs Sodium Chloride 0.9% for injection (10mLs for central lines) and attach a new needle or sterile bung. Do not re-sheath needles.	To prevent sharp injury and contamination of the syringe.
8.	Place syringes in a clinically clean receptacle and collect any other necessary equipment, including a sharps bin. Remove gloves and wash hands thoroughly.	Infection Prevention
9.	Proceed to the patient and, with a second nurse, silently check patient identity against the prescription chart and prepared drug. In domiciliary settings, verbally check the patients identity against the prescription record	To prevent the wrong drug being given to the wrong patient.
10.	Wash or gel hands and apply new non-sterile gloves.	Infection Prevention.

11.	Remove any bandages and inspect the insertion site of the cannula using the VIP Score. See appendix 5. The exit site of a central line should be checked against the insertion paperwork to ensure there has been no migration of the line.	To prevent the development of Phlebitis
12.	Observe the infusion, if in progress and switch off.	To prevent the drug mixing with an in compatible fluid.
13.	Decontaminate the end of closed needle free device with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine.) Take care not to contaminate the cannula or any other connections.	To prevent the introduction of contamination or infection.
14.	Check patency of cannula by slowly injecting at least 5mls Sodium Chloride 0.9% using push, pause and positive pressure flushing technique. If using a central line aspiration is required to check for patency.	This flushing technique removes debris from the internal catheter wall and prevents reflux of blood. Additionally it confirms the presence of the cannula within the vessel.
15.	Check that no resistance is met, no pain or discomfort is felt by the patient and observe for any swelling or leakage.	To prevent infiltration.
16.	Connect giving set using aseptic non-touch technique, open the control valve and administer via an IV pump.	Prevent speed shock or rapid infusion of medication
17.	Tape the administration set as appropriate and clear away all equipment.	Avoids placing a strain on the cannula.
18.	Check the insertion site and ask the patient if they are comfortable. Frequently check and monitor the patient during infusion.	Early detection of any complications during administration.
19.	When the infusion is completed switch off, wash hands and put on non-sterile gloves.	Infection Prevention.

20.	Disconnect infusion set, decontaminate connections with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine.)	Infection Prevention
21.	Flush with at least 5mls 0.9% sodium chloride 0.9% injection (10mLs if central line) between drugs and following last drug administered. Decontaminate the end of closed needle free device with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine.) and restart infusion (if appropriate) at prescribed rate.	Prevent the cannula from becoming blocked. To prevent infection and continue with the patient's current treatment.
22.	Ensure cannula dressing is clean, intact and secure. See appendix 5. Make sure the patient is comfortable.	Infection prevention and to protect the cannula.
23.	Observe insertion site carefully. If indicated reapply bandage to cannula site.	Check for any signs of Phlebitis. Only bandage if patient is confused or a high risk of pulling cannula out.
24.	Discard all sharps into sharps bin. Saftey guards must be correctly used before disposal. Remove gloves and wash and dry hands.	As stated in the Trust Policy and prevent sharps injury. To prevent cross infection.
25.	Document procedure/sign drug chart and record the VIP Score.	As per drug administration policy to prevent Phlebitis.
	Check availability of drug for next dose.	To prevent a late or missed dose from occurring.

A3.3 Administration of Drugs by Continuous Infusion

A3.3.1 Continuous infusion may be defined as the delivery of a medication or fluid at a constant rate over a prescribed time period to achieve a controlled therapeutic response. Greater dilutions of medicines help to reduce venous or tissue irritation.

A3.3.2 Large or small volumes may be delivered continuously. Usually indicated when constant blood levels are required or an IV drug is required to be highly diluted.

A3.3.3 Pre-prepared solutions should be used where possible, and only one additive should be made to each bag, bottle or syringe, unless stability is confirmed by pharmacy.

A3.3.4 Ensure thorough mixing of the drug, as layering will occur and the patient may inadvertently be given a concentrated bolus.

A3.3.5 The infusion needs to be monitored constantly for discoloration or presence of particles.

A3.3.6 Label the infusion line and bag, bottle or syringe.
A3.3.7 Principles of asepsis must be used throughout procedure
A3.3.8 If using a pump ensure the correct infusion rate is set.

No.	Action	Rationale
1.	Check the prescription chart/record to ensure the right patient, the drug is correctly prescribed and there are no documented allergies.	Prevent drug being given to the wrong patient and an error from occurring on administration
2.	Explain and discuss the procedure with the patient.	To reassure the patient and gain informed consent for procedure.
3.	Check any infusion in progress for compatibility to ensure it is safe to stop whilst the drug is given.	Some IV infusions could be detrimental to the patient if stopped. Another cannula may have to be considered.
4.	Wash hands as directed in the Trust Hand Hygiene Policy . Dry with paper towels and put on non-sterile gloves as appropriate.	Infection prevention and gloves to protect yourself. Gloves should be used with discretion when performing infusion-related procedures. The use of non-sterile or sterile gloves will depend on the procedure being undertaken, contact with susceptible sites or clinical devices, the risks involved and the local organisational policies and procedures in place (Loveday et al., 2014). RCN standards for infusion 2018.
5.	Prepare drugs as recommended by the manufacturers' guidelines and detailed procedure in Appendix 2.	Prevent medication error from occurring.
6.	Complete IV additive label and apply to infusion fluid.	To prevent a medication error from occurring.

