Royal Cornwall Hospitals
NHS Trust

Injectable Medicines Policy

V6.0

November 2025

Table of Contents

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Royal Cornwall Hospital Trust rch-tr.infogov@nhs.net

1. Introduction

1.1. The use of injectable medication has many healthcare benefits for patients. The complexities associated with the prescription, preparation and administration of injectable medicines means that there are greater potential risks for patients and staff 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.

1.2. A key risk mitigation for staff is the use of needle-free or safer sharp devices to reduce the risk of needle stick injuries. Please refer to the RCHT 'Safer Sharps' Policy for further details.

1.3. Injectable preparations representing a high risk to patient or staff will be reviewed and mitigations put in place such as the procurement of a pre-filled preparation, closed-system drug transfer devices or preparation of the product moved to Pharmacy Technical Services.

1.4. This version supersedes any previous versions of this document.

2. Purpose of this Policy/Procedure

2.1. The purpose of this policy is to inform all practitioners of their responsibility in the safe and effective administration of injectable medicines.

2.2. This document specifies the minimum standard procedure that should be applied to prescribing, preparation and administration of injectable medicines to minimise risks to both healthcare personnel and patients.

3. Scope

3.1. This document sets out the standards required to ensure the safe prescribing, preparation and administration of injectable medicines within the hospitals of Royal Cornwall Hospitals Trust.

3.2. Related policies include the Medicines Policy (particularly chapter 4- Custody and Storage of Medicines), the Controlled drug policy and the Safer Sharps policy.

3.3. Please refer to 'The Safe Administration of Intrathecal Chemotherapy Clinical Guideline' for information on intrathecals.

4. Definitions / Glossary

- ANTT = Aseptic non-touch technique.
- IV = Intravenous.
- S/C = subcutaneous.
- IM = intramuscular.
- MPC= Medicines Practice Committee.

5. Ownership and Responsibilities

5.1. Role of the Chief Pharmacist

5.1.1. The Chief Pharmacist holds ultimate responsibility for the adequate resourcing of the aseptic preparation service to ensure that it meets the defined national standards as described in the Quality Assurance of Aseptic Preparation Services: Standards.

5.1.2. The Chief Pharmacist is responsible for ensuring a policy document governing the use of injectable medicines within the Trust is published and presented to the Medication Practice Committee for approval and implementation. The chief pharmacist is also responsible for ensuring a system of injectable risk assessment is in place and mitigation actions for high-risk products are implemented.

5.2. Role of the Medication Practice Committee

5.2.1. The Medicines Practice Committee (MPC) will provide oversight and guidance on policy and practice relating to the use of injectable medicines within the Trust and co-ordinate the actions required to improve practice as identified through medication incident reports, risk assessments and audit.

5.2.2. The MPC is responsible for adequate resourcing of systems and processes to support the safe use of injectable medicines across the Trust.

5.2.3. The MPC will sign-off any local arrangements for the involvement of non-registered clinical support workers in the preparation or administration of injectable medicines.

5.3. Role of Pharmacy Procurement and Specialist Pharmacists

5.3.1. The pharmacy procurement team will ensure that a new product risk-assessment is completed for any new injectable product. The specialist pharmacist or medication safety pharmacists will support the procurement team in the completion of this risk assessment and identify high-risk products and appropriate mitigation.

5.3.2. The Pharmacy Governance and Quality Management group and MPC can be accessed as a route of escalation for advice on mitigating actions.

5.3.3. Strategies to manage risk include:

- Purchase ready to administer product.
- Manufacture the product in pharmacy technical services.
- Implement closed-system transfer devices.
- Seek an alternative medicine with a lower risk profile.

- Supporting information, such as loading dose worksheets and monographs.

5.4. Role of Line Managers and Clinical Supervisors

Line Managers and Clinical Supervisors are responsible for ensuring that staff required to prescribe, prepare and administer injectable medicines are competent to do so.

5.5. Role of Individual Staff

5.5.1. All staff members will ensure that injectable medicines are prescribed, prepared and administered in line with this policy.

5.5.2. All staff members are responsible for recording all incidences of non-compliance with this policy, the Medicines Policy and clinical incidents involving injectable medicines on the Trust's incident management system (Datix).

6. Standards and Practice

6.1. Prescribing Injectable Medicines

6.1.1. Refer to the Medicines Policy for general guidelines on prescribing.

6.1.2. Where relevant, the prescription or direction must specify the following (where appropriate):

- Generic name and formulation of the medicine (unless it is a medicine which is not dose interchangeable in which case it should be prescribed by brand name).
- Concentration or total quantity of medicine in the final infusion container or syringe.
- Name and volume of diluent and/or infusion fluid.
- Rate and duration of administration.
- Stability information to determine the expiry date of the final product.
- Type of rate-control pump or device(s) to be used.
- Date on which treatment should be reviewed.
- Arrangements for fluid balance or clinical monitoring should be made on an individual patient basis and according to local protocol and clinical need.

