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Guidelines for the Administration of Subcutaneous Chemotherapy in the Community.

Introduction and Aim

Cytotoxic chemotherapy has the potential to cause harm to patients who receive it and to health care professionals, or carers, who administer it. However, certain cytotoxic chemotherapy agents may be given subcutaneously and can safely be delivered in the community; enabling patients to receive care in their own home or local to where they live. Thus reducing the need for unnecessary hospital stays.
Following the good practice outlined in these guidelines will reduce the risks to all patients, carers and Health Care Professionals involved.

Objectives

These guidelines will:

- Raise awareness with patients, carers and Health Care Professionals about the risks involved in the administration of subcutaneous chemotherapy and how to reduce those risks
- Ensure informed consent is gained prior to administration
- Provide clear written information for both Health Care Professionals, patients and carers on the actual process of administration
- Identify the equipment required for the safe administration of subcutaneous chemotherapy in the community
- Offer guidance on storage, disposal of sharps and spillage

Scope

This procedure applies to all Health Care Professionals who are administering subcutaneous chemotherapy in the community to adult, or young adult/teenage, patients. It will apply equally to patients receiving their treatment for management of an autoimmune disorder and for treatment of a malignancy.

Equality Impact Assessment	An Equality Impact Assessment has not been completed. This is because the procedure has been written to support implementation of the Management of Parenteral Cytotoxic Chemotherapy Policy.
Documents to read alongside this Procedure	Management of Parenteral Cytotoxic Chemotherapy Policy Procedure for Handling Cytotoxics During Pregnancy Procedure for the Safe Administration of Chemotherapy/Supportive Therapy on the Tenovus Mobile Unit
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Disclaimer

If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or the [Governance Directorate](#).

Summary of reviews/amendments

Version Number	Date of Review Approved	Date Published	Summary of Amendments
1	18 th August 2016	31 st August 2016	New document.

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1.0 Introduction

Cytotoxic chemotherapy may be administered via a variety of routes, including the subcutaneous. It can be used in the management of both malignancies and autoimmune disorders and is a safe and convenient way for patients to receive their treatment. An additional advantage being that it is often feasible for that treatment to be delivered in the community; allowing costly and unnecessary hospital stays to be reduced to a minimum and preventing excessive out-patient appointments.

It should be noted that only a small group of cytotoxic drugs are suitable for subcutaneous administration.

2.0 Definitions

A cytotoxic drug is any drug that has a toxic effect on cells and is commonly used in cancer settings to kill, or slow the reproduction of, neoplastic, or cancerous, cells. However, when used in the treatment of autoimmune disorders, the intended outcome is to alter the abnormal behaviour of cells, or to kill reactive T or B cells, and to alleviate the symptoms of the disease. Consequently doses may be lower when used for this indication. Regardless of intent however all may have a range of unpleasant side effects.

Subcutaneous literally means under the skin and subcutaneous administration involves using a short needle to inject medication into the layer of tissue between the skin and the muscle.

3.0 Scope

These Guidelines are intended as a practical resource for Health Care Professionals (HCPs) caring for patients receiving subcutaneous chemotherapy in the community and will include advice on prescribing, administration, waste management and handling of a spillage.

They should supplement face to face training; which may be achieved through attendance on the Cardiff and Vale University Health Board's (UHB's) Chemotherapy Study Days, through small group training as in the case of district nurses, or one to one training for patients.

Administration in the community refers to both the patient's own home and, for Haematology or Teenage Cancer Trust Unit (TCTU) patients only, to administration on the Tenovus Mobile Support Unit (TMSU).

4.0 Aim

The handling and administration of cytotoxic chemotherapy is potentially hazardous to HCPs who prepare and administer the drugs and to the patients who receive them; as it has the potential to cause harm to a developing foetus and to cause secondary malignancies and genetic mutations. Exposure may occur through inhalation of the drug, ingestion, absorption through the skin and mucous membranes or through needlestick injury.