7.	Draw up a flush of at least 5mLs Sodium Chloride 0.9% for injection (10mLs if central line) and attach a new needle or sterile bung. Do not re-sheath needles.	To prevent sharp injury and contamination of the syringe
8.	Place flush and infusion in a clinically clean receptacle and collect any other necessary equipment, including a sharps bin. Remove gloves and wash hands thoroughly.	Infection prevention
9.	Proceed to the patient and, with a second nurse, silently check patient identity against the prescription chart and prepared drug. In domiciliary settings, one nurse should verbally check the patient's identity against the prescription record.	To prevent the wrong drug being given to the wrong patient
10.	Wash or gel hands and apply new non-sterile gloves	Infection prevention
11.	Expose the injection port on the container, decontaminate with 2% chlorhexidine in 70% isopropyl alcohol medical device swab, applied with friction for a minimum of 30 seconds and allowed to dry. A new sterile medical device swab must be used at each intervention (povidone iodine should be used if a patient is sensitive to chlorhexidine.).	Infection prevention.
12.	Switch off the infusion and hang the new container quickly using a non-touch technique. Restart the infusion and adjust the rate of flow as prescribed.	Prevent speed shock or rapid infusion of medication.
13.	Ask the patient if any abnormal sensations etc are experienced.	To detect any adverse reaction.
14.	Discard all sharps into sharps bin. Safety guards must be correctly used before disposal. Remove gloves and wash and dry hands.	As stated in the Trust Policy and prevent sharps injury. To prevent cross infection.
15.	Document procedure/sign drug chart and record the VIP Score.	As per drug administration policy to prevent Phlebitis.
	Check availability of drug for next dose.	To prevent a late or missed dose from occurring.

Appendix 4 – Competency Document for the Administration of IV Therapy / Drugs Centrally and or Peripherally

This competency is to be used in conjunction with:

- The Code, professional standards of practice and behaviour for nurses and midwifes (2015). - https://www.nmc.org.uk/standards/code/
- Trust policy: Policy for the Safe Management and Administration of IV Medicines
- Local policies/procedures regarding administration of IV drugs/therapy

This document is divided into three sections

Section A: Should be completed on completion of the course.

Section B: Is for documentation of supervised practice

Section C: Documentation of your competency and should be signed and dated by you and your assessor.

Section A: Theoretical Instruction	
Date of course	
Name of Candidate and Assignment number	
Signature	
Work location	
Course Supervisor Name	Clinical Education Lead
Course Supervisor to sign on successful completion of drug calculations	
Organisation	Solent NHS Trust

 After you have completed the Solent IV drug administration study sessions/day and passed the drug calculation paper, you may start to undertake supervised practice in your work area.

 If you fail to pass all the drug calculation questions you will be able to undertake supervised practice, but need to re-sit the drug calculation paper and achieve a pass before going on to achieve competency in drug administration (you will need to discuss this with the educator who delivered the session)

- To undertake supervised practice and to achieve your competencies you will need to have an assessor (a practitioner who is certified competent to give IV drugs within Solent NHS Trust) who is up to date with current practice.
- **You can undertake as much supervised practice as you need.** This will create the opportunity for you to obtain familiarity with a range of drugs and methods of administration. At the end of your period of supervised practice, you should demonstrate competence at level 3 or above according to Fearon's performance rating scale (1998), before going on to achieve your competencies.
- The competency documentation should be achieved in a timely manner on completing the study session/day.
- **A photocopy/picture of section C and or section D depending on which competency you will have had signed off** must be sent the address on the page 3 in order for your competence to be tracked and certificated.

Section B: Supervised Practice

Administration of IV Drugs

This is your record of supervised practice. There is no set number of times that you need to be supervised. With each supervised practice you the practitioner will develop the skills listed below. You will need to be supervised in as many types of administration methods as you can e.g. by bolus infusion, intermittent infusion and continuous infusion. You will need to practice a variety of methods if possible such as adding drugs to bags / containers and administering drugs by infusion pumps and syringe drivers. As you progress and reach level 3 in the performance rating scale, and when you and your assessor feel that you are ready, you can begin your competency assessments.

