Standard Operating Procedures for the Safe Handling and Administration of Injectable Cytotoxic Drugs

Plymouth Hospitals NHS
NHS Trust

Date	Version
January 2016	**2**

Purpose

To instruct staff on how to correctly handle and administer injectable cytotoxic drugs.

Scope this document?

Applies to all staff who handle and administer injectable cytotoxic drugs.

Key Message

Staff working for or on behalf of Plymouth Hospitals NHS Trust who handle or administer injectable cytotoxic drugs must do so in accordance with these SOPs.

Accountabilities

Production	Peter Gray, Pharmacist
Review and approval	Medicines Utilisation and Assurance Committee
Ratification	Medicines Utilisation and Assurance Committee
Dissemination	Peter Gray, Pharmacist

Links to other policies and procedures

PHNT Chemotherapy Operations Group

- Oncology and Blood Services Clinical Chemotherapy Service Operations Policy

Pharmacy Documents:

- PHNT Medicines Management Policy

PHNT Vascular Access Documents:

- Administration of Medication through a Central Venous Catheter (CVC)
- Removal of a Central Line

PHNT Infection Control Documents:

- Guidelines for the Management of Peripheral Intravenous Devices
- Guidelines for the Management of Central Intravenous Catheters
- Hand Hygeine Guidelines
- Guidelines for Aseptic Technique
- Safe Disposal of Sharps Policy

Other Documents:

- Royal College Nursing Standards for Infusion Therapy

Version History	Changes
Version 1 Version2	December 2012 January 2016 Minor amendments (eg. Birch ward is now the Bracken Unit) Minor rearrangement of the order of the sections Removal of section relating to administration via a butterfly needle (no longer practiced)

Last Approval	Due for Review
January 2016	January 2020

1 Introduction

The purpose of this procedure is to provide instructions for the safe handling and administration of cytotoxic drugs to safeguard patients, staff, carers and visitors to the hospital. They should be read in conjunction with the Oncology and Blood services Guidelines and Protocols.

Special precautions are required to avoid potential hazards from handling cytotoxic drugs. Cytotoxic drugs can be highly irritant to the eyes, mucous membranes and intact skin. Most cytotoxic drugs are mutagenic, teratogenic and carcinogenic, and prolonged exposure to even low levels of cytotoxic drug may cause cancer.

Any female member of staff who is pregnant or thinks they may be pregnant, or who is breast feeding must not handle cytotoxic drugs.

The preparation of **ALL** cytotoxic drugs will therefore be carried out in the specialised facilities of the Pharmacy Department.

The administration of cytotoxic drugs also requires special precautions, since their administration may be accompanied or followed by severe local or systemic toxicity. Accidental infiltration must be avoided since extravasated cytotoxic drugs may cause extensive damage to subcutaneous or underlying soft tissue.

Staff involved in the administration of cytotoxic drugs must do all they can to avoid contamination of medical equipment with any infusion fluid by following closely the local drug handling recommendations. Destruction of equipment may be necessary if successful decontamination cannot be guaranteed resulting in the financial implications of replacement. Staff should refer to the MEMS Medical Equipment User Guide, in particular the sections on Good Practice in the use of Medical Equipment, Fault Reporting and Appendix B Decontamination Labelling Procedure.

Intrathecal Cytotoxic drugs must only be administered by registered medical practitioners, (Group 1) who are on the Intrathecal Register. Intravenous cytotoxic drugs should only be administered by Group 3 and Group 5 nurses (Chemotherapy-trained nurses). However Group 2 nurses may administer cyclophosphamide infusions and methotrexate injections **but only** if they have previous experience of administering injectable cytoxics.

