Birmingham Children's Hospital NHS
NHS Foundation Trust

PROCEDURE FOR THE MANAGEMENT OF SPILLAGE OF CYTOTOXIC DRUGS

Version:	2.0
Ratified by:	Head of Chemotherapy (HoC) and Chemotherapy Working Group
Date ratified:	Reviewed version approved by Chemotherapy Working Group July 2012
Name of originator/author:	Nigel Ballantine (now Retired)
Name of responsible committee for updating:	Chemotherapy Working Group (CWG)
Review date:	Document to be reviewed not more than every 3 years – repeat review not later than July, 2015
Target audience:	Nursing and support staff within the Haematology Oncology Specialty

Contents

1 Introduction

Chemotherapy drugs are potentially carcinogenic, mutagenic and/or teratogenic and as such pose a potential risk to any person coming into contact with them.

Since all chemotherapy drugs for parenteral administration are provided in the syringe or infusion bag from which they are administered, and the majority of oral dosage forms are presented in blister packaging, the most likely scenario for such inadvertent contact and/or ingestion is through spillage. This may occur through misuse of the syringe or infusion bag, damage to either of these, or the necessary crushing or opening of various oral dosage forms to facilitate administration to younger patients.

This procedure sets out the steps that should be taken in the event of spillage of a cytotoxic drug to ensure that the spillage is dealt with efficiently and effectively, and thereby risk any to staff, carers and visitors is minimised.

2 Purpose

Recognising the duty of all staff under the Health & Safety at Work Act 1974 to ensure the safety of other staff and the public, the following defines the actions to be taken should spillage of cytotoxic drugs, in liquid or other forms, occur within the clinical areas of the Haematology Oncology Specialty.

3 Duties

3.1 Duties within the Organisation

The lead officer for this document is identified on the title page.

3.2 Identification of Stakeholders

The following stakeholders have been identified within BCH: The Chemotherapy Working Group (CWG); the Cancer Locality Group; the Haematology Oncology Programme meeting; nursing and support staff within the Haematology Oncology specialty.

Outside BCH: The West Midlands Children's Cancer Network Group; Pan Birmingham Cancer Network Drug & Therapeutics Committee.

4 Method for development

4.1 Consultation and Communication with Stakeholders

The policy was drafted by Nigel Ballantine (Chair, CWG) and reviewed by the stakeholders previously identified. Comments and suggestions were incorporated until a final version was agreed by the CWG and

ratified by the Head of Chemotherapy (HoC) and Lead Cancer Clinician (LCC).

4.2 The policy was reviewed as still accurate & valid by the Chemotherapy Working Group July 2012, and subsequently re-issued

5 Content

5.1 General Guidelines

All staff involved in the handling of cytotoxic drugs, or who work in areas where such drugs are handled, must be aware of the policies and procedures for managing spillage or contamination of individuals or surfaces with cytotoxic drugs.

All staff must take reasonable precautions to avoid spillage, recognising the duties of staff under the Health & Safety at Work Act 1974.

Protective clothing must be worn at all times when handling cytotoxic drugs.

Any spill, however small, must be dealt with as a matter of urgency.

Any spill, however small, must be 'cordoned off' in a way that prevents other staff, parents, visitors and patients coming into contact with the spillage. If any spill occurs around or onto the patient's bed, patient(s) and visitors should be removed from the vicinity at once. The notice included within the spillage kit (See Appendix II) should be displayed in such a way as to be clearly visible to both staff and visitors. **No spill should be left unattended.**

ALL spills of cytotoxic drugs must be reported as a clinical incident.

5.2 Protective clothing

All staff should be aware that personal protective equipment (PPE), including clothing, only offers protection to those areas covered and only then if the equipment is worn correctly. At all times staff must handle cytotoxic chemotherapy in a responsible manner that minimises the possibility of personal contamination, the contamination of others and/or the environment.

For dealing with spills: The spillage kit provides two sets of PPE each containing the items listed in Appendix I.

5.3. Spillage kits

Spillage kits are located in:

- Treatment room on Ward 15

- Treatment room on Ward 15 HDU
- Treatment room in Teenage Cancer Trust (TCT) unit, Ward 15
- Treatment room in Oncology OPD
- Treatment room on Ward 10

5.4 Procedure for liquid spills

Obtain the spillage kit from the treatment room. See Appendices I & II for the contents of the spillage kit. The kit itself also contains a list.

Put on **ALL** the PPE provided. Use the kneeling mat provided in the spillage kit if it will be necessary to kneel down to wipe up a significant spill at floor level.

Isolate any continuing source of contamination such as a leaking infusion bag or 'Sharps' bin by enclosing it in the large blue plastic waste sack provided in the spillage kit.

Assess the presence of 'sharps' e.g. broken glass, needles etc. Use the tweezers provided in the spillage kit to remove as many such items as possible and place them into the large blue plastic waste sack. Do not spend too much time on this in order to avoid delaying management of the spill.