Supervised Practice: **Performance criteria essential for competent administration of IV drugs/therapy**	
A	Correct identification of patient / obtains verbal consent
B	Appropriate patient preparation & communication
C	Chooses & handles equipment confidently and correctly
D	Considers personal safety & that of others
E	Pharmacology considered if appropriate – can list drug action & side effects
F	Appropriately identifies method of IV drug/flush administration
G	Correct preparation of drug/Flush for IV administration
H	Correct positioning of patient & preparation of environment
I	Checks prescription chart: prescription is still appropriate, correct drug, time, route, dose etc
J	Appropriate management if complications arise
K	Confirmation of line patency
L	Check drug with colleague if appropriate (calculations etc)
M	Drug/flush administered correctly & safely according to BNF Formulary, Guidelines and Solent NHS Policy and can demonstrate a knowledge of drug interactions and incompatibilities if used
N	Line flushed appropriately between (if required) & following administration of drug
O	Line secured & patient comfort considered
P	Aseptic principles followed throughout procedure as per infection control policies and guidelines
Q	Demonstrates safe practice In the handling of irritant/ toxic chemicals
R	Disposal of sharps & equipment safely & efficiently

S	Completes documentation correctly

CENTRAL and /or Peripheral IV DRUG

ADMINISTRATION COMPETENCY

- **The completion of this competency document is a policy requirement of Solent NHS Trust.**

- **You need to be assessed giving a drug centrally** and or **peripherally either by a bolus, intermittent infusion or continuous infusion.**

- **On the date your competency is assessed, please ensure that you and your assessor complete this document in full.**

- **Once the relevant documentation has been completed, Please photocopy/take a picture of page 11 or 13 according to which competency route you have achieved and email and send to the Learning and Development department at the address below. A certificate of competency will then be issued and emailed to you.**

Solent NHS Trust

Learning and Development Dept

FAO S Macadie

Trust Headquarters

Highpoint venue

Bursledon road

Southampton

Hants

SO19 8BR

Or email picture of competency to

sophie.macadie@solent.nhs.uk

Assessors Guidelines: Central IV Drug Administration Competency

	Competencies	Guidance
1.	Obtains consent	Explains procedure & obtains verbal consent for procedure from patient or parent if a child
2.	Correct positioning of patient and checking of appropriateness of prescription.	Assists patient into a comfortable position. Checks that the prescription is still appropriate and that there are no clinical changes which would necessitate a prescription review.
3.	Demonstrates safe technique throughout the procedure	Demonstrates safe practice to reduce risk of complications. Aware of personal safety and that of colleagues. Safe disposal of sharps and glass and use of personal protective equipment.
4.	Familiar with equipment	Demonstrates knowledge of different equipment. Chooses appropriate equipment for procedure. Gathers all equipment together before procedure.
5.	Correct preparation of drug for IV administration	Uses correct solution and amount for re-constitution and then dilution (if necessary). Uses correct drug calculations, (if required). Swabs bottle/port with alcohol swab for 30 seconds and allows drying for same, gently mixes solution & checks for precipitation or poor dilution. Adds drugs to bag or container if required Keeps all bottles for final check at bedside.
6.	Considers pharmacology by stating drug actions and potential side effects	States the generic name of the drug, reason for administration, the drug action & any interactions, with potential side effects (relative to the drug). Awareness of toxicity levels if appropriate. Knows to checks blood levels fall within the therapeutic range if required.
7.	Appropriately identifies method and drug for IV administration	Using IV formulary confirms best method of administration - bolus, intermittent or continuous. Reads prescription for drug correctly, using *BNF/Medusa* for further information on drug if required. Checks for allergies on prescription chart
8.	Appropriately identifies route for IV drug administration	Administers according to route on prescription chart- understanding rationale for choice of route for each patient.
9.	Appropriate management if complications occur or trouble shooting is required	Continuously checks patient reaction/experience-pain, allergic/anaphylactic reaction. Manages a blocked lumen/cannula appropriately, treats infiltration/extraversion/ phlebitis if identifies correctly.
10.	Drug administered correctly and safely	Drugs administered according to Solent NHS Trust policy. Checks patient identity. Checks that drugs are prescribed correctly. Administers according to prescription with all drugs and charts next to patient, gives 0.9% sodium

		Chloride flush before, using push pause method and after, ending with a positive pressure flush. Assesses veins (if drug given peripherally) for condition and patency of infusion throughout procedure. Clamps all lumens of central line (if drug given centrally) when complete and not in use, no lines left open to air. Checks insertion records of central lines to ensure that no migration of the line has occurred. Demonstrates the correct use of infusion devices if used.
11.	Appropriate care of IV access device following administration	Secures cannula site with appropriate dressing/tape. Asks patient to inform staff if any pain, heat or redness occurs during or after administration.
12.	Appropriate communication with the patient / relative throughout	Always demonstrates caring and sensitive manner. Provides patient with full explanation of procedure. Employs methods to reduce patient anxiety.
13.	Aseptic technique throughout	Correct hand washing before procedure. Checks packaging and expiry dates of equipment. Correct preparation of equipment. Maintains an aseptic non–touch technique throughout the procedure. Uses universal precautions throughout.
14.	Completes documentation	Documents IV administration on prescription sheet. Documents any problems/complications with procedure.

