1. Introduction

This policy should be read in conjunction with the Medicines Policy and the Injectable Medicines Policy – Supporting Information, and other relevant documents including Training in the Safe Use of Medical Devices, Asepsis Policy, the Anticancer Medicines Policy and Guidance on the Management of Patients receiving Cytotoxic Chemotherapy for Non Malignant Conditions and the Parenteral Therapy Protocol: Management and Administration of Injectable Medicines by a Lone Community Registered Practitioner which will be referenced throughout the document. It closely follows the guidelines set out in the NPSA’s Patient Safety Alert 20 – Promoting the Safer Use of Injectable Medicines.

This policy has been written to encompass, as much as possible, the range of practice within the Trust. It incorporates evidence based practice, recommendations of expert bodies, accepted best practice both locally, and at other UK Trusts, and the views of local practitioners. It is however recognised that healthcare practice constantly evolves due to the introduction of new and innovative techniques, the review of existing practices in the light of new evidence, and as the skill mix, and the responsibilities of different staff groups change. As a result certain areas may wish to define local guidelines to facilitate the implementation of new developments. Any such additional guidelines must define which of the local procedures vary from this existing Newcastle Injectable Medicines Policy and be produced in collaboration with appropriate staff groups (e.g. infection control). In all cases the Medicines Management Committee must approve and register these additional guidelines prior to their implementation, and they must be reviewed at least once every two years.

2. Scope

This policy applies to all healthcare staff employed by the Trust on a substantive or temporary basis who are involved in the prescribing, supply and storage, preparation, administration and monitoring of injectable medicines.

Note: The ‘clinical area’ referred to throughout this document refers to any area where clinical activities are performed. In the community setting this may include the patient’s home.

3. Aim

The aim of this policy is to standardise practices with respect to the prescribing, preparation, administration and monitoring of injectable medicines.
4. Policy

A series of standard statements is set out below. The policy is based upon these statements.

Standard Statements

Injectable medicines should be prescribed, prepared, administered and monitored only by healthcare staff who understand the risks involved, have been trained to use safe procedures, and have demonstrated their competence for the task. Further information can be found in Injectable Medicines Policy – Supporting Information (section1).

4.1 Prescribing

4.1.1 Medicines should be given by injection only when the use of no other route is clinically appropriate, practically possible or acceptable to the patient. The necessity for repeated injections/infusions should be regularly reviewed in favour of switching to oral administration as soon as clinically appropriate.

4.1.2 All prescriptions for injectable medicines, including flushes, must specify the following:
   - patient’s name
   - prescriber’s signature
   - the approved medicine name
   - the dose and frequency of administration
   - the maximum daily dose has not been exceeded (where applicable)
   - the date and route of administration
   - the allergy status of the patient

Further information which may be required includes the following items:
The technical information can be found in the NHS Injectable Medicines Guide which is available on the intranet (Application Resources tab > BNF & Medicines Resources > Injectable Medicines Guide) or by clicking Injectable Medicines Guide.

   - 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
   - date on which treatment should be reviewed

*the type of rate-control pump or device should be stated on the prescription when a non-standard device is to be used.
When two or more prescription charts are in use it is essential that they are cross referenced so that practitioners are aware of all prescribed medicines.

A prescription is not required where a Patient Group Direction (PGD) applies or where a medical device (with a CE mark) is used for its intended purpose e.g. a sodium chloride flush.

Community nurses may use a written instruction (See the Medicines Policy section 8.1.4 for further detail).

4.2 Supply and Storage

4.2.1 New injectable medicines which are to be introduced for use within the Trust should be risk assessed e.g. using the NPSA 20 Risk Assessment Tool. This assessment will determine the safest presentation, location for storage and whether the medicine is suitable to be prepared in the clinical area. This assessment is done as part of the Formulary approval process.

Where necessary risk reduction tools e.g. a preparation aid can be used to allow preparation of higher risk medicines in the clinical area where deemed appropriate.

4.2.2 Injectable cytotoxics and parenteral nutrition must be supplied to clinical areas or for use only as ready-to-administer products. A list of cytotoxic medicines can be found on the intranet.

4.2.3 Ready-to-administer or ready-to-use products should be stocked in all clinical areas in preference to products needing preparation for use and classified as high-risk. Concentrates should only be supplied where safer alternatives are not available.

4.2.4 Multiple use of unpreserved injectable medicines is not permitted. Most injectable medicines are licensed for “once-only” use. Unless the manufacturer’s label specifically indicates that the injection contains a preservative, the container must be used to prepare a single dose for a single patient on one occasion only. This includes bags of infusion fluid which must be used once only. When preparing injectable medicines, infusion fluids must not be used to dilute or reconstitute more than one preparation. Decanting spikes must not be used.