6.1.3. The Trust use the online Medusa Injectable Medicines Guide and the on-line BNF – as an easily accessible resource on how to prepare injectables. Both are available on the clinical desktops and downloadable from the applications catalogue. Also refer to the Summary of Product Characteristics (SPC) within the packaging or available on www.medicines.org.uk

6.1.4. There are also loading dose protocols for specific medicines (digoxin, amiodarone, tirofiban, danaparoid, argatroban and aminophylline) that can be found on the Trust's document library.

6.2. Preparation and Administration of Injectable Medicines

6.2.1. The preparation and administration of intravenous medicines, infusions, transfusions and their maintenance should be undertaken only by registered healthcare professionals who have undergone the necessary training and are deemed competent. Exceptions to this are stated below:

6.2.1.1. Student nurses are permitted to undertake the process for peripheral venous lines when under direct supervision from a registered nurse. In this situation, a second independent check is still required from another suitably trained and competent Healthcare Professional. This applies to all nursing students on a pathway to Registered Nurse status with the NMC.

6.2.1.2. Assistant practitioners (APs) that have undergone the necessary training and competency assessments are permitted to administer subcutaneous low molecular weight heparin in pre-filled syringes for the purposes of VTE prophylaxis.

6.2.1.3. Students and APs must have up to date ANTT training and complete the same pathway for administration of medicines as registered nurses (the on-line learning modules and workbook).

6.2.1.4. Nuclear Medicine technicians may administer pre-prepared IV radiopharmaceuticals under the ARSAC licence holder, supervision and training of a named Consultant Radiologist.

6.2.1.5. Nursing associates on Critical Care, that have undergone the relevant training competencies are permitted to prepare and administer listed IV Medicines. Please refer to the 'Preparation and Administration of IV Medicines By Nursing Associates on Critical Care' SOP, available on the intranet.

6.2.2. If medicines are drawn up and labelled in a theatre setting ideally this is done by the person who will administer them at the time of preparation. Where this is not possible and when a practitioner requires that a medicine is drawn up on their behalf, e.g. when working in a sterile field, these medicines are:

6.2.2.1. Checked with the requesting practitioner before they are opened.

6.2.2.2. Drawn up in the presence of the requesting practitioner – and checked (medicine, route of administration, diluent, dose, and expiry date) against the original container (e.g. vials) prior to administration.

6.2.3. Preparation should only take place if: there is a prescription; a patient group directive or other written instruction; and essential information is available about the product(s) and processes needed for safe preparation and administration.

6.2.4. Adequate uncluttered surface space and appropriate trays, clean for each patient, are provided for drawing up, arranging and holding the syringes and drugs used in each procedure. Wherever possible this is standardised.

6.2.5. All medicine-containing infusions and syringes are clearly labelled. The exception to this is for syringes intended for immediate push (bolus) administration by the person who prepared them. Under no circumstances should an operator be in possession of more than one unlabeled syringe at any one time, nor must an unlabeled syringe be fitted to a syringe driver or similar device.

6.2.6. Open systems (including gallipots and other types of open container such as molded plastic procedure trays) are never used as containers for medicines – with the exception only of embolisation procedures involving embolic agents that need to be prepared openly.

6.2.7. Medicines for spinal, epidural or for nerve block injection are presented as prefilled syringes wherever possible and are clearly identifiable (e.g. as different coloured lines, bags and labels). Appropriate connectors are used for epidural, intrathecal and nerve block infusions.

6.2.8. Infusion pumps for epidural and/or nerve block infusions are permanently dedicated for a single purpose, and appropriately coloured and labelled. They should have appropriate security and safety features, such as locks and pass codes.

6.2.9. Medicines and fluids used in theatre settings must be readily identifiable at all times during a procedure. Pre-labelled empty syringes and unlabeled or poorly labelled presentations are considered unsafe and should be immediately discarded.

6.2.10. For comprehensive guidance refer to appendix 3- Standard Operating Procedure for Administering an Injectable Medicine.

6.2.11. Aseptic (non-touch) technique should be used during preparation and administration. Injectable medicines prepared in clinical areas should always be administered immediately after preparation. They should not be stored for a period of time before use. Administration of infusions prepared in clinical areas should be completed within 24 hours of preparation. In exceptional circumstances where an infusion from a single container is intended to continue for more than 24 hours, a risk assessment should be undertaken to determine the safest course of action. Every effort should be made to use a ready-to-administer product.

