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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:

- Identify and minimise the risks to patients, carers and Health Care Professionals involved in the administration process
- 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
 Guidelines for the Safe Handling, Checking and Administration of Cytotoxics.

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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	02/04/2016	31/08/2016	New document.
2	03/09/2020	12/10/2020	Removal of references to the mobile unit. Amendments to storage. New Step by Step pictures. Amendments to spillage. Advice on administration of 2 doses (e.g. with Azacitidine). Amendment to Appendix 1.

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1.0 Introduction

Cytotoxic chemotherapy may be administered via a variety of routes, including the subcutaneous one. Administered subcutaneously it can be used in the management of both malignancies and autoimmune disorders and can be 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 un-necessary hospital stays to be reduced to a minimum.

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 and to alleviate the symptoms of the disease. Consequently doses will be lower. 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 the patient's own home and, on the rare occasion it may be required, the GP practice with a Practice Nurse.

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. 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, through absorption into the skin and mucous membranes or by needlestick injury.

Following the good practice outlined in these Guidelines will minimise the risks to HCPs, carers and patients themselves. The Guidelines will cover prescribing, safe handling, transport, 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 or the Cancer Research UK Systemic Anti-Cancer Therapy (SACT) 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 side-effects and contact numbers as a minimum.

6.0 Prescribing

Electronic prescribing is becoming more widely available in Cardiff and Vale UHB; but some prescriptions continue to be hard copies. In the cancer setting parenteral cytotoxic chemotherapy may only be prescribed by an accredited consultant, specialist registrar, staff grade or independent prescriber and initial doses are given either as an in-patient or in day unit. Patients will return to day unit for regular reviews, blood tests and subsequent prescriptions.

In Rheumatology, some patients' GPs are now agreeing to prescribe second and subsequent rounds of treatment; once treatment has been initiated 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 and Transport

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 each individual drug.

General principles behind storage in a patient's home are that it should be kept in a rigid container out of reach of children and pets. Drugs stored at room temperature should also be kept away from heaters or direct sunlight. Drugs that require storage in a fridge should be kept in a rigid container at the back of the fridge preferably away from food. Cytotoxic sharps bins should also be stored securely away from children and pets.

In a clinical environment refrigerated Cytotoxic drugs should be stored in a lockable separate fridge. If a separate fridge is unavailable, they should be stored on a bottom shelf away from other drugs, but the fridge must be lockable. Cytotoxics stored at room temperature should be stored in a lockable cupboard away from other drugs.

Some drugs may need to be kept at a cool temperature even whilst transporting them to the patient's home. In that instance patients will be asked to bring in a cool box which they can use specifically for cytotoxic drugs. Pharmacy is no longer able to supply cool boxes because of infection control purposes.

Drugs that need to be transported at room temperature should be transported in a rigid container, with a lid, which is designated purely for cytotoxic drugs.

8.1 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).

- Non-sterile gloves (to reduce the risk of cross contamination)
- A rigid plastic tray (that may be wiped clean) or, if unavailable, dressing pack(s)
- Gauze
- Absorbent dressing towel to line the tray
- 25 gauge needles for administration if required – (minijet methotrexate may be used in Rheumatology and Dermatology with the needle already in situ)
- Skin cleanser (NB. Normal guidance is that this is patient preference and not essential if socially clean; however during the current pandemic our recommendation would be that the area was cleansed prior with soap and water and a skin cleanser used)
- Cytotoxic sharps bin
- Medication and prescription
- Cytotoxic spillage kit

Sufficient supply should be given until the patient's next hospital visit or until supplies can be ordered in the community.

8.2 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.

9.1 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 pad
- 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 can contact pharmacy)
- Chemotherapy checking should be carried out by 2 registered nurses, in front of the patient, immediately prior to administration. If this is not possible (e.g. with district nurses) the drug may be checked with the patient or a carer/family member

- The nurse administering should check the patient's name, address and date of birth against the addressograph
- Check the dose, route of administration, name, batch number and expiry date
- The 2nd nurse should document the batch number, expiry and date and time of administration and sign as the checker
- Clean skin site if desired - normally the abdomen, upper arms or thighs. Avoid the umbilicus 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. Inject slowly
- 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
- Some drugs may need to be manipulated before administration and brought to room temperature. Examples include Azacitidine. In this instance please follow the specific drug administration guidance provided

9.2 Patient Self Administration or Carer (See Appendix 3 for a simplified Step by Step Guide)

- Patients must consent to self-administration and be trained by a chemotherapy trained and competent registered nurse before discharge. Appendix 1 may be used as an example of a patient/carer education checklist to complete as evidence of training.
- 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.
- Pregnant carers should be advised not to administer or handle a cytotoxic spill.

Haematology/TCTU patients should be trained to:

1. Wash their hands immediately prior to administration
2. Gather the equipment needed and place close by. Ideally administer in a non-carpeted area
3. Check that the label(s) on the syringe(s) and the prescription sheet have the same drug name and dose
4. Sit comfortably so that they can see their stomach

5. Choose a fatty area (if possible) an inch or two away from the umbilicus and cleanse as per section 8. (Patients may also use the thighs if preferred and carers may administer in the upper arms. Damaged or sore skin must be avoided at all times).
6. Pull off the clear plastic cover by gently pulling the cap and syringe apart
7. Undo the red top by twisting it off
8. Connect the orange needle by twisting it on to the syringe and making sure it is on as far as it will go
9. Gently pinch the area of skin on their stomach where they are going to inject
10. Hold the syringe like a pencil in their dominant hand and push the needle into the pinched area
11. Use their index finger or thumb to gently push the plunger down to inject all the fluid into their stomach
12. Wait for a few moments before removing the needle
13. Flip the protective cover over the needle then put the needle and syringe straight into the sharps bin
14. 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)
15. Wash hands and write the date and time of administration on the drug chart
16. Use a different administration site for each injection; so if 2 injections are required ensure they are at separate sites at least 2 inches apart
17. Rotate the site in a clockwise manner

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
- medication vial in the case of minijets
- 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).