4.3 Preparation

4.3.1 Before beginning preparation staff* must have a prescription or Patient Group Direction, essential information about the product(s), and processes needed for safe preparation and administration.

*In those circumstances where a doctor or dentist is preparing and administering the injectable medicine, a prescription is not required.
In the Perioperative & Critical Care and Cardiothoracic directorates, anaesthetic assistants may prepare items under the direction of an anaesthetist without a prescription or PGD. Technical information required is available in the electronic Injectable Medicines Guide which should be available on all clinical workstations in these areas. (This can also be accessed via the intranet (Application Resources tab > BNF & Medicines Resources > Injectable Medicines Guide).

4.3.2 Aseptic Non Touch Technique (ANTT) must be used during preparation and administration. Injectable medicines prepared in clinical areas must always be administered immediately after preparation: they must not be stored before use. The duration of administration of any infusion should not exceed 24 hours.

4.3.3 When preparing infusions the number of additions to the infusion bag via the additive entry port should be minimised.

4.3.4 All syringes, including flushes and infusions, must be labelled immediately after preparation by the person who prepared them. “Flag labelling” should be used to make sure that volume graduations on syringes are not obscured.

The following exceptions apply:

- In general clinical areas where preparation and bolus (push) administration is one uninterrupted process and the unlabelled product does not leave the hands of the person who prepared it. In theatres a scrubbed nurse drawing up and handing a syringe to a surgeon is also considered to be undertaking one uninterrupted process. Only one unlabelled medicine must be handled at one time.
- Where a flush is a pre-filled medical device used for its intended purpose.
- Exemptions apply for community nursing teams when in line with their approved local operational policy.
The standard should be implemented in the Trust as follows:

Labelling of Bolus Injections

Critical Care and Theatres use the internationally recognised colour coded system. (Available from supplies)

Labelling of Infusions in Bags

Drug Additive / Infusion Identification Labels (Supplies code: NUTH91) correctly completed should be used in all cases.

Labelling of Infusions in Syringes

Syringe Labels (Supplies code: NUTH97) correctly completed should be used taking care not to obscure syringe markings.

Labelling of Infusions in Bags

Drug Additive / Infusion Identification Labels (Supplies code: NUTH91) correctly completed should be used in all cases.

Labelling of Infusions in Syringes

Syringe Labels (Supplies code: NUTH97) correctly completed should be used taking care not to obscure syringe markings.

Labelling of Bolus Injections

General wards and clinical areas to prepare blank labels as part of the preparation process and attach to the syringe for differentiation of preparations during transportation to the patient. (Supplies code: sls 14014)
Labelling of syringes for use during sterile procedures. In these circumstances a risk assessment should be undertaken by the directorate. If the provision of sterile labels is deemed appropriate, contact the Supplies Department who will be able to assist with their procurement. If other methods of differentiating prepared injections are used, then a standard operating procedure should be developed and displayed in the area where the activity is undertaken.

Where identification of multiple invasive lines is necessary the Guideline for Labelling Invasive Lines should be referred to section 3.3 of the Injectable Medicines Policy – Supporting Information.

4.3.5 Medical devices with Luer connectors must be used for preparation and administration of injectable medicines with the exception of epidural, intrathecal and regional infusions and boluses which should be prepared and administered in a non-Luer device where possible. This is to satisfy the recommendations of the National Patient Safety Alert (NPSA); Safer spinal (intrathecal), epidural and regional devices.

Medicines for oral/enteral use must be prepared and administered using only devices specified for this purpose with non-Luer connections.

4.3.6 Risks associated with the route of administration should be considered when deciding the most appropriate location for preparation. Preparation of intrathecal injections (non-cytotoxic only) is permitted in theatre and critical care areas; however, preparation within the pharmacy is preferred whenever the stability of the medicine allows.

4.3.7 An independent second check should occur for preparation of intravenous injectable medicines (i.e. those being manipulated in clinical areas, pre-filled syringes are excluded) except when a life threatening emergency prevents this. (The checker can be a doctor, registered nurse or nursing associate, anaesthetic assistant, pharmacist, radiographer or medical physicist who has undertaken training in drug administration). Where a doctor or dentist has prepared the injectable medicine, the second check is recommended but it is at the discretion of the individual practitioner.

Single nurse or nursing associate preparation of intramuscular and subcutaneous injectables is acceptable. See section 4.4.3 for exceptions.