Use the SLIPPA pack laid on top of the spill to absorb the majority of the liquid. If the liquid covers a wide area the pack can be moved around so as to wipe up all of the spillage.

Once as much of the spill as possible has been absorbed into the SLIPPA pack transfer this into the blue plastic waste sack. Use great care to avoid further contamination of the area and take particular care if 'sharps' are present.

Once the SLIPPA pack has been removed, empty one or both of the ampoules of eye wash into the 20ml. spray bottle provided and use this to spray the contaminated area. Do not over-wet.

Wipe up this wetting with the lint-free wipes provided and repeat until you are satisfied that the entire area of contamination has been cleaned. Use particular care if there are small particles of broken glass in the contaminated area. Place each wipe as used into the blue plastic waste sack.

Ensure the area is left dry by using further lint-free wipes as necessary.

Dispose of the blue plastic waste sack according to the Trust waste disposal policy for contaminated waste. NOTE: If the blue plastic sack contains 'Sharps' it MUST be disposed of in a 'Sharps' bin.

Complete Trust clinical incident form and inform pharmacy.

5.5 Procedure for spillages of powder

Obtain the spillage kit from the treatment room. See Appendices I & II for the contents of the spillage kit. The kit itself also contains a list.

Put on ALL the PPE provided.

Isolate the container by enclosing it in the large blue plastic waste sack provided in the spillage kit. Use the tweezers in the spillage kit as necessary.

Assess the presence of 'sharps' e.g. broken glass, needles etc. Use the tweezers to remove as many such items as possible and place them into the large blue plastic waste sack. Do not spend too much time on this in order to avoid delaying management of the spill.

Fill the 20ml. spray bottle with one or both of the ampoules of eye wash supplied in the spillage kit and use this to wet the powder spill and the immediately surrounding area.

Take a lint-free wipe from the spillage kit and place over the spillage. Work the towels to wipe up as much of the spill as possible. Use particular care if there are small particles of broken glass in the contaminated area.

As each wipe is used carefully place into the blue plastic waste sack.

Repeat the above until all visible powder has been removed.

Dry the area with further lint-free wipes, discarding as above.

Dispose of the blue plastic waste sack according to the Trust waste disposal policy for contaminated waste. NOTE: If the blue plastic sack contains 'Sharps' it MUST be disposed of in a 'Sharps' bin.

Complete Trust clinical incident form and inform pharmacy.

5.6 Procedure for contamination of clothing or bed linen

Any clothing which becomes contaminated should be removed from the patient, visitor or member of staff as quickly as possible and treated as soiled linen.

Any person whose clothing becomes contaminated should be bathed or showered at the earliest opportunity paying particular attention to the area below where the contamination occurred, unless it is CERTAIN that the contamination did not penetrate the clothing and contact the patient's skin.

Any clothing (e.g. theatre gown), bed-linen or other fabric material belonging to the **Trust** that becomes contaminated should be removed as soon as possible and treated as soiled linen.

If any clothing, bed-linen or other fabric material belonging to the **patient** or their family becomes contaminated the material should be treated as soiled linen until it can be washed in the washing machine on the ward. A cycle appropriate to the fabric being washed should be used but the washing machine should NOT be run on a 'half-load' setting since this reduces the amount of water used. While the washing machine is running it should be labelled as containing cytotoxic-contaminated materials and once the patient's materials have been removed it should be run through a complete cycle empty as a flushing procedure.

5.7 Procedure for contamination of other materials

If a cytotoxic spillage occur in the patient's bed area it is possible that other materials will be contaminated.

If these are of a non-porous nature e.g. a plastic toy, gross spillage should be dealt with as above (see para. 5.3). The item should then be placed in a plastic bag and washed at the earliest opportunity. This should be done away from other staff and visitors ensuring that the appropriate protective clothing is used (see para. 5.2).

If the contaminated items are porous, for example a soft toy, gross spillage should be dealt with as above (see para. 5.3). Parents/carers should then be informed that it is impossible to ensure that all contamination has been removed and that the safest thing to do would be to destroy the item.

If parents/carers are agreeable to the destruction of the contaminated item it should be dealt with as contaminated waste according to Trust policy.

If parents/carers are unwilling to allow the item to be destroyed it should be placed in a plastic bag and returned to them. They should be asked to remove the item from the ward at the earliest opportunity and also to sign a statement that they have been advised to destroy the item (see Appendix III.)

5.8 Procedure for spills occurring in the home

In general the procedures outlined in paras. 5.3 and 5.4 should be followed according to the nature of the spill. Para. 5.3 will be appropriate for spills of liquid medicines and injectable chemotherapy administered in the home. Para. 5.4 will be appropriate for crushed tablets or the contents of capsules.