The Performance Rating Scale: To be used during period of supervised practice

Level of Achievement	Grade
Cannot perform this activity satisfactorily to participate in the clinical environment	0
Can perform this activity BUT not without constant supervision and some assistance	1
Can perform this activity satisfactorily but requires some supervision and/or assistance	2
Can perform this activity satisfactorily without supervision and/or assistance	3
Can perform this activity without assistance and/or supervision with more than acceptable speed and quality of work	4
Can perform this activity satisfactorily with more than acceptable speed and quality of work and with initiative and adaptability to special problem situations	5
Can perform this activity with more than acceptable speed and quality, with initiative and adaptability and can lead others in performing this activity	6

Fearon (1998) *Assessment and Measurement of Competence in Practice.* Nursing Standard Feb 1998 Vol.12 No 22

Record of supervised Practice Please circle appropriate route (example see below)

<table>
<tr><td rowspan="2">Date</td><td rowspan="2"><u>Route/Type of</u>

<u>Administration</u>

• Bolus administration
- Peripheral / CVAD
• Additions - to bags / containers / syringes

</td><td><u>Rating of skill, knowledge and performance</u>:

Self-Assessment rating : 2

Assessor rating : 1</td></tr>
<tr><td>Comments: Close supervision was necessary to ensure aseptic non touch technique was followed.

Print name of Assessor: A Person

Signature of Assessor: A Person</td></tr>
<tr><td rowspan="2">Date</td><td rowspan="2"><u>Route/Type of</u>

<u>Administration</u>

• Bolus administration
- Peripheral / CVAD
• Additions - to bags / containers / syringes</td><td><u>Rating of skill, knowledge and performance:</u>

Self-Assessment rating :

Assessor rating :</td></tr>
<tr><td>Comments:

Print Name of Assessor:……..

Signature of Assessor:…….</td></tr>
<tr><td>Date</td><td><u>Route/Type of Administration</u>

• Bolus administration
- Peripheral / CVAD
• Additions - to bags / containers /</td><td><u>Rating of skill, knowledge and performance:</u>

Self-Assessment rating :

Assessor rating :</td></tr>
</table>

	syringes **Administration via** Infusion Pump/	*Comments:* Print Name of Assessor:…… Signature of Assessor:……..
Date	**<u>Route/Type of Administration</u>** • **Bolus administration** - Peripheral / CVAD • **Additions -** to bags / containers / syringes / Burettes • **Administration via** Infusion Pump	<u>Rating of skill, knowledge and performance</u>: Self-Assessment rating : Assessor rating : *Comments:* Print Name of Assessor:…….. Signature of Assessor:…….
Date	**<u>Route/Type of Administration</u>** • **Bolus administration** - Peripheral / CVAD • **Additions -** to bags / containers / syringes • **Administration via** Infusion Pump	<u>Rating of skill, knowledge and performance:</u> Self-Assessment rating : Assessor rating : *Comments:* Print Name of Assessor:…….. Signature of Assessor:……

Date	**Route/Type of Administration** □ **Bolus administration** - Peripheral / CVAD □ **Additions -** to bags / containers / syringes	Rating of skill, knowledge and performance: Self-Assessment rating : Assessor rating : *Comments*: Print Name of Assessor:……. Signature of Assessor:……
Date	**Route/Type of Administration** □ **Bolus administration** - Peripheral / CVAD □ **Additions -** to bags / containers / syringes	Rating of skill, knowledge and performance: Self-Assessment rating : Assessor rating : *Comments:* Print Name of Assessor:……. Signature of Assessor:……
Date	**Route/Type of Administration** □ **Bolus administration** - Peripheral / CVAD □ **Additions -** to bags / containers /	Rating of skill, knowledge and performance: Self-Assessment rating : Assessor rating : *Comments:*

	syringes	Print Name of Assessor:…… Signature of Assessor……
Date	**<u>Route/Type of Administration</u>** • **Bolus administration** - Peripheral / CVAD • **Additions -** to bags / containers / syringes • **Administration via** Infusion Pump/ syringe driver	<u>Rating of skill, knowledge and performance</u>: Self-Assessment rating : Assessor rating :
		Comments: Print Name of Assessor:…… Signature of Assessor:……
Date	**<u>Route/Type of Administration</u>** • **Bolus administration** - Peripheral / CVAD	<u>Rating of skill, knowledge and performance:</u> Self-Assessment rating : Assessor rating :

	• **Additions -** to bags / containers / syringes	*Comments:* Print Name of Assessor:…… Signature of Assessor:……..