6.2.12. Under no circumstances should an injectable cytotoxic medication be prepared, or additions made to cytotoxic medicines or TPN bags outside of the Pharmacy Technical Services Unit.The only exception to this is the use of dexrazoxane (Savene®) for cases of extravasation (see extravasation policy).

6.2.13. Non-registered Clinical Support Workers (e.g. Health Care Assistants) must not routinely prepare or administer any injectable medicine. Exceptions are stated above in 6.2.1.

6.2.14. Where there are specific clinical circumstances that require the involvement of a Non-Registered Clinical Support Workers, the arrangement must be formally signed off by the Medication Practice Committee. Details of this process can be found in the 'Preparation and Administration' chapter of the Medicines Policy.

6.2.15. The one exception to this is boluses of Sodium Chloride 0.9% for the purposes of flushing newly inserted cannulae once they have been suitably trained and assessed as competent to do so. This must also be checked by a registered Healthcare Professional who is competent at injectable drug administration.Subsequent flushing of cannulae must not be undertaken.

6.2.16. Certain groups of medicines or administration routes may not be administered/utilised by medical, nursing, midwifery or allied health professionals except under certain circumstances as specified in the relevant policy. These are:

- Cytotoxic drugs - see cytotoxic policy.
- Intrathecal drugs – see intrathecal policy.
- Patient controlled analgesia – see clinical guidelines.
- Epidurals and spinals – see clinical guidelines.
- Sedation – see Conscious Sedation Policy.
- Peripheral nerve blocks – see clinical guidelines.

6.3. **Mixing of Medicines**

6.3.1. The mixing of medicines is defined as the 'combination of two or more medicinal products together for the purposes of administering them to meet the needs of a particular patient'.This includes the administration of more than one intravenous drug where mixing takes place at a 'Y' site but does not include mixing where one product is a vehicle for the other.

6.3.2. It is common practice in palliative care to combine medicines in a syringe driver. Administration of multiple medications which mix at a 'Y' site is also common practice in other areas of medicine and surgery.

6.3.3. Compounding and mixing of medicines should, wherever possible, be carried out in the pharmacy technical services unit. As per 6.2.12 above, certain groups of medicines should never be compounded or mixed in clinical areas. (Compounding is defined as the mixing of 2 or more parts or ingredients to make a preparation for administration).

6.3.4. It is best practice to use a single lumen of an intravenous cannula to administer each medicine, which is then flushed between each administration.However, this is not always practical, due to the number of drugs or lack of intravenous access.

6.3.5. Where medicines are compounded in established combinations or mixed at a 'Y' site in clinical areas, this should be in accordance with standard procedures.

6.3.6. Where a mixture is not usual practice, reference should be made to standard reference sources which include:

6.3.6.1. PCF5 Palliative Care Formulary 5th ed, Twycross R, Wilcock A, Radcliffe Medical Press 2016 (http://www.palliativedrugs.com).

6.3.6.2. Medusa IV Guide (http://medusa.wales.nhs.uk).

6.3.6.3. Referenced and evaluated reference chartssuchasusedinAnaesthetics, Neonatology or Thames Valley 'Y' site intravenous drugs compatibility chart (accessed via Medusa)

6.3.6.4. UCL Injectable Medicines Administration Guide Wiley – Blackwell

6.3.6.5. In all other cases expert advice should be sought from the pharmacists.

6.4. Double Checking of Injectable Medicines

6.4.1. The Trust requires double checking for all injectable medicines administered intravenously e.g. IV boluses and IV infusions, by a competent registered healthcare professional.

6.4.2. For injectable medicines administered by other routes, double checking is only mandated in the following high-risk situations:

- Where the administering professional requests a second check.
- Where specified by another policy (i.e. Intrathecal Policy, Cytotoxic Policy).
- Subcutaneous syringe drivers for palliative care patients where it requires the mixing of two or more drugs.
- Where a complex calculation is required.
- Where the Medusa Injectable Medicines Guide indicates a high level of risk (NPSA risk rating of 6 or above).
- Neonates and paediatric departments.
- Schedule 1,2 and 3 Controlled Drugs.
- Undertaking the period of supervised practice as defined in the RCHT Injectable Medicines Competency Framework.

6.4.1. Any administration of an injectable medicine where double checking has not occurred where it is required must be recorded on the Trust's ePMA system and an override reason selected.

6.4.2. Where injectable medicines are double checked the checking practitioner must be a competent registered healthcare professional in accordance with the scope of their professional practice and registration. The double check is to confirm the correct preparation of the correct drug and not to confirm the administration (except for Controlled drugs- please refer to Controlled Drug Policy and ward SOP).

6.4.3. Where injectable medicines are double checked both must sign the administration record. Electronic administration via the ePMA system will request the password of the checker. On paper drug charts, the administration box should be divided in two and the person administering the drug should sign in the top half and the checker sign in the bottom half.