Administration of cytotoxic drugs

- Gown/apron and gloves must be worn at all times when handling cytotoxic drugs. The wearing of safety glasses is also recommended when there is a risk of spraying, splashing or aerosols. Ensure that your gloves and gown/apron are removed before returning to general duties such as answering the telephone, to avoid the spread of cytotoxic contamination. **Refer to the PHNT Oncology and Blood Services Clinical Chemotherapy Service Operations Policy for detailed instructions on the use of personal protective equipment.**

- The following guidance on the method of administration is intended primarily to assist in avoidance of extravasation (see Appendix 2). Brent ward and Bracken Unit have their own handling guidelines to reflect their practice and circumstances.

2 Procedure for administration of cytotoxic drugs by intravenous bolus via a cannula

Refer to the PHNT Oncology and Blood Services Clinical Chemotherapy Service Operations Policy for further general guidance on the safe handling, administration and disposal of cytotoxic drugs.

- It is recommended that a cannula of the smallest suitable gauge should be used to administer cytotoxic drugs. Cannulae placed in the flexor surface of the wrist or the antecubital fossa should be avoided when administering cytotoxic drugs. Use a readily visualised vein of a suitable calibre.

- If a cannula is already in situ, inspect insertion site and administer a Normal Saline 0.9% flush to ensure vein integrity and patency. Where vesicant drugs are being given, resiting of the cannula is advised. If cannula is resited, avoid the distal point on the same vein.

- Vesicant cytotoxic drugs should usually be given into a running infusion of Sodium Chloride 0.9% or glucose 5% (depending on the compatibility with drugs).

- Give the most irritant and vesicant drugs first.

- Attach a connector to the peripheral cannula

- Attach luer lock chemo syringes to the needle free bung on the administration set and administer the drug. Vesicant drugs should usually be injected slowly through a fast running drip. Other drugs can be administered at approximately 4-5ml per minute.

- Withdraw a small volume of blood to check that the needle is in the vein. If there is no back flow of blood and/or there are signs of extravasation, use a new injection site avoiding distal point on same vein.

- Whilst administering the drug observe the site continuously for patency, redness, inflammation, swelling etc. and ask the patient to report any stinging or burning pain, which may indicate extravasation.

- On completion of the injection, ensure adequate flushing.

- If several drugs are given or there are several syringes of the same drug, repeat above steps for each syringe and/or drug.

3 Procedure for administration of cytotoxic drugs by peripheral intravenous infusion

Refer to the PHNT Oncology and Blood Services Clinical Chemotherapy Service Operations Policy for further general guidance on the safe handling, administration and disposal of cytotoxic drugs.

- Insert a cannula of an appropriate gauge.

- If a cannula is already in situ, inspect insertion site and flush with 0.9% Normal Saline to ensure vein integrity and patency. Where vesicants are being given, re-siting of the cannula is advised.

- If cannula is resited, avoid the distal point on the same vein.

- Ensure there is good free flow (60 drops/minute) with sodium chloride 0.9% or glucose 5% infusion.

- Give the most vesicant and irritant drugs first if more than one drug is being administered.

- Check that all cytotoxic drugs are infused through the correct giving set (eg. dacarbazine infused through a light-sensitive giving set, paclitaxel infused through a filter giving set).

- Check the infusion site regularly for redness, inflammation, swelling etc. and ask the patient to report any stinging or burning pain immediately, which may indicate extravasation.

- At the end of the infusion flush the giving set with the same diluent solution.

4 Procedures for administration of cytotoxic drugs by the intravesical, intrapleural, subcutaneous, intramuscular or central venous routes

Refer to the PHNT Oncology and Blood Services Clinical Chemotherapy Service Operations Policy for further general guidance on the safe handling, administration and disposal of cytotoxic drugs.

5 Special procedures

- Refer to the Intrathecal Policy for intrathecal administration of cytotoxic drugs.

- Intrathecal medication is only administered on Bracken Ward and Children and Young People's Outpatients Department. Special procedures apply and all patients should be referred to the Consultant Haematologist/Paediatric Oncologist

- Medical/Nursing staff who are not on the Intrathecal Register are not authorised to take part in the procedure other than as an observer.