Section C: Central IV Drug Administration Competency

Please send a **photocopy** of this page or email a **photograph** of the relevant competency document to the address at the front of this document

Keep the original in a safe place as together with your certificate this is evidence of your competence

Name & Grade	
Full workplace address and email	
Date of course	
Clinical Skill	**IV Drug Administration (Central)**
Assessor's full name, job title and work location	

Section C: Central IV Drug Administration Competency

Each box should be initialled and dated separately

	Competency: Administration of Central IV Drugs	**Date**	**Assessor's initials**	**Practitioner initials**
1.	Obtains verbal consent			
2.	Correct positioning of patient and preparation of environment			
3.	Demonstrates safe technique throughout the whole process			
4.	Familiar with equipment			
5.	Correct preparation of drug/flush *(circle as appropriate)* for IV administration			
6.	Considers pharmacology by stating drug generic name, action and potential side effects (if appropriate)			
7.	Appropriately identifies method and drug/flush *(circle as appropriate)* for IV administration			
8.	Appropriately identifies correct route for IV drug/flush administration			
9.	Appropriate management if complications arise or if trouble shooting is required			

10.	Drug/flush *(circle as appropriate)* administered correctly and safely			
11.	Appropriate use and care of IV access device, pre, during and post administration of drug/flush *(circle as appropriate)*			
12.	Appropriate communication with the patient & relatives throughout			
13.	Aseptic technique used throughout			
14.	Completes documentation correctly			

I have assessed ..... in the **administration of IV Central Drugs/Flushes** (circle as appropriate) and in my professional opinion they are competent to carry out this role unsupervised

Assessor's signature.....

Date.....

I have been assessed, and feel happy to carry out this role unsupervised. I understand that I am responsible for maintaining my competence and keeping up to date

Candidate's signature.....

Date.....

Section D: Peripheral Drug Administration Competency

Please send a **photocopy** of this page or email a **photograph** of the relevant competency document to the address at the front of this document.

Keep the original in a safe place as together with your certificate this is evidence of your competence

Name & Grade	
Full workplace address and email	
Date of course	
Clinical Skill	**IV Drug Administration (Peripheral)**
Assessor's full name, job title and work location	

Section D: Peripheral IV Drug Administration Competency

Each box should be initialled and dated separately

	Competency: Administration of Central IV Drugs	**Date**	**Assessor's initials**	**Practitioner initials**
1.	Obtains verbal consent			
2.	Correct positioning of patient and preparation of environment			
3.	Demonstrates safe technique throughout the whole process			
4.	Familiar with equipment			
5.	Correct preparation of drug/flush *(circle as appropriate)* for IV administration			
6.	Considers pharmacology by stating drug generic name, action and potential side effects (if appropriate)			
7.	Appropriately identifies method and drug/flush *(circle as appropriate*) for IV administration			

8.	Appropriately identifies correct route for IV drug/flush *(circle as appropriate*) administration			
9.	Appropriate management if complications arise or if trouble shooting is required			
10.	Drug/flush administered correctly and safely			
11.	Appropriate use and care of IV access device, pre, during and post administration of drug/flush *(circle as appropriate)*			
12.	Appropriate communication with the patient & relatives throughout			
13.	Aseptic technique used throughout			
14.	Completes documentation correctly			

I have assessed ..... in the **administration of IV Peripheral Drugs/Flushes** *(circle as appropriate)* and in my professional opinion they are competent to carry out this role unsupervised

Assessor's signature.....

Date.....