Following the good practice outlined in these Guidelines should minimise the risks to HCPs, carers and patients themselves. The Guidelines will cover prescribing, safe handling, storage, administration, disposal of waste and management of a cytotoxic chemotherapy spillage in the community.

5.0 Consent

Written informed consent should be obtained before the administration of the first dose of any chemotherapy, using the UHB's standard consent form. For subsequent doses verbal consent will be sufficient. Patients should receive both verbal and written information on their individual treatment plan, and the chemotherapy itself, as part of this process of consent. The information should cover, as a minimum, side-effects and contact numbers of who to contact for advice (both in and out of hours).

6.0 Prescribing

Electronic prescribing is not currently widely available in Cardiff and Vale UHB so most prescriptions will be hard copies. In the cancer setting parenteral cytotoxic chemotherapy may only be prescribed by an authorised consultant, specialist registrar, staff grade or non-medical prescriber and initial doses are given either as an in-patient or in day unit. Patients will return to clinic for regular reviews, blood tests and subsequent prescriptions.

In Rheumatology, some GPs are now prescribing second and subsequent rounds of treatment; once treatment has been instigated in hospital. Initial treatment will be prescribed as above in accordance with local policy.

A list of approved regimens should be available in each Directorate and in Pharmacy.

7.0 Storage

Whether a medication should be stored in the fridge or at room temperature will vary depending on the drug and the manufacturer. Please adhere to the manufacturer's or pharmacy's guidance for the individual drug. However, general principles behind storage in a patient's home are that it should be kept in a plastic container out of reach of children and pets. If stored in a fridge keep away from un-wrapped food if possible. Drugs stored at room temperature should be kept away from heaters or direct sunlight. Cytotoxic sharps bins should also be stored securely away from children and pets.

Chemotherapy administered in the TMSU will be delivered to the unit from the Pharmacy Aseptic Unit and stored according to manufacturers' requirements. A tray will be used to store non-fridge items and the unit will contain a fridge specifically for the storage of medication. Cytotoxic drugs should be stored on a shelf away from other drugs if a separate cytotoxic fridge is not available.

8.0 Equipment

The following equipment should be provided to patients who wish to self-administer: (Appendix 1 {Patient/Carer Administration Checklist} may provide a useful prompt for the nurse supplying equipment and training the patient).

- Clean impermeable tray or foil trays
- Gauze
- Appropriate sized needles for administration if required – [Dougherty and Lister (2015) recommend 23g but if not available then 25g]. *Minijet methotrexate may be used in Rheumatology and Dermatology with the needle already in situ*
- Skin cleanser (*patient preference – advisable if immunocompromised but not essential if socially clean (Dougherty and Lister 2015)*)

- Cytotoxic sharps bin and cytotoxic bag for non-sharps waste
- Cytotoxic medication and prescription (if appropriate)
- Other medications (e.g. prophylaxis, antiemetics)

Please supply sufficient until the patient's next hospital visit or until supplies can be ordered in the community.

8.1 Equipment for District Nurses/Carers

In addition to the above, personal protective equipment (PPE) in the form of non-sterile gloves and aprons should be provided for carers or district nurses who are going to administer. Goggles may also be supplied if desired.

8.2 Equipment for the TMSU

Equipment will be taken across to the TMSU on the days in use; as there is limited room for permanent storage. In addition to the above the following will be required:

- a cytotoxic spillage kit
- absorbent lining (to line the trays)
- goggles (if desired), apron and non-sterile gloves

9.0 Procedure

Registered Nurse Administration (See Appendix 2 for a simplified Step by Step Guide)