Community nursing teams are an exception and are permitted to single check any injectable preparation only when doing so in line with their approved local operational policy.
4.3.8 Further Information
The general procedure for the preparation of injectable medicines in clinical areas can be found in section 7 of the Injectable Medicines Policy – Supporting Information.

4.4 Administration

4.4.1 Before administering an injectable medicine, the following should be available†: a current prescription, or a Patient Group Direction or other written instructions, essential technical information and a prepared and labelled injectable medicine (see section 4.3.4 for exemptions). The patient’s identity should be confirmed (e.g. by the wristband if an inpatient.)

†In those circumstances where a doctor or dentist has prepared and is administering the intravenous injectable medicine, a prescription is not required. Similarly, where a doctor or dentist is administering the intravenous injectable medicine, the second check is recommended but not required; therefore it is at the discretion of the individual practitioner.

4.4.2 For intravenous preparations an independent check from a second registered practitioner is required with the following exceptions:

- A single administration check is permitted within adult critical care units (ward 26 FH, ward 37 FH, ward 18 RVI and ward 38 RVI), a verbal check of the planned rate and access route shall be performed as part of the preparation check. Changes of infusions and multiple bolus injections can be carried out by one registered nurse. See the Medicines Policy for further detail.

- Community nursing teams are an exception and are permitted to single check an intravenous injection administration only when doing so in line with their approved local operational policy.

4.4.3 For intramuscular and/or subcutaneous preparations an independent check prior to administration from a second registered practitioner is not required (in most circumstances). The Medicines Policy advises that that a second check of an injectable medicine via the intramuscular or subcutaneous route is only necessary in specific circumstances (see the Medicines Policy for further detail).

However,

- Insulin administered by any injectable route requires an independent check by a registered practitioner.

- Practitioners administering an injectable medicine via the intramuscular or subcutaneous route should always work within their competence and ask for an independent check if in any doubt.
*In the community setting single nurse administration of insulin may be undertaken based on a local risk assessment.

4.4.4 The person administering the medicine must **personally** make a record of administration as soon as possible after the event. This is extremely important in circumstances such as theatres or outpatient clinics where the person administering the injectable may also be the prescriber and there may be no written prescription.

4.4.5 Where products have been identified as representing the highest risk to patients at the time of administration a strategy to reduce these risks should be put in place. Examples of possible risk reduction strategies include double checking systems and the use of "smart" infusion pumps or controllers and similar technologies.

4.4.6 Further Information
The general procedure for the administration of injectable medicines in clinical areas can be found in the Injectable Medicines Policy – Supporting Information (section 8). Considerations for intravenous, intramuscular and subcutaneous, epidural, intrathecal and other routes are also given.

4.5 Monitoring

4.5.1 Infusions must be monitored to ensure safe administration of prescribed treatment. A minimum standard for **active** infusions recommends monitoring of the patient, the cannula and infusion site, the administration set, and the infusion pump or device on an hourly basis.

**Inactive** (simple infusion fluids) should be monitored at least 4 hourly. Monitoring may be required more frequently if clinically indicated.

Community nursing teams are an exception and must follow their approved local operational policy.

Further Information

The minimum practice standard for the monitoring the administration of injectable medicines in clinical areas can be found in section 9 of the Injectable Medicines Policy – Supporting Information document.

Any clinical complications identified as a result from routine monitoring should be managed appropriately as per the individual patient needs.

5. Training

Training for staff will be as outlined in the Injectable Medicines Policy Supporting Information document. Monitoring of training will be via the annual policy audit.
6. Equality and diversity

The Trust is committed to ensuring that, as far as is reasonably practicable, the way we provide services to the public and the way we treat our staff reflects their individual needs and does not discriminate against individuals or groups on any grounds. This document has been appropriately assessed.

7. Monitoring and Review

<table>
<thead>
<tr>
<th>Standard</th>
<th>Monitoring and Audit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreed standards for prescribing, supply, storage, administration and monitoring of injectable medicines (in line with Trust Policy)</td>
<td>Audit against agreed standards that represent the content of the policy. Datix incidents related to failure to comply with these standards.</td>
</tr>
<tr>
<td></td>
<td>Pharmacy staff and MSO with support from nursing as required.</td>
</tr>
<tr>
<td></td>
<td>Medicines Management and Governance Committee</td>
</tr>
<tr>
<td></td>
<td>Annually</td>
</tr>
</tbody>
</table>

8. Consultation and review

Original Version of this policy was produced by the multidisciplinary Safer Use of Injectables Group (task and finish group to implement NPSA PSA 20). Last version Medicines Management Committee (July 2010). Subsequent amendments discussed individually at Medicine Management Committee meetings.