11.1 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). However it is advisable to supply patients with a cytotoxic spillage kit. Recommended contents of a spill kit should include an apron, 2 pairs of gloves, gauze, an absorbent pad and a cytotoxic clinical waste bag. Full training on how to manage a cytotoxic spillage will be given to the patient prior to discharge and both nurses and patients should also follow the instructions supplied with the kit. District nurses may also request training on administration and spillage management from the Chemotherapy Clinical Nurse Specialist.

The drug should be administered in a non-carpeted area as stated 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 (see Appendix 4). Should a spillage occur in the home the patient/carer/district nurse should also be advised to contact a health care professional where the patient is receiving their treatment as soon as possible; so that replacement medication can be arranged if needed.

Registered nurses 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/UHB201%20Handling%20Spilled%20Cytotoxic%20drugs%20procedure%20revision.pdf>

11.2 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.

11.3 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.

Bibliography

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Appendix 1: Patient/Carer Administration of Subcutaneous Chemotherapy Checklist

Patient or Carer Administration of Subcutaneous Chemotherapy Checklist	
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: <ul style="list-style-type: none"> • Transportation of drugs • Storage of drugs • Spillage of drugs • Allergic reaction • Infection Control and Prevention 	YES / NO YES / NO YES / NO YES / NO YES / NO
Patient or carer has been given: <ul style="list-style-type: none"> • A copy of a valid prescription • Sufficient drugs • Cytotoxic waste sharps bin • Spill kit • Injecting equipment & cleaning solution • Emergency contact numbers • Follow up appointment, blood forms & recall dates for blood tests 	YES / NO YES / NO YES / NO YES / NO YES / NO YES / NO YES / NO
Dates agreed to collect subsequent batches of chemotherapy injections:	Date: Time: Date: Time:
Name of Nurse:.....Signature:	
Name of Patient / Carer administering chemotherapy injection:	
Signature:	

Please find below Step by Step Guidance for nurses and patients on how to administer subcutaneous chemotherapy. Other drug specific leaflets may also be available.

Appendix 2: Nurse Administration of Subcutaneous Chemotherapy



1

Check the prescription, including:
- patient's name, address and date of birth
- name and dose of the drug
- date, route and time of administration



2

Wash hands and put on non sterile gloves and an apron.



3

Line a clean rigid tray with an absorbent pad or dressing towel. Place drug, needle, gauze and sterile skin wipe in the tray; ensuring the drug has been correctly stored and the packaging is sealed.



4

Open the packaging and put the syringe in the tray.



5

Ask the patient to confirm their name, address and date of birth. Check the dose, drug name and route of administration are all correct and correspond with the prescription.



6

Check batch number and expiry of the drug and document on the prescription.



7

Select injection site; using either the abdomen, upper arms or top of the thighs and clean with the sterile skin wipe. Allow to dry.



8

Holding syringe over the gauze, carefully pull off the clear connector and untwist the red bung. Attach the needle. Do not expel air.



9

Using Aseptic Non Touch Technique and a pinch technique, inject the needle at a 45 degree angle. Administer slowly.



10

Remove the needle and cover the site with gauze.



11

Dispose of all equipment, except the tray, into the cytototoxic waste bin; removing gloves last.



12

Wash hands immediately. Ensure drug chart is signed and dated and batch number, expiry and time of administration are all documented.

Appendix 3: Patient or Carer Administration of Subcutaneous Chemotherapy



1

Check the prescription is correct, including
- the name, address and date of birth
- name and dose of the drug
- date, route and time of administration



2

Wash hands. If self-administering put on non sterile gloves. Carer to wear non sterile gloves and an apron.



3

Line a clean rigid tray with an absorbent pad or dressing towel. Place drug, needle, gauze and sterile skin wipe in the tray; ensuring the drug has been correctly stored and the packaging is sealed.



4

Open the packaging and put the syringe in the tray.



5

Check prescription and the label on the syringe: the patient details, drug name and dose should be the same on the syringe as on the prescription.



6

Check batch number and expiry of the drug and document on the prescription.



7

Holding syringe over the gauze, carefully pull off the clear connector and untwist the red bung. Attach the needle. Do not expel air.



8

Select injection site and clean with the sterile skin wipe. (Suitable injection sites include the upper arms, abdomen or outer thighs). Allow to dry.



9

Pinch a fold of skin. Holding the barrel of the syringe, inject the needle at a 45 degree angle. Once the needle is in the skin inject slowly using your index finger or thumb on the plunger.



10

Remove the needle and cover the site with gauze.



11

Dispose of all equipment, except the tray, into the cytotoxic waste bin; removing gloves last.



12

Wash hands immediately. Sign or tick the prescription to say the drug has been given and put the date and time.

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?

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

Contents of the kit:

1. 2 pairs of gloves
2. Apron
3. Clinical Waste beg
4. Absorbent pad to clean contaminated area
5. Gauze for any spill on the skin

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 apron and 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.
- Pick up the pad and place them in the 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, apron and gloves and gauze if used into the cytotoxic clinical waste bag.
- Tie the bag and put all the waste in the yellow cytotoxic 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 chemotherapy spillage onto the skin?

- Mop any excess chemotherapy with gauze then 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.