- Explain the procedure to the patient and gain verbal consent
- Check the medication is prescribed, the chart dated and that there is a pharmacy signature on each page
- Carry out an initial check to make sure the patient's name, address and date of birth corresponds with that on the addressograph
- Ensure dose, route, time and date are all correct on the prescription chart
- Wash hands and put on PPE
- Clean tray and line with an absorbent lining or use a disposable foil tray
- Place the drug, the skin cleanser, the un-opened needle (if not minijet) and the gauze into the tray
- Chemotherapy prepared in pharmacy will be stored in sealed packages. Inspect the packaging before opening; ensuring no spillage within. (Do not open if this appears to have happened. Contact the appropriate ward or day unit and they will speak to pharmacy)
- Chemotherapy checking should preferably be carried out by two registered nurses, in front of the patient, immediately prior to administration. Where two nurses are available to carry out the checks the nurse administering should check the patient's name, address and date of birth against the addressograph; followed by the name of the drug, the dose, route of administration, batch number and expiry date
- The second nurse should document the batch number, the expiry date and the date and time of administration and countersign as the checker. Having completed the checks there is no need to witness the administration
- After administration the nurse administering should also sign the prescription
- However, it is recognised that in the case of district nurses it may not be possible to release two nurses to attend the patient's home. In

these instances all the above checks and documentation should be carried out by the registered nurse who administers the drug. Alternatively it may be checked with the patient or a family member/carer as above.

- Clean skin site if desired - normally the abdomen, upper arms or thighs. Avoid the belly button and rotate the site for each administration
- If a needle needs to be attached, holding gauze under the connector, carefully remove the connector top from the syringe and securely attach the needle. (Minijets will come ready for use)
- Do not attempt to expel the air from a pre-filled syringe
- Use a pinch technique and inject at either a 90 or 45 degree angle; depending on how much fatty tissue is available. For 2 inches of tissue inject at a 90 degree angle; for 1 inch of tissue inject at a 45 degree angle (Dougherty and Lister 2015). Inject slowly over 10-30 seconds or as per manufacturers' instructions (Dougherty and Lister 2015)
- Remove needle and cover the site with gauze
- Dispose of all equipment, barring the plastic tray if used, in the cytotoxic sharps bin
- Wash hands
- Document as per local practice

9.1 Patient Self Administration (See Appendix 3 for a simplified Step by Step Guide)

- Patients must agree to self-administer and be trained by a chemotherapy trained and competent registered nurse before discharge. The Patient/Carer Administration of Subcutaneous Chemotherapy Checklist (Appendix 1) should be completed and the training should be documented in the medical notes
- Written and verbal information must be given on the drug, storage, the administration process, disposal of waste and how to manage a spillage
- The registered nurse must provide the patient with sufficient equipment and check the drug, dose and expiry before giving the medication to the patient; documenting the expiry and batch numbers on the prescription
- **Haematology/TCT patients should be trained to:**
 - wash their hands immediately prior to administration
 - gather the equipment needed and place close by
 - check that the label on the syringe and the prescription sheet have the same drug name and dose
 - sit comfortably so that they can see their stomach
 - choose a fatty area (if possible) an inch or two away from the belly button and cleanse if required. (Patients may also use the back of the arms and thighs if preferred; but must avoid sore/damaged skin)
 - pull off the clear plastic cover by gently pulling the cap and syringe apart
 - undo the red top by twisting it off

- connect the orange 25g needle by twisting it on to the syringe and making sure it is on as far as it will go
- gently pinch the area of skin on their stomach where they are going to inject
- hold the syringe like a pencil in their dominant hand and push the needle into the pinched area
- use their index finger to gently push the plunger down to inject all the fluid into their stomach
- wait for a few moments before removing the needle
- flip the protective cover over the needle then put the needle and syringe straight into the sharps bin after use
- press a gauze swab onto the site if any blood or fluid is visible on the skin. (This should be disposed of in the sharps bin after)
- wash hands and write the date and time of administration on the drug chart
- change the administration site each time

- **Rheumatology/Dermatology patients using minijet:**

- will not need to document administration details
- will not need to connect a needle to the syringe
- will not need to flip the protective cover over the needle
- may otherwise follow the same administration process

10.0 Disposal of Cytotoxic Waste

Patients administering in their own home should be given a cytotoxic waste bin to dispose of the following:

- foil tray
- apron/gloves if used
- needle and syringe
- gauze
- skin cleanser

Cytotoxic waste bins must be kept out of the reach of children and pets, firmly closed when full and either returned to Day Unit or disposed of as cytotoxic waste in the community. (The availability of this service will vary from area to area and may be arranged through the patient's district nurse).