6 Procedure for dealing with accidents involving injectable cytotoxic drugs

- If a member of staff has an accident involving cytotoxic drugs the following action must be taken:

Immediate first aid:

Eyes	All areas where cytotoxic drugs are routinely administered should keep eye irrigation kits which are available from the Pharmacy Department. If such a kit is not available, copious amounts of cold water will suffice.
Mucous membranes	Copious amounts of cold water.
Skin	Wash well with soap and water
Skin infiltration	Treat as for extravasation

- Following immediate first aid an incident form must be completed and medical advice sought from the Occupational Health Department. Attend the Accident and Emergency department if anything other than basic first aid is required. Casualty officers are advised to inform a senior ophthalmic surgeon in the event of spillage in the eye.
- Reporting an accident involving a member of staff:
    - Nursing staff report through the nurse in charge to the clinical area nurse manager.
    - Medical staff report to consultant.
    - Pharmacy staff report to the Chief Pharmacist.

- All staff must report the incident to the Occupational Health Department and must record the accident details on a Datix electronic incident form.

- If, after an accidental spillage, any of the following symptoms occur then report these to Occupational Health:- light-headedness, dizziness, nausea, headaches, hair loss, nasal ulceration or skin reactions.

- Accidents involving a patient/visitor:

    - If the accident involves a patient or visitor instigate immediate first aid as above and seek immediate medical advice. Document the accident in the patient's notes and record the accident on a Datix electronic incident form.

- N.B. Cytotoxic spillage is reportable under RIDDOR as the accidental release of any substance which may damage health – telephone the General Office or On-call Manager immediately.

Cytotoxic Spillages

- An unused cytotoxic drug spillage kit (supplied by Pharmacy) must be available at all times in clinical areas where cytotoxic drugs are routinely administered (Bracken Ward, Birch Day Case Unit, Woodcock Ward, Children and Young People's Outpatient Department , Brent Ward, Chemotherapy Outpatients and PIU). All staff must know how to use it and know where it is stored. If a kit is used it must be replaced immediately.

- All patients who are being transferred between hospital wards and departments with intravenous chemotherapy in situ must be accompanied by a cytotoxic drug spillage kit.

7 Procedure for dealing with of spillage of cytotoxic drug

- Do not leave the spillage unattended in order to obtain assistance, call for help if necessary. Keep all unnecessary personnel away from the site of the spillage. Obtain the nearest Cytotoxic drug spillage kit and follow the instructions on the pack.
- If any equipment is contaminated with cytotoxic fluid follow the following procedure for cleaning and transport of the contaminated equipment
- The equipment must be cleaned externally at the spill site by the users, taking suitable precautions (wearing the gloves, gown, respirator mask and safety glasses provided in the Cytotoxic spill kit)
- Provide details to MEMS of the equipment, the cytotoxic drug, whether the equipment is contaminated or not and the degree of contamination (e.g. Splash or large amounts of fluid).
- A contamination or decontamination label and form must be completed. Both of which should be attached and sent with the equipment to MEMS.
- The equipment must be double bagged and labelled as having been involved in a cytotoxic spill.
- The equipment must be brought to MEMS and placed in a fume cabinet in the MEMS decontamination room.
- Complete the report card and pass to Pharmacy Quality Assurance Manager.

8 Document Accountability

Production	Peter Gray, Pharmacist
Review and approval	Medicines Utilisation and Assurance Committee

Dissemination	Peter Gray, Pharmacist

9 Overall responsibility for this document

The Director of Pharmacy has overall responsibility for the safe preparation and administration of medicines in this Trust, and therefore has overall responsibility for this document.

10 Dissemination and Implementation of this document

- This SOP will be publicised in Vital signs and in the weekly staff news brief. The SOP will be held in the Pharmacy Dept. Section of PHNT StaffNet.