

NU10.35 Safe Handling and Waste Management of Cytotoxic Drugs

Purpose

To ensure the safe handling and waste management cytotoxic drugs and waste, therefore minimising the risk of exposure to people and the environment

Audience/Scope

Registered and Enrolled Nurses who have completed either Module One of the Antineoplastic Drug Administration Course (ADAC) or who have completed ADAC – Non Cancer Setting credentialing courses or those undergone specific CDHB waste and spill management education

Associated Documents

- Cytotoxic and Biotherapies Policy, [CDHB Manual, Volume 12 – Fluid and Medication Management](#)
- [Cytotoxic and Biotherapy Resources Website](#)
- [eviQ ADAC credentialing programmes on healthLearn](#)

Definitions

Cytotoxic Personal Protective Equipment (PPE) consists of

- Long sleeved impermeable gown that is cuffed and can be tied at the back
- Chemo protectant gloves are gloves that are non-sterile and have reinforced finger tips and a long cuff.
- **Face Shield, goggles and mask are optional**

Standard PPE consists of

- Plastic apron
- Non-sterile disposable gloves

Procedures

Administration

See the Cytotoxic and Biotherapies Resources website for procedures regarding safe handling during cytotoxic drug administration.

Disposal of equipment

Don appropriate cytotoxic PPE when disposing of cytotoxic related materials.

1. Do not disconnect IV infusion lines from the cytotoxic drug bag.
2. Place all empty cytotoxic contaminated syringes, IV bags, lines and access devices, plastic backed sheets in the thick, clear plastic bag at the end of the trolley. Place the clear plastic bag into a cytotoxic waste bag.
3. If appropriate, the above items can be place directly into a cytotoxic waste bag.
4. Any sharps associated with cytotoxic administration must be placed into a cytotoxic sharps container after use.
5. All other related waste ie dressings, medication pottles. Gowns and gloves worn to administer cytotoxic drugs should be placed in a cytotoxic waste bag.

Safe disposal of patient waste

The first **48 hours** post drug administration has been deemed the most hazardous period for drug excretion however many drugs are excreted in body fluids up to seven days post administration.

1. Inpatients must be identified as receiving chemotherapy. This is to alert staff that cytotoxic safe handling and management processes should be followed. This is done by using the 'cytotoxic icon either on **FLOVIEW** or on the patient management board.
2. Standard PPE should be worn when handling any body fluids that are contained (ie in a pan, urinal, jug, vomit container).
3. Patients should be educated to flush the toilet with a full flush and lid down. Any pans, jugs or potties contaminated by cytotoxic waste should be sanitised as soon as possible after use.
4. Equipment waiting for sanitising should be covered with a plastic-backed absorbent pad, labelled with cytotoxic stickers and set aside from other equipment and sanitised as soon as possible.
5. Non disposable equipment must be washed in warm soapy water or sanitised immediately after use.

Safe disposal of contaminated linen and clothing

Linen contaminated with body fluid waste from a patient who has received cytotoxic drugs within 48 hours or a direct drug spill should be treated as hazardous. This requires specific handling measures

1. Personnel should wear cytotoxic PPE when handling contaminated linen and clothing.

2. Contaminated hospital laundry and slide sheets (enclosed in their dedicated yellow linen bag) should be double bagged using an alginate bag and red infectious linen bag and sent to the laundry.
3. Personal clothing must be double bagged (in plastic) and warm washed as soon as possible. Instruct relatives on how to wash at home ie handle with gloves or tip directly into the machine without touching, wash separately in a hot wash and air dry if possible. This applies both in hospital and in the community.
4. If there is a large direct drug spill, consider disposal of contaminated materials. Double bag using cytotoxic waste bags and send for disposal

Procedure Accidental Contamination

This may include contamination of clothing, PPE, penetrating injuries (needle stick), skin and other body contact and mucosal exposure

In the event of accidental contamination

- Immediately remove PPE and any contaminated clothing
- Wash affected area with soap and flush thoroughly with copious amounts of water. This may be best done in a shower. Arrange for the shower to be cleaned by the cleaning services after use.
- For needle stick injuries, follow the CDHB Blood/Body fluid exposure policy.
- For eye exposure, immediately irrigate the affected eye with 0.9% Sodium Chloride for at least 15 minutes. Follow the Lippincott procedure to do this.
- Seek medical/pharmacy advice regarding exposure and use of ointments or eye drops. Consider review in Emergency Department.
- Complete Safety 1st Incident report.

Procedure Transit of Someone who has Cytotoxic Drugs Infusing

On rare occasions, someone who has cytotoxic drugs being infused needs to leave the treatment area. This is often for an urgent test or investigation.

If possible, delay either the administration of chemotherapy until the person has returned to the treatment area or delay the appointment until the cytotoxic drugs have been administered.

If the person does need to leave the treatment area for any reason, an ADAC credentialed RN must accompany them with a cytotoxic spill kit.

Procedure Spill Management

Hazardous drug spills and related waste must be dealt with immediately as they present a health risk to those exposed. They must be dealt with by someone who has completed ADAC credentialing. It is advisable to have two people attending to a cytotoxic spill.

Isolate the area

- Contain the spill by covering it with plastic backed sheets.
- Cordon off the area. Close any windows and doors. Turn off any fans which may spread the spill/aerosols.
- Move people away from the area of the spill.
- Obtain cytotoxic spill kit
- Open the spill kit and put out the caution sign.