6.4.4. Double checking of all IV medicines is recommended in theatre environment if possible.If, however, the patient is at risk if the drug is not administered in timely fashion, then it is appropriate to give without having a second check.Anaesthetists must be aware of the risk of medication error where a second check is not obtained.

6.4.5. In an emergency situation where a patient is at risk of being harmed if administration of a medication is delayed it is permissible to administer medicines without a double check.

6.4.6. Areas challenged to comply with these rules need to raise concerns through their Speciality and Care Group/ Division governance routes to the Director of Nursing and Chief Pharmacist. A risk assessment will need to be completed and acknowledged on the risk register and mitigating measures considered. A final decision for safe arrangements will be made by the Director of Nursing and Chief Pharmacist supported by the Medication Practice Committee.

6.5. Flushing with Normal Saline

6.5.1. The IV cannula must be flushed with normal saline before and after administration of an IV medicine. This flush should be undertaken by the same person that administers the medicine.

6.5.2. The recording of the administration of the IV medicine by the nurse or other appropriate healthcare professional on ePMA or paper-based system also signifies the administration of the normal saline flush.

6.6. Flushing with Heparinised Saline

6.6.1. The Regional Medicines Optimisation Committee recommends there is no role for routine use of heparinised saline lock for the purpose of maintaining patency of a central venous catheter (CVC) in adults, and that sodium chloride 0.9% is suitable for locking CVCs in the majority of adult patients.

6.6.2. Clinicians caring for people with a CVC in situ should be reminded about the importance of good technique when flushing and locking a central venous access line. Good technique should include maintaining positive pressure to avoid backflow.

6.6.3. Heparinised saline has a number of disadvantages over sodium chloride 0.9% in this indication. Using heparinised saline exposes patients to an active medicine that may result in side effects.

6.6.4. This recommendation does not apply to children or neonates, nor to patients who have other vascular access types (e.g. implanted ports, renal dialysis lines).

6.6.5. This recommendation may differ from advice given by device manufacturers and differs from recommendation 1.4.4.7 in NICE CG 139, which states “When recommended by the manufacturer, implanted ports or opened-ended catheter lumens should be flushed and locked with heparin sodium flush solutions.” A risk benefit assessment should be undertaken if a manufacturer specifically recommends locking with heparinised saline. This risk assessment should include asking the manufacturer for the device-specific evidence (comparing use to sodium chloride 0.9%) for their recommendation.

6.7. Epidurals

6.7.1. All epidural infusion bags and syringes (whether purchased commercially, manufactured by the hospital pharmacy or prepared in clinical areas) must be clearly labelled with 'For Epidural Use Only' in a large font.

6.7.2. Maximise the use of ready-to-administer epidural infusions to help reduce the need for complex calculations and preparations.

6.7.3. Reduce the risk of the wrong medicine being selected by storing epidural infusions in separate cupboards or refrigerators from those holding intravenous and other types of infusions

6.7.4. Use clearly labelled epidural administration sets and catheters that distinguish them from those used for intravenous and other routes.

6.7.5. Use infusion pumps and syringe driver devices for epidural infusions that are easily distinguishable from those used for intravenous and other types of infusion.

6.7.6. Ensure all staff involved in epidural therapy have received adequate training and have the necessary work competences to undertake their duties safely.

6.7.7. Refer to the Clinical Guideline for the Care of Epidural Infusions (Adult) for more information.

6.8. Training and Assessment of Competence

6.8.1. All of the staff groups must undergo injectable medicine training before administering injectable medicines and be assessed as being competent to do so.

6.8.2. Persons assessing competence must themselves be competent in injectable medicines administration.

6.8.3. Newly qualified members of staff must undertake the approved Trust training for injectable medicines.This does not apply to medical staff who have done this in their training.

6.8.4. Training for newly qualified nurses and ODPs will normally be undertaken within the first year of becoming qualified.Ensuring this is completed is the responsibility of the department manager who is also responsible for maintaining records of this training.

6.8.5. Doctors who have previously undertaken injectable training and can evidence this must be assessed as competent by another IV competent individual before they may administer IV medications.Ensuring this is completed is the responsibility of the individual doctor who is also responsible for maintaining records of this training.

6.8.6. Doctors who have not previously undertaken IV training must do Trust training.

6.8.7. Nursing staff and ODPs appointed from outside of the Trust who regularly gave IV drugs in their last post must do the following:

- Show evidence of their competence from previous training and evidence of recent updating.
- Read this policy and Appendix 2 as well as the relevant chapters of the Trust's Medicines Policy.
- Complete mandatory Aseptic Non-Touch Technique (ANTT) training.
- Have their practice observed by someone nominated by their manager who is competent in this area.