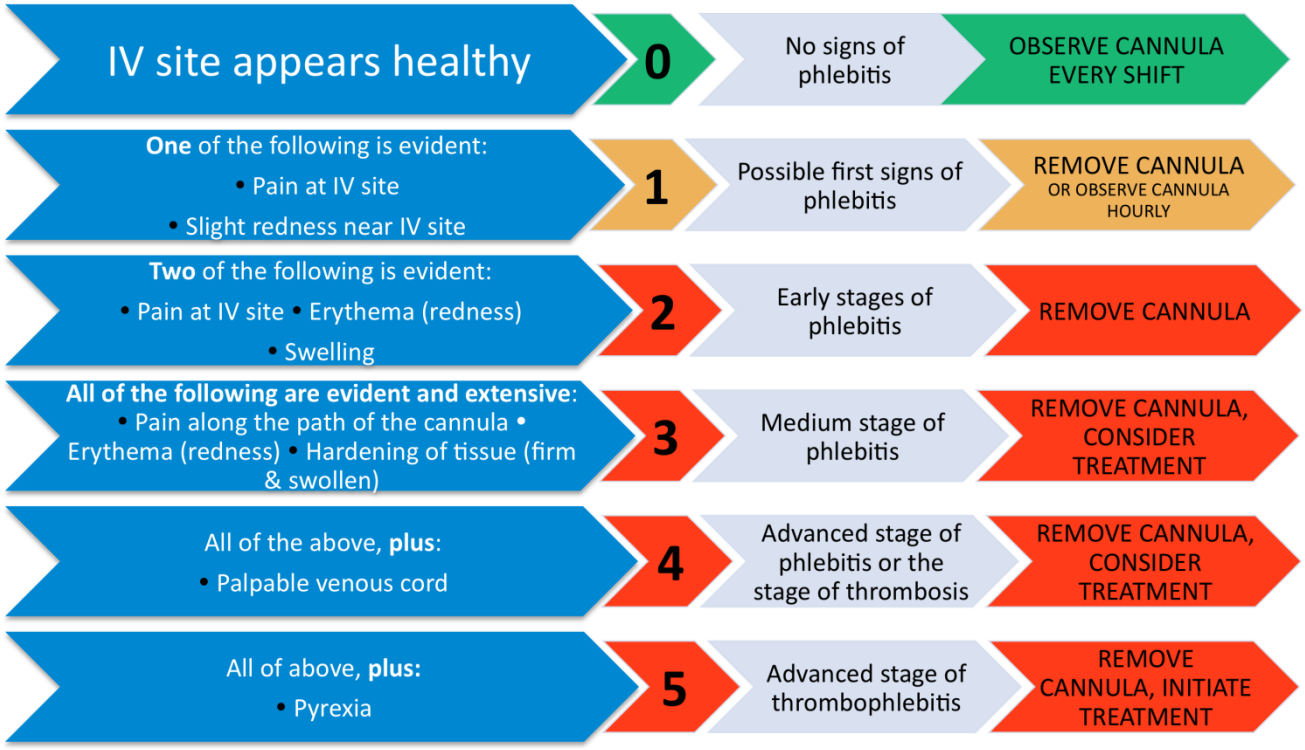
I have been assessed, and feel happy to carry out this role unsupervised. I understand that I am responsible for maintaining my competence and keeping up to date

Candidate's signature.....

Date.....

Appendix 5 - Visual Infusion Phlebitis Score

Peripheral venous cannulae insertion sites must be visually inspected and palpated for tenderness a minimum of once per shift and a Visual Infusion Phlebitis (VIP) score recorded. Practitioners must act immediately if the VIP score is >=1



Insertion sites and cannula components should be checked prior to the administration of any

intravenous medications or fluids with recording of these observations as best practice

All peripheral venous cannulae, prior to use, must have:

No evidence of phlebitis, infiltration, extravasation

No reported pain at the site

An intact transparent dressing which completely covers the entry site and secures the device

Needle free extension set in situ

A valid date and time on the dressing

Cannula dressings should cover the entry site and device up to the notch

MMT008 Policy for the Safe Management of Injectable Medicines V3

APPENDIX 6 – Detailed Procedure for Administration of Intramuscular Medicines

A3.4 Procedure for Administration of Drugs by Intramuscular Injection

No.	Action	Rationale
1.	Check the prescription chart/record to ensure the right patient, the drug is correctly prescribed and there are no documented allergies.	Prevent drug being given to the wrong patient and an error from occurring on administration.
2.	Explain and discuss the procedure with the patient.	To reassure the patient and gain informed consent for procedure.
3.	Wash hands as directed in the Trust Hand Hygiene Policy . Dry with paper towels and put on non-sterile gloves as appropriate.	Infection prevention and gloves to protect yourself. Gloves should be used with discretion when performing injectable procedures. The use of non-sterile or sterile gloves will depend on the procedure being undertaken, contact with susceptible sites or clinical devices, the risks involved and the local organisational policies and procedures in place (Loveday et al., 2014). RCN standards for infusion 2018.
4.	Prepare drugs as recommended by the manufacturers' guidelines and detailed procedure in Appendix A2.	Prevent medication error from occurring.
5.	If more than one syringe is being used label the syringe with the drug name	To prevent errors in administering the wrong syringe
6.	Place syringes in a clinically clean receptacle and collect any other necessary equipment, including a sharps bin. Remove gloves and wash hands thoroughly.	Infection Prevention.
7.	Proceed to the patient and, with a second nurse (where policy to do so), silently check patient identity against the prescription chart and prepared drug. In domiciliary settings, one nurse should verbally check the patients identity against the prescription record. Only clean the site of injection if visibly dirty.	To prevent the wrong drug being given to the wrong patient.
8.	Wash or gel hands and apply new non-sterile gloves.	Infection Prevention.
9.	Administer medication using aseptic non-touch technique. Observe insertion site for swelling throughout procedure and ask the patient to express any discomfort or pain.	Prevent cross infection and early detection of any complications during administration.