Where chemotherapy is being administered in the TMSU cytotoxic bins will need to be taken to the unit each day it is in use, firmly closed and signed at the end of the day and returned to the Haematology Day Unit for disposal by waste management.

11.0 Management of a Chemotherapy Spillage

The volumes of cytotoxic drugs that are administered subcutaneously in the community are likely to be small (less than 3mls); therefore it should not be necessary to supply patients with a spillage kit.

The drug should, however, be administered in a non-carpeted area and a copy of the information leaflet 'Advice for Patients, Carers and District Nurses on the Management of a Cytotoxic Chemotherapy Spillage in the Home' should also be given. This covers both large volume and small volume spillages and should be explained as part of the training to administer (see Appendix 4). Should a spillage occur in the home the patient/carer/district nurse should be advised to contact a health care professional where the

patient is receiving their treatment as soon as possible after the spillage has been cleared up; so that replacement medication can be arranged if needed. Registered nurses administering in the MCU are asked to familiarise themselves with the guidance given in the 'Handling Spilled Cytotoxic Drugs Procedure'; a copy of which should be available on the unit and on the link below:

<http://www.cardiffandvaleuhb.wales.nhs.uk/sitesplus/documents/1143/UHB000cyto%20spill%20procedureSep13.pdf>

11.1 Contact with Skin

- Wash the area with copious amounts of tap water. Repeat with warm soapy water and dry gently
- Do not apply hand cream or moisturiser
- Seek medical advice if any redness or irritation is experienced

11.2 Spillage onto Clothing or Bed Linen

- Using disposable gloves blot dry with kitchen towel and remove the contaminated item immediately
- Wash separately from other linen/clothing as soon as possible

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Appendix 1: Patient/Carer Administration of Subcutaneous Chemotherapy Checklist

<u>Patient or Carer Administration of Subcutaneous Chemotherapy Checklist</u>	
Date:	
Patient Name:	DOB: Hospital No:
Diagnosis:	Chemotherapy Agent:
Name of person administering chemotherapy injections:	
Patient / Carer given written information on SC chemo administration	YES / NO
Patient / Carer given agrees to administer SC chemo	YES / NO
Nurse explained procedure	YES / NO
Nurse observed first injection given by patient / carer	YES / NO
Patient or carer has been given instructions regarding:	
· Transportation of drugs	YES / NO
· Storage of drugs	YES / NO
· Spillage of drugs	YES / NO
· Allergic reaction	YES / NO
· Infection Control and Prevention	YES / NO
Patient or carer has been given:	
· A copy of a valid prescription (optional)	YES / NO
· Sufficient drugs	YES / NO
· Cytotoxic waste sharps bin	YES / NO
· Spill kit	YES / NO
· Injecting equipment & cleaning solution	YES / NO
· Emergency contact numbers	YES / NO
· Follow up appointment, blood forms & recall dates for blood tests	YES / NO
Date agreed to collect second batch of chemotherapy injections:	Date: Time:
Name of Nurse:.....Signature:.....	
Name of Patient / Carer administering chemotherapy injection:.....	
Signature:.....	