Protect

- Don PPE in the following order;
 - Shoe covers
 - Disposable impermeable long-sleeved gown
 - Mask & face shield
 - Gloves (two pairs). Put the chemo protectant gloves on first, followed by the thicker gloves. Ensure sleeve cuffs are tucked into the gloves.

Clean up the spill

- Put the clear plastic bag into the cytotoxic waste bag and roll down the edges.
- Working from the outside of the spill to the middle of the spill, clean area and put contaminated material in the clear bag. If floor still contaminated with the spill, use another plastic backed sheet and repeat.
- Cover spill area with dry disposable towels
- Fill disposable container with water and pour over the towels
- Working from the outside of the spill to the middle of the spill, dry area with disposable towels and place in the clear bag.
- Repeat as necessary until clean
- **Lino spill** – Contact cleaner if area requires further cleaning.
- **Carpet spill** – Contact cleaning supervisor for steam cleaning

Dispose of waste

- Remove protective clothing in the following order and place in the clear bag;
 - Outer gloves
 - Face shield
 - Mask
 - Shoe covers
 - Gown
- Unroll the edges of the clear bag and secure with cable tie.
- Unroll the edges of the cytotoxic waste bag, remove the second pair of gloves and place into the cytotoxic waste bag and secure with a cable tie.
- Remove cytotoxic waste bag to waste removal area.
- Perform hand hygiene.






Documentation


- Document spill in clinical notes
- Complete Safety 1st Incident report.
- Obtain a new spill kit from the Oncology Ward.

Appendix 1: Summary of Changes

Review Date	Reviewed By	Changes
October 2018	Wendy Jar	Two procedures and Spill Flow Chart merged Spill management NU 10.31(Now obsolete) Management of cytotoxic waste (NU 10.35) Spill Flow Chart (NU 10.32) <u>New procedure</u> Safe Handling and Waste management of Cytotoxic drugs (NU 10.35) Minor edits & education requirements updated.

Appendix 2: Cytotoxic Spill Management Flow Chart (see over)

CYTOTOXIC SPILL MANAGEMENT FLOW CHART	
<p>ISOLATE</p> 	<ul style="list-style-type: none"> • Close windows and doors & turn off fans. • Move people away • Cover spill with plastic backed sheet • Obtain spill kit and put out caution sign
<p>PROTECT</p> 	<p>Don PPE</p> <ul style="list-style-type: none"> • Shoe covers • Disposable gown • Mask & face shield • Chemo protectant gloves • Rubber gloves (tuck gown sleeves into gloves)
<p>CLEAN</p> 	<ul style="list-style-type: none"> • Put clear plastic bag into cytotoxic bag and roll down edges • Working from the outside of the spill to the middle of the spill, clean area and put contaminated material/towels into clear bag. If floor still contaminated with the spill, use another plastic backed sheet and repeat. • Cover spill area with dry disposable towels • Fill disposable container with water and pour over the towels • Working from the outside of the spill to the middle of the spill, dry area with disposable towels and place in the clear bag. • Repeat as necessary until clean • Lino spill – Contact cleaner if area requires further cleaning • Carpet spill – Contact cleaning supervisor for steam cleaning
<p>DISPOSE</p> 	<ul style="list-style-type: none"> • Remove outer gloves and place into inner waste bag • Remove protective clothing in the following order and place in the clear bag <ul style="list-style-type: none"> ○ Shoe covers ○ Gown – ask assistant to untie the gown at the back so as not to contaminate your hair and neck ○ Mask and face shield • Unroll the edges of the clear bag and secure with cable tie • Unroll the edges of the inner cytotoxic waste bag, remove the second pair of gloves and place into the outer cytotoxic waste bag and secure with a cable tie • Remove cytotoxic waste bag to waste removal area • Perform hand hygiene
<p>DOCUMENT</p> 	<ul style="list-style-type: none"> • Document in clinical notes • Complete Safety 1st Incident report
OBTAIN A NEW CYTOTOXIC SPILL KIT FROM THE ONCOLOGY WARD	

ACCIDENTAL CONTAMINATION - FIRST AID MEASURES	
Skin-drug contact <ul style="list-style-type: none">• Shower with soap and copious amounts of water• Arrange for the shower to be cleaned by the cleaning services• Consider medical review• If needle stick injury occurred follow the CDHB Blood/Body fluid exposure policy	Eyes <ul style="list-style-type: none">• Remove gloves• Irrigate with 0.9% Sodium Chloride for at least 15 minutes. Follow the Lippincott procedure• Medical review in ED
 Complete Safety 1st Incident Report	
CONTAMINATED MATERIALS SEE CDHB CYTOTOXIC AND BIOTHERAPIES RESOURCES WEBSITE FOR FULL PROCEDURAL INSTRUCTIONS	
Minor spill <ul style="list-style-type: none">• Splash, contamination of urine, vomit, faeces, sweat• Hospital issue clothing• Place materials in alginate lined red laundry bag and send to laundry	Major spill <ul style="list-style-type: none">• Direct spill of cytotoxic agent, large area of absorption• Double bag in cytotoxic waste bag and send for incineration
<u>Personal clothing</u> <ul style="list-style-type: none">• Double bag in plastic• Hot wash as soon as possible in washing machine separate to non-contaminated items	