9. Implementation (including raising awareness)

- Changes communicated to staff working in Community Health
- Changes communicated to Pharmacy Staff
- Changes communicated to Nursing staff via the Clinical Educators / nursing forums including clinical managers / leaders.

10. References

3) NPSA. Patient Safety Alert 20. A multidisciplinary practice standard listing core principles of safe practice
4) NPSA. Infusion Device Training www.clpu.nhs.uk
The Newcastle upon Tyne Hospitals NHS Foundation Trust

Equality Analysis Form A

This form must be completed and attached to any procedural document when submitted to the appropriate committee for consideration and approval.

PART 1

1. **Assessment Date:** 13.5.19

2. **Name of policy / strategy / service:**
   Injectable Medicines Policy

3. **Name and designation of Author:**
   David Caulfield – Assistant Director of Pharmacy

4. **Names & designations of those involved in the impact analysis screening process:**
   Lorna Clark, Assistant Director of Pharmacy

5. **Is this a:**
   Policy [x]  Strategy [ ]  Service [ ]
   **Is this:**
   New [ ]  Revised [x]
   **Who is affected**
   Employees [x]  Service Users [x]  Wider Community [ ]

6. **What are the main aims, objectives of the policy, strategy, or service and the intended outcomes?** *(These can be cut and pasted from your policy)*
   This policy aims to minimise the risks associated with the prescribing, preparation, supply and administration of injectable medicines.

7. **Does this policy, strategy, or service have any equality implications?**  Yes [ ]  No [x]
   **If No, state reasons and the information used to make this decision, please refer to paragraph 2.3 of the Equality Analysis Guidance before providing reasons:**
   This policy applies to all staff working in the Trust who are involved in prescribing, preparation, supply and administration of injectable medicines.
8. Summary of evidence related to protected characteristics

<table>
<thead>
<tr>
<th>Protected Characteristic</th>
<th>Evidence, i.e. What evidence do you have that the Trust is meeting the needs of people in various protected Groups</th>
<th>Does evidence/engagement highlight areas of direct or indirect discrimination? If yes describe steps to be taken to address (by whom, completion date and review date)</th>
<th>Does the evidence highlight any areas to advance opportunities or foster good relations. If yes what steps will be taken? (by whom, completion date and review date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race / Ethnic origin (including gypsies and travellers)</td>
<td>Staff are expected to comply with policy irrespective of their race / ethnic origin.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sex (male/ female)</td>
<td>Staff are expected to comply with policy irrespective of their sex.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Religion and Belief</td>
<td>Staff are expected to comply with policy irrespective of their religion and belief.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sexual orientation including lesbian, gay and bisexual people</td>
<td>Staff are expected to comply with policy irrespective of their sexual orientation.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Age</td>
<td>Staff are expected to comply with policy irrespective of their age.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Disability – learning difficulties, physical disability, sensory impairment and mental health. Consider the needs of carers in this section</td>
<td>Staff with physical disabilities will be expected to comply with policy. Staff with learning difficulties, sensory impairment and mental health may be excluded from prescribing, preparation, supply and administration of non-cytotoxic intrathecal and intraventricular injections. This is appropriate from a safety and security perspective.</td>
<td>Staff with learning difficulties, sensory impairment and mental health may be excluded from the policy; this is on the grounds of safety and security.</td>
<td>No</td>
</tr>
<tr>
<td>Gender Re-assignment</td>
<td>Staff who have had gender re-assignment are expected to comply with policy.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Marriage and Civil Partnership</td>
<td>Staff are expected to comply with policy whether they are married, in a civil partnership or single.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Maternity / Pregnancy</td>
<td>Staff are expected to comply with policy when pregnant.</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

9. Are there any gaps in the evidence outlined above? If ‘yes’ how will these be rectified?

No

10. Engagement has taken place with people who have protected characteristics and will continue through the Equality Delivery System and the Equality Diversity and Human Rights Group. Please note you may require further engagement in respect of any
significant changes to policies, new developments and or changes to service delivery. In such circumstances please contact the Equality and Diversity Lead or the Involvement and Equalities Officer.

Do you require further engagement?  
Yes [  ]  No [ x ]

11. Could the policy, strategy or service have a negative impact on human rights? (E.g. the right to respect for private and family life, the right to a fair hearing and the right to education?)

No.

PART 2

Name:  
Lorna Clark

Date of completion:  
13.5.19

(If any reader of this procedural document identifies a potential discriminatory impact that has not been identified, please refer to the Policy Author identified above, together with any suggestions for action required to avoid/reduce the impact.)