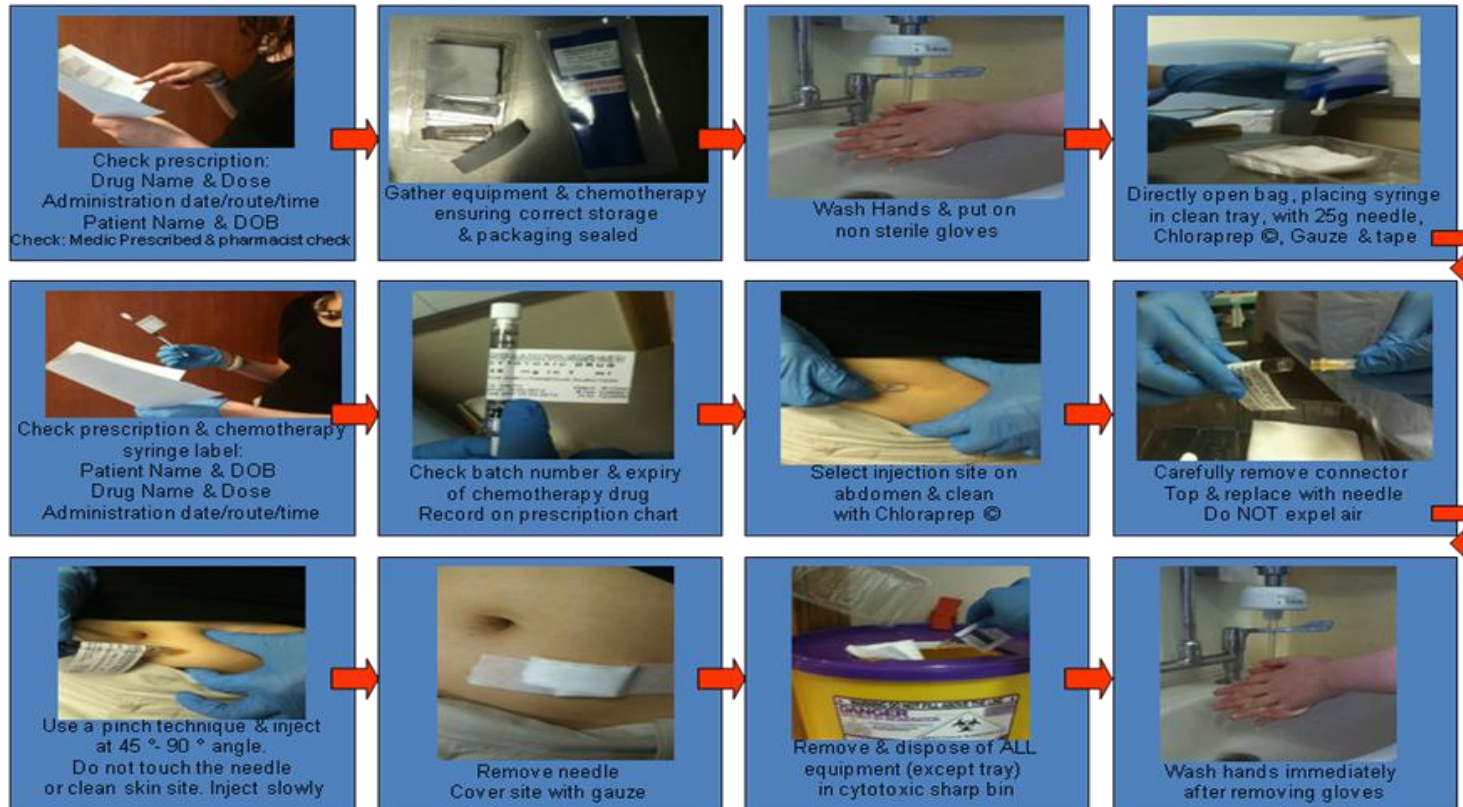
Appendix 2: Nurse Administration of Subcutaneous Chemotherapy

Nurse Administration of Subcutaneous Chemotherapy



Appendix 3: Patient Self-Administration of Subcutaneous Chemotherapy

Patient Self Administration of Subcutaneous Chemotherapy



NB Cleaning with Chloraprep is optional and only really advisable if the patient is immunocompromised (Dougherty and Lister 2011)

Appendix 4: Advice for Patients, Carers and District Nurses on the Management of a Cytotoxic Chemotherapy Spillage in the Home

ADVICE FOR PATIENTS AND CARERS ON THE MANAGEMENT OF A CYTOTOXIC CHEMOTHERAPY SPILLAGE IN THE HOME

This leaflet contains the answers to some questions that patients and carers may have about the management of a chemotherapy spillage in the home.