This removes the need to do the Trust in house training. If the evidence is not available, staff must undertake the Trust approved training for the administration of IV Medicines and assessment of competence.

6.8.8. All staff giving injectable medicines must undertake ANTT as part of their mandatory training and injectable medicines mandatory training every year. A regular assessment of injectable medicines competence (by observation by a competent IV administrator) must be carried out by all staffandrecordsofthisassessmentbe maintained as part of the persons PDR process.

7. Dissemination and Implementation

7.1. The document is available on the Trust's Document Library. Significant updates will be communicated via Trust-wide email.

7.2. Implementation of the policy will be via Trust-wide communication and supported by appropriate training for the relevant members of staff.

7.3. Training for this policy will be as set out in the medicines management section of core training matrix of the Trust Core Training Policy.

8. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	The prescribing, preparation and administration of injectable medicines.
Lead	The Medicines Safety Officer.

Information Category	Detail of process and methodology for monitoring compliance
Tool	Datix for clinical incidents.
Frequency	The policy will be monitored every 3 years or sooner as clinical incidents dictate.
Reporting arrangements	Incidents and concerns will be escalated to the Pharmacy Governance meeting and the Medicines Practice. Committee (MPC) as appropriate.
Acting on recommendations and Lead(s)	Pharmacy Governance Group and MPC will co-ordinate the actions to the audit results.
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned within the time frame specified in the action plan.

9. Updating and Review

This policy will be reviewed every 3 years or sooner in the light of changes in legislation or practice.The policy review will be ratified by the Medication Practice Committee when changes are substantial.For minor changes the chair of the Medication Practice Committee can approve and re-publish.

10. Equality and Diversity

10.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the Equality Diversity And Inclusion Policy or the Equality and Diversity website.

10.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Injectable Medicines Policy V6.0
This document replaces (exact title of previous version):	Injectable Medicines Policy V5.0
Date Issued/Approved:	October 2025
Date Valid From:	November 2025
Date Valid To:	November 2028
Directorate / Department responsible (author/owner):	Iain Davidson Chief Pharmacist
Contact details:	01872 252593
Brief summary of contents:	Describes the process and governance for the prescribing, preparation and administration of injectable medicines within clinical settings.
Suggested Keywords:	Medicines, injectables, intravenous, intramuscular, subcutaneous, epidurals.
Target Audience:	**RCHT:** Yes **CFT:** No **CIOS ICB:** No
Executive Director responsible for Policy:	Chief Medical Officer
Approval route for consultation and ratification:	Medicines Practice Committee. Clinical Support Care Group.
General Manager confirming approval processes:	Richard Andrzejuk
Name of Governance Lead confirming approval by specialty and care group management meetings:	Kevin Wright
Links to key external standards:	CQC. Royal Pharmaceutical Society Hospital Pharmacy Standards.

Information Category	Detailed Information
Related Documents:	Promoting Safer Use of Injectable. Medicines, 28th March 2007. The Medicines Policy. The Medusa Injectable Medicine Administration Guide British National Formulary (BNF). Aseptic Non-touch Technique. RCH and RPS- Professional Guidance on the Administration of Medicines in Healthcare Settings Jan 2019. Cytotoxic Policy Extravasation Policy Loading Dose Worksheets. Humans Medicines Regulations 2012. Regional Medicines Optimisation Committee (RMOC)-Maintaining Patency of Central Venous Catheters in Adults-Position Statement on heparinised saline for central venous catheter lock in adults February 2019. RPS- Professional guidance on the safe and secure handling of medicines. Dececember 2018.
Training Need Identified?	Yes- there is established training packages in place for injectable medicines competency.
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical / Pharmacy

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
October 2008	V1.0	Initial Issue.	Stephen Thomas, Head of Pharmacy Technical Services
June 2011	V1.2	Review with minor amendments and reformatted into Trust policy format.	Iain Davidson, Chief Pharmacist
March 2012	V2.0	Change from SOP into Injectable Medicines. Policy with old policy contents as an appendix.	Ian Nicholls, Medication safety Lead Pharmacist

Date	Version Number	Summary of Changes	Changes Made by
July 2013	V2.1	Policy updated to clarify arrangements for the double checking of injectable medicines.	Iain Davidson, Chief Pharmacist
July 2016	V2.2	Regular review.	Ian Nicholls, EPMA and Governance Pharmacist
December 2016	V3.0	Removed student nurses from being allowed to be involved in the process. Set out clear requirements for non-registered clinical support workers. Changed terminology to included registered healthcare professionals, rather than listing every profession.	Iain Davidson, Chief Pharmacist
March 2019	V4.0	Removed reference to UCL guide and replaced with Medusa. Included section on normal saline and heparinised flush administration. Include section on epidurals.	Iain Davidson, Chief Pharmacist
Jan 2020	V4.1	Added in section 6.2.1.1 regards changed to student nurses being allowed to be involved under direct supervision and 6.2.1.2 regards assistant practitioners and VTE prophylaxis.	Iain Davidson, Chief Pharmacist
May 2022	V5.0	Minor review and amendments. Included outcome of discussion at MPC regards need for double check of IVs.	Iain Davidson, Chief Pharmacist
October 2025	V6.0	Complete review. Include reference to nurse associates on critical care.	Iain Davidson, Chief Pharmacist

All or part of this document can be released under the Freedom of Information Act 2000.