10.	Discard all sharps into sharps bin. Do not resheath needles. Remove gloves and wash and dry hands.	As stated in the Trust Policy and prevent sharps injury. To prevent cross infection.
11.	Document procedure/sign drug chart	As per drug administration policy

APPENDIX 7 – Equality Impact Assessment

Version number	2
Date from	August 2022

Equality Analysis and Equality Impact Assessment

Equality Analysis is a way of considering the potential impact on different groups protected from discrimination by the Equality Act 2010. It is a legal requirement that places a duty on public sector organisations (The Public Sector Equality Duty) to integrate consideration of Equality, Diversity and Inclusion into their day-to-day business. The Equality Duty has 3 aims, it requires public bodies to have due regard to the need to:

- **eliminate unlawful discrimination**, harassment, victimisation and other conduct prohibited by the Equality Act of 2010;
- **advance equality of opportunity** between people who share a protected characteristic and people who do not;
- **foster good relations** between people who share a protected characteristic and people who do not.

Equality Impact Assessment (EIA) is a tool for examining the main functions and policies of an organisation to see whether they have the potential to affect people differently. Their purpose is to identify and address existing or potential inequalities, resulting from policy and practice development. Ideally, EIAs should cover all the strands of diversity and Inclusion. It will help us better understand its functions and the way decisions are made by:

- **considering the current situation**
- **deciding the aims and intended outcomes of a function or policy**
- **considering what evidence there is to support the decision and identifying any gaps**
- **ensuring it is an informed decision**

You can find further information via the Solent e-learning module:

https://mylearning.solent.nhs.uk/course/view.php?id=170

Equality Impact Assessment (EIA)

Step 1: Scoping and Identifying the Aims

Service Line / Department	Medicines Management	
Title of Change:	Routine policy update	
What are you completing this EIA for? (Please select):	Policy	*(If other please specify here)*
What are the main aims / objectives of the changes	To update for current legislation, guidance and practice and responding to feedback to widen scope: The policy itself informs staff of the correct procedures for injectable medicines administration and practice	

Step 2: Assessing the Impact

Please use the drop-down feature to detail any positive or negative impacts of this document /policy on patients in the drop-down box below. If there is no impact, please select "not applicable":

Protected Characteristic	Positive Impact(s)	Negative Impact(s)	Not applicable	Action to address negative impact: *(e.g. adjustment to the policy)*
Sex			X	
Gender reassignment			X	
Disability			X	
Age			X	
Sexual Orientation			x	
Pregnancy and maternity			X	
Marriage and civil partnership			X	
Religion or belief			X	
Race			X	

If you answer yes to any of the following, you MUST complete the evidence column explaining what information you have considered which has led you to reach this decision

Step 3: Review, Risk and Action Plans

How would you rate the overall level of impact / risk to the organisation if no action taken?	Low	Medium	High
	■	☐	☐
What action needs to be taken to reduce or eliminate the negative impact?			
Who will be responsible for monitoring and regular review of the document / policy?	Luke Groves – Chief Pharmacist		

Step 4: Authorisation and sign off

I am satisfied that all available evidence has been accurately assessed for any potential impact on patients and groups with protected characteristics in the scope of this project / change / policy / procedure / practice / activity. Mitigation, where appropriate has been identified and dealt with accordingly.

Equality Assessor:		*Date:*	*20-09-2022*

Additional guidance

Protected characteristic		Who to Consider	Example issues to consider	Further guidance
1.	**Disability**	A person has a disability if they have a physical or mental impairment which has a substantial and long term effect on that person's ability to carry out normal day today activities. Includes mobility, sight, speech and language, mental health, HIV, multiple sclerosis, cancer	• Accessibility • Communication formats (visual & auditory) • Reasonable adjustments. • Vulnerable to harassment and hate crime.	Further guidance can be sought from: Solent Disability Resource Group
2.	**Sex**	A man or woman	• Caring responsibilities • Domestic Violence • Equal pay • Under (over) representation	Further guidance can be sought from: Solent HR Team
3	**Race**	Refers to an individual or group of people defined by their race, colour, and nationality (including citizenship) ethnic or national origins.	• Communication • Language • Cultural traditions • Customs • Harassment and hate crime • "Romany Gypsies and Irish Travellers", are protected from discrimination under the 'Race' protected characteristic	Further guidance can be sought from: BAME Resource Group
4	**Age**	Refers to a person belonging to a particular age range of ages (eg, 18-30 year olds) Equality Act legislation defines age as 18 years and above	• Assumptions based on the age range • Capabilities & experience • Access to services technology skills/knowledge	Further guidance can be sought from: Solent HR Team
5	**Gender Reassignment**	" The expression of gender characteristics that are not stereotypically associated with ones sex at birth" World Professional Association Transgender Health 2011	• Tran's people should be accommodated according to their presentation, the way they dress, the name or pronouns that they currently use.	Further guidance can be sought from: Solent LGBT+ Resource Group
6	**Sexual Orientation**	Whether a person's attraction is towards their own sex, the opposite sex or both sexes.	• Lifestyle • Family • Partners • Vulnerable to harassment and hate crime	Further guidance can be sought from: Solent LGBT+ Resource Group
	Religion and/or belief	Religion has the meaning usually given to it but belief includes religious and philosophical beliefs, including lack of belief (e.g Atheism). Generally, a belief should affect your life choices or the way you live for it to be included in the definition. (Excludes political beliefs)	• Disrespect and lack of awareness • Religious significance dates/events • Space for worship or reflection	Further guidance can be sought from: Solent Multi-Faith Resource Group Solent Chaplain
8	**Marriage**	Marriage has the same effect in relation to same sex couples as it has in relation to opposite sex couples under English law.	• Pensions • Childcare • Flexible working • Adoption leave	Further guidance can be sought from: Solent HR Team
9	**Pregnancy and Maternity**	Pregnancy is the condition of being pregnant or expecting a baby. Maternity refers to the period after the birth and is linked to maternity leave in the employment context. In non-work context, protection against maternity discrimination is for 26 weeks after giving birth.	• Employment rights during pregnancy and post pregnancy • Treating a woman unfavourably because she is breastfeeding • Childcare responsibilities • Flexibility	Further guidance can be sought from: Solent HR team