General Information

- Any liquid spillages of chemotherapy drugs onto the floor, clothes, linen or skin should be dealt with immediately to minimise the potential for harm to yourself or other people
- Inform a health care professional as soon as possible that you have had a spillage so that replacement medication can be arranged, if necessary, and support in managing the spillage given
- Keep all chemotherapy medication in a safe place according to the storage instructions on the product label (for example in the refrigerator or at room temperature)
- Ensure that all medicines, administration equipment and sharps bins are out of the reach of children or pets
- If administering at home please do so in a non-carpeted area if possible to minimise the potential for contamination
- If you are a carer and are pregnant, think you may be pregnant or are breast feeding, you should not handle chemotherapy drugs, or waste

How should I deal with a chemotherapy spillage of more than a few mls?

If you are having chemotherapy through a pump you will have been provided with a chemotherapy spill kit for use at home and a yellow sharps bin.

Contents of the kit:

- Two pairs of gloves
- Goggles
- Disposable gown
- Face mask
- Disposable overshoes
- Two clinical waste bags (You will only require one)
- Absorbent pads to clean contaminated area

Instructions for use:

- Clear the area around the spillage to avoid further contamination and ask anyone in the vicinity to move away
 - Open the chemotherapy spillage kit and remove the contents
 - Put on the gown, 2 pairs of gloves, face mask and goggles
 - Cover the spillage using the absorbent pads provided until the fluid has been 'soaked' up through the pads. Clean from the outside-in to contain the fluid rather than spread it any further
 - Pick up the pads and place them in the grey-blue clinical waste bag
 - Take off the top pair of gloves and clean the floor or work surface with warm soapy water (i.e. washing up liquid) and kitchen towel
 - After cleaning put the kitchen towel, overshoes, gown and gloves in the blue-grey bag
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- Tie the bag and put all the waste in the yellow cytotoxic sharps bin. (Goggles and face mask may also be disposed of in the sharps bin)
- Close the sharps bin and return to your hospital department on your next visit
- Wash hands
- (Inform your ward, day unit or outpatient's department as soon as possible)

How should I deal with a small chemotherapy spillage of just a few mls?

- Put on gloves and an apron
- Mop up with kitchen towel from the outside-in
- Clean the floor or surface area with warm soapy water
- Place all waste in the yellow sharps bin
- Take off gloves and apron and place in the sharps bin
- Seal the bin and return to the appropriate hospital department on your next visit
- Wash hands
- (Inform your ward, day unit or outpatient's department as soon as possible)

How should I deal with a chemotherapy spillage onto the skin?

- Rinse the area with plenty of tap water. This should then be repeated using warm soapy water, and the area gently dried
- Do not apply any moisturising cream or hand cream on the affected area
- If you experience any redness or irritation that lasts for longer than a few hours, contact the ward

How should I deal with a chemotherapy spillage in the eyes?

- Immediately flush the eyes and the surrounding areas with large volumes of cool tap water for as long as possible
- Go to your nearest A&E Department as soon as you can, as it is important that you seek medical attention for any spillages into the eye. If contact lenses are used: remove the lenses immediately, dispose of them and follow the same procedure above for rinsing the eyes

How should I deal with a chemotherapy spillage onto clothing or bed linen?

- Wearing a pair of gloves, blot dry with the absorbent pad or kitchen towel and remove the contaminated clothing/linen immediately
- The clothing/linen should be washed separately from other clothing as soon as possible. Where possible, repeat the wash cycle to ensure all drugs are completely removed
- If the drug has soaked through the clothes to the skin, this should be dealt with as outlined above

If you are in any doubt, or you have any concerns, please contact your clinical area where you are receiving treatment. Thank you.