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust The Policy on Policies (Development and Management of Knowledge Procedural and Web Documents Policy). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity and Inclusion Team rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy / policy / proposal / service function to be assessed:	Injectable Medicines Policy V6.0
Directorate and service area:	Pharmacy, Clinical Support.
Is this a new or existing Policy?	Existing
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Iain Davidson, Chief Pharmacist
Contact details:	01872 252593

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	Describes the process and governance for the prescribing, preparation and administration of injectable medicines within clinical settings.
2. Policy Objectives	Safe patient care.
3. Policy Intended Outcomes	No harm to patients from the use of injectable medicines.
4. How will you measure each outcome?	Review of datix and incidents and through audit.
Who is intended to benefit from the policy?	All staff and patients involved in using injectable medicines.
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: Yes • Patients/ visitors: No • Local groups/ system partners: No • External organisations: No • Other: No

Information Category	Detailed Information
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/ groups:** Medicines Practice Committee. Clinical Support Governance Group.
6c. What was the outcome of the consultation?	Approved.
6d. Have you used any of the following to assist your assessment?	**National or local statistics, audits, activity reports, process maps, complaints, staff or patient surveys:** No.

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	
Religion or belief	No	
Marriage and civil partnership	No	
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Iain Davidson, Chief Pharmacist.

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
Section 2. Full Equality Analysis

Appendix 3. Standard Operating Procedure for Preparing and Administering an Injectable Medicine

This appendix is based on the 'Template Standard Operating Procedure for Use of Injectable Medicines' published by the National Patient Safety Agency (NPSA) in March 2007 as part of its 'Patient Safety Alert 20, Promoting Safer Use of Injectable Medicines'.

1. Preparation

1.1 Read all prescription details carefully and confirm that they relate to the patient to be treated.

1.2 Ensure that the area in which the medicine is to be prepared is as clean, uncluttered and free from interruption and distraction as possible. Ideally, preparation should take place in an area dedicated to this process. (NB High risk if not compliant).

1.3 Assemble all materials and equipment: needle safe devices, sharps bin for waste disposal, medicine ampoule(s)/vial(s), diluent, syringe(s), needle(s), alcohol wipe(s), disposable protective gloves, clean re-usable plastic tray, disposable plastic apron.

1.4 Check the following:

- Expiry dates on medicines.
- Damage to containers, vials or packaging.
- That medicines were stored as recommended, e.g. In the refrigerator.

1.5 Beware of the risk of confusion between similar looking medicine packs, names and strengths. Read all labels carefully.

1.6 Check that:

- The formulation, dose, diluent, infusion fluid and rate of administration correspond to the prescription and product information.
- The patient has no known allergy to the medicine.
- You understand the method of preparation. Use the on-line Medusa Guide, British National Formulary (BNF) or drug package insert for guidance.

1.7 Calculate the volume of medicine solution needed to give the prescribed dose. Write the calculation down and obtain an independent check by another qualified healthcare professional.

1.8 Prepare the label for the prepared medicine (see section 7).

1.9 Cleanse your hands according to local policy.

1.10 Put on a pair of disposable protective gloves.

1.11 Use a 70% alcohol wipe or spray to disinfect the surface of the plastic tray.

1.12 Assemble the syringe(s) and needle(s). Peel open wrappers carefully and arrange all ampoules/vials, syringes, and needles neatly in the tray.

1.13 Use a ‘non-touch’ technique throughout, i.e. avoid touching areas where bacterial contamination may be introduced, e.g. syringe-tips, needles, vial tops. Never put down a syringe attached to an unsheathed needle.

1.14 Prepare the injection by following the manufacturer’s product information or local guidelines, and the relevant guidance in sections 2 to 10

2. Withdrawing solution from an ampoule (glass or plastic) into a syringe

2.1 Tap the ampoule gently to dislodge any medicine in the neck.

2.2 Wipe neck of ampoule with alcohol wipe and allow to dry for 30 seconds.

2.3 Attach a sharp-safe needle to a syringe.

2.4 Snap open the neck of glass ampoules, using an ampoule snapper.

2.5 Using the syringe and needle, draw the required volume of solution into the syringe. Tilt the ampoule if necessary. Always use a filter needle or filter straw to avoid drawing up glass particles into the syringe.