Appendix 8 – Cannula Insertion and Management Form

PATIENT_____

HOSPITAL NUMBER_____

DATE OF BIRTH_____

CONSULTANT_____

Affix Addressograph

Saving Lives: reducing infection, delivering clean and safe care

CANNULA INSERTION & MANAGEMENT FORM

NHS Solent NHS Trust

WARD_____

DATE & TIME INSERTED_____ BY_____ SIGNATURE_____ BLEEP_____

DATE & TIME REMOVED_____ BY_____ SIGNATURE_____

INSERTION

GAUGE 24 22 20 18 16 14

Lot No _____ Number of attempts _____

CONSENT

Informed ☐ Implied ☐ Unable ☐

INSERTION REASON

IV Fluids ☐ IV Antibiotics ☐ Blood ☐

Chemotherapy ☐ Surgery ☐ Other_____

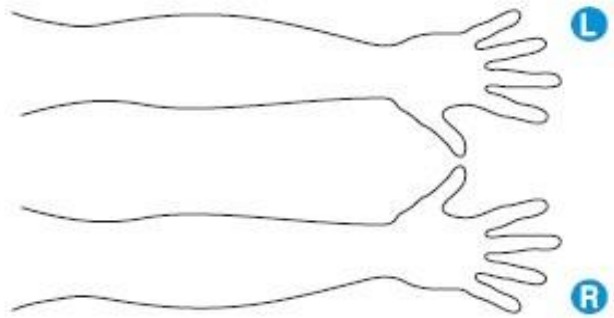
ADHERED TO

Aseptic Technique ☐ Skin prep ☐ IV 3000 dressing ☐

Extension ☐ Single ☐ Double ☐

Local Anaesthetic YES ☐ NO ☐

SUCCESSFUL FLUSH POST INSERTION ☐



Please mark successful cannulation with an X and failed cannulation with an F

REMOVAL REASON

Not required ☐

Phlebitis (& score) ☐

Infiltration ☐

Extravasation ☐

Other_____

CANNULA IN PLACE

<72hours ☐

Not >96 hours ☐

COMMENTS

_____

_____

Peripheral intravenous ongoing cannula care bundle

Observation	Time	Hand hygiene	Continuing clinical indication	Site inspected	Dressing intact	Aseptic cannula access	Administration set replacement	Does cannula need replacing?	Date and Signature
DAY 1	AM								
	PM								
DAY 2	AM								
	PM								
DAY 3	AM								
	PM								
DAY 4	AM								
	PM								

Saving Lives: reducing infection, delivering clean and safe care

High Impact Intervention No 2

Peripheral intravenous cannula care bundle

Aim

To reduce the incidence of peripheral intravenous cannula infections

Hand hygiene

Decontaminate hands before and after each patient contact. Use correct hand hygiene procedure as per trust policy

Continuing clinical indication

All IV cannulae and associated devices are still indicated. If there is no clinical indication for use then the IV cannula must be removed.

Site Inspection

Regular observation for signs of infection/ phlebitis, every time cannula is accessed, documented in the patient notes/RIO.

Dressing

An intact, dry, adherent transparent dressing should be present. A date and time of insertion must be applied & visible at the cannula insertion point. Bungs should not be applied directly to a cannula. Single or double lumen adaptors must be insitu

Cannula access

Use Chlorhexidine 0.5% in denatured ethanol 70% and allow drying prior to accessing the cannula for administration of fluids or

Administration set replacement

Immediately after administration of blood, blood products. All other fluid sets after 72 hours, giving sets should be labelled with date and time on commencement of use

Routine cannula replacement

Cannula replacement should occur every 72-96 hours