2.6 Hold the syringe vertically and tap lightly to aggregate the air bubbles at the needle end. Expel the air carefully.

2.7 Remove the needle from the syringe, activate the needle safe device and discard in the sharps bin. Fit a new needle or sterile blind hub as required.

2.8 Label the syringe (see section 7).

2.9 Keep the ampoule and any unused medicine until administration to the patient is complete to enable further checking procedures to be undertaken.

2.10 If the ampoule contains a suspension rather than solution, it should be gently swirled to mix the contents immediately before they are drawn into the syringe.

2.11 The neck of some plastic ampoules is designed to connect directly to a syringe without use of a needle after the top of the ampoule has been wiped with an alcohol wipe, allowed to dry and twisted off.

3. Withdrawing a solution or suspension from a vial into a syringe

3.1 Remove the tamper-evident seal from the vial and wipe the rubber septum with an alcohol wipe. Allow to dry for at least 30 seconds.

3.2 With the needle sheathed, draw into the syringe a volume of air equivalent to the required volume of solution to be drawn up.

3.3 Remove the needle cover and insert the sharp-safe needle into the vial through the rubber septum.

3.4 Invert the vial. Keep the needle in the solution and slowly depress the plunger to push air into the vial.

3.5 Release the plunger so that solution flows back into the syringe.

3.6 If a large volume of solution is to be withdrawn, use a push-pull technique.Repeatedly inject small volumes of air and draw up an equal volume of solution until the required total is reached. This ‘equilibrium method’ helps to minimise the build-up of pressure in the vial.

3.7 Alternatively, the rubber septum may be pierced with a second needle to let air into the vial as solution is withdrawn. The tip of the vent needle must always be kept above the solution to prevent leakage.

3.8 With the vial still attached, invert the syringe.With the needle and vial uppermost, tap the syringe lightly to aggregate the air bubbles at the needle end. Push the air back into the vial. If a vent needle used, ensure the tip of the vent needle is located within the air space within the vial.

3.9 Fill the syringe with the required volume of solution.Withdraw the needle from the vial.

3.10 Check correct volume is contained in syringe.Remove the needle from the syringe, activate the needle safe device and discard in the sharps bin and exchange it for a new needle or a sterile blind hub.

3.11 The vial(s) and any unused medicine should be kept until administration to the patient is complete.

3.12 If the vial contains a suspension rather than solution, it should be gently swirled to mix the contents, immediately before they are drawn into the syringe.

4. Reconstituting powder in a vial and drawing the resulting solution or suspension into a syringe

4.1 Remove the tamper-evident seal from the vial and wipe the rubber septum with an alcohol wipe. Allow to dry for at least 30 seconds.

4.2 Use the procedure in 3.2 above to withdraw the required volume of diluent (e.g. water for injections, sodium chloride 0.9% or manufacturers supplied diluent), from ampoule(s) into the syringe.

4.3 Inject the diluent into the vial. Keeping the tip of the needle above the level of the solution in the vial, release the plunger. The syringe will fill with the air which has been displaced by the solution (if the contents of the vial were packed under a vacuum, solution will be drawn into the vial and no air will be displaced). If a large volume of diluent is to be added, use a push-pull technique.

4.4 With the syringe and needle still in place, and if permitted by the manufacturer's literature, gently swirl the vial(s) to dissolve all the powder. This may take several minutes.

4.5 Follow the relevant steps in section 3 above to withdraw the required volume of solution from the vial into the syringe.

4.6 If a purpose-designed reconstitution device is used, the manufacturer’s instructions should be read carefully and followed closely.

5. Adding a medicine to an infusion

5.1 Prepare the medicine in a syringe using one of the methods described in section 2 above.

5.2 Check the outer wrapper of the infusion container is undamaged.

5.3 Remove the wrapper and check the infusion container itself in good light. It should be intact and free of cracks, punctures and leaks.

5.4 Check the infusion solution, which should be free of haziness, particles and discolouration. NB The plastic on some infusion bags can sometimes appear hazy.

5.5 Where necessary, remove the tamper-evident seal on the additive port according to the manufacturer's instructions or wipe the rubber septum on the infusion container with an alcohol wipe and allow to dry for at least 30 seconds.

5.6 If the volume of medicine solution to be added is more than 10% of the initial contents of the infusion container (more than 50ml to a 500ml or 100ml to a 1litre infusion), an equivalent volume must first be removed with a syringe and needle.

5.7 Inject the medicine into the infusion container through the centre of the injection port, taking care to keep the tip of the needle away from the side of the infusion container. Withdraw the needle and gently invert the container at least ten times to ensure thorough mixing before starting the infusion.

5.8 Do not add anything to any infusion container other than a burette when it is hanging on the infusion stand since this makes adequate mixing impossible.

5.9 Before adding a medicine to a hanging burette, administration must be stopped. After the addition has been made and before administration is re-started, the contents of the burette must be carefully swirled to ensure complete mixing of the contents.

5.10 Check the appearance of the final infusion for absence of particles, cloudiness or discolouration.

5.11 Label the infusion (see section 7).

6. Diluting a medicine in a syringe for use in a pump or syringe-driver

6.1 Prepare the medicine in a syringe using one of the methods described above.

6.2 Draw the diluent into the syringe to be used for administration by the pump or syringe- driver. Draw in some air (slightly more than the volume of medicine needed) and remove the needle.

6.3 Stand the diluent syringe upright.Insert the needle of the syringe containing the medicine into the tip of the diluent (administration) syringe and add the medicine to it. Alternatively, a disposable sterile connector may be used to directly connect two syringes together.

6.4 Fit a blind hub to the administration syringe and invert several times to mix the contents.

6.5 Tap the syringe lightly to aggregate the air bubbles at the needle end. Remove the blind hub. Expel the air and refit the blind hub.

6.6 Carefully check the syringe for cracks and leaks and then label it (see section.7), especially noting the requirements specific to syringe drivers.

6.7 Check the following:

- The total volume of injection solution in the syringe is as specified in the prescription and that the infusion can be delivered at the prescribed rate by the administration device chosen.

- The rate of administration is set correctly on the administration device and according to the manufacturer's instructions.

6.8 Check that the rate of administration is set correctly on the device before fitting the syringe, priming the administration set and starting the infusion device.

7. Labelling injection and infusion containers

7.1 All injections should be labelled immediately after preparation, except for syringes intended for immediate push (bolus) administration by the person who prepared them. Under no circumstances should an operator be in possession of more than one unlabelled syringe at any one time, nor must an unlabelled syringe be fitted to a syringe driver or similar device.

7.2 Labels used on injectable medicines prepared in clinical areas should contain the following information:

- Name Of The Medicine.

- Strength.

- Route Of Administration.

- Diluent And Final Volume.

- Patient's Name.

- Expiry Date And Time.

- Name Of The Practitioner Preparing The Medicine.

7.3 Place the final syringe or infusion and the empty ampoule(s)/vials(s) in a clean plastic tray with the prescription for taking to the patient for administration.

8. Administration of an injectable medicine

8.1 Before administering any injection refer to the administration section in The Medicines Policy.

8.2 Also check, where relevant:

- Brand name and formulation of the medicine.

- Concentration or total quantity of medicine in the final infusion container or syringe.
- Name and volume of diluent and/or infusion fluid.
- Rate and duration of administration.
- Type of rate-control pump or device(s) to be used.
- The age and weight of any patient under 16 years of age, where relevant.
- Date on which treatment should be reviewed.

8.3 Check that the medicine is due for administration at that time and has not already been given.

8.4 Assemble everything you need including any flushing solution(s) needed.

8.5 Explain and discuss the procedure with the patient.

8.6 Check any infusion already in progress. It should be free of haziness, particles and discolouration.

8.7 Check that an appropriate access device is in place. Flush it immediately before and after administration of a medicine, and between doses of different medicines administered consecutively, according to local policy. Also check the administration site for signs of leakage, infection or inflammation.

9. Administration of injections – general

9.1 Check infusions. They should be free of haziness, particles and discolouration.

9.2 Use aseptic (non-touch) techniques at all times.

9.3 Attach administration sets to infusion containers carefully, on a flat surface and using the technique appropriate to the type of container.

9.4 Prime the access device according to local policy immediately before starting an infusion.

9.5 Before adding a medicine to a hanging burette, administration must be stopped. After the addition has been made and before re-commencement, the contents of the burette must be carefully swirled to ensure complete mixing.

9.6 If the medicine is a suspension in a syringe, gently roll the syringe between the palms of the hands to re-suspend the medicine and administer immediately.

10. After administration

10.1 After completion of an intermittent infusion, flush the access device according to local policy.

10.2 Ask the patient to report promptly any soreness at the injection site or discomfort of any sort.

10.3 Make a detailed record of administration immediately after administering the medicine.

10.4 Discard the empty ampoules/vials from which the injection was prepared and any unused medicine. Ampoules or vials should never be used to prepare more than one injection unless specifically labelled by the manufacturer for ‘multi-dose’ use.

10.5 Re-check the administration site for signs of leakage, infection or inflammation and continue to monitor the patient, contents of the infusion container and the rate of infusion according to local policy.

10.6 Check that arrangements for monitoring fluid balance or clinical parameters have been made. Ensure that relevant documentation is made available for subsequent regular monitoring to take place.