Whenever possible medicines should be prepared and administered in areas such as the kitchen where the medicines can be handled on non-porous surfaces. This makes cleaning easier if spillage should occur.

Should soft furnishings such as fabric covered chairs and carpets become contaminated paper towels or other absorbent material should be placed on the spill IMMEDIATELY to minimise penetration of the spill into the fabric.

All materials used to clean up after a spill should be disposed of as soon as possible by placing in a double layer of plastic bags (for example, a kitchen bin liner within a dustbin liner) which should then be put in the dustbin or other receptacle kept outside the home. DO NOT put in a waste bin in the kitchen or other living area.

The contaminated area should then be sponged with as much water as possible on two or three occasions. As far as possible, avoid allowing the area to dry out between applications.

6 References

MARC Guidelines

The Cytotoxics Handbook, 4th. edition Ed. Allwood, Stanley & Wright (2002)

ASHP Technical Assistance Bulletin on handling Cytotoxic and Hazardous Drugs, 1990.

Manual of clinical nursing procedures, Royal Marsden Hospital.

7 Equality Impact Assessment

See Appendix F

8 Approval, Dissemination and Implementation

8.1 Approval of document

This document has been approved by the CWG and ratified by the HoC, LCC and LCN.

8.2 Dissemination

A paper copy will be placed in the policy files within the Haematology Oncology Specialty.

Electronic copies will be provided via the Trust Intranet in the Oncology department and Trust policies folders.

8.3 Implementation

The policy is currently in use within the Haematology Specialty. This document brings the policy into Trust-approved format.

9 Monitoring Compliance With and the Effectiveness of the policy

9.1 Process for Monitoring Compliance and Effectiveness

Given the rarity of spillage incidents planned audit is not possible. However, such instances as do occur provide an opportunity for review of the management of the incident in order to learn lessons and refine practice.

9.2 Standards/Key Performance Indicators

Spillage managed according to procedure

10 Associated Documentation

Personal protective equipment (PPE)

Appendix I

Personal Protective Equipment Included in the Spillage Kit

Two packs of PPE are included, each containing: 1	Microguard 2500 white laboratory coat.
1 pair	Microguard 2500 white overshoes
1 pair	Eye shields with side protection against splashes and aerosols
2 pairs	Specialist cyto-gloves for double gloving.
1	Moldex 2435 facepiece to protect against splashes and aerosols (not intended to protect against fumes or vapour).

Appendix II

Further items included in the spillage kit:

Clean up equipment

1	Blue / white SLIPPA super-absorbing polymer which can absorb up to 1 litre of liquid.
1	Protective floor / kneeling mat.
3	Ampoules of eye wash containing 20ml. each.
12	Lint-free wipes
3	Grey absorbent pads

Waste disposal equipment

1	Waste bag and tie.
1	Disposable labels.
3	Laminated warning signs.

Appendix III

Statement regarding patients own property which is contaminated by cytotoxic chemotherapy:

Dear Parent,

Following the recent incident that resulted in the following items being contaminated with cytotoxic drugs, we have advised you that in the circumstances the safest thing to do would be to allow us to destroy these items.

You have told us that you are unwilling to allow us to destroy them. We are returning them to you in a sealed bag to prevent any further immediate contamination and request that you remove the bag from the ward within 24 hours. The bag will be stored in the sluice, and will be disposed of if it is not removed within 24 hours.

We ask you to sign this paper to agree that you have been advised to destroy the contaminated items.

Signature of parent	Signature of member of staff (state grade)

Date:

Appendix D - Checklist for the Review and Approval of Procedural Document

To be completed and attached to any document which guides practice when submitted to the appropriate committee for consideration and approval.

	Title of document being reviewed:	Yes/No/ Unsure	Comments
1.	**Title**		Checklist used for 2012 review
	Is the title clear and unambiguous?	Yes	
	Is it clear whether the document is a guideline, policy, protocol or standard?	Yes	
2.	**Rationale**		
	Are reasons for development of the document stated?	Yes	
3.	**Development Process**		
	Is the method described in brief?	Yes	
	Are people involved in the development identified?	Yes	
	Do you feel a reasonable attempt has been made to ensure relevant expertise has been used?	Yes	
	Is there evidence of consultation with stakeholders and users?	Yes	
4.	**Content**		
	Is the objective of the document clear?	Yes	
	Is the target population clear and unambiguous?	Yes	
	Are the intended outcomes described?	Yes	
	Are the statements clear and unambiguous?	Yes	
5.	**Evidence Base**		
	Is the type of evidence to support the document identified explicitly?	Yes	
	Are key references cited?	Yes	
	Are the references cited in full?	Yes	
	Are supporting documents referenced?	Yes	
6.	**Approval**		
	Does the document identify which committee/group will approve it?	Yes	
	If appropriate have the joint Human Resources/staff side committee (or equivalent) approved the document?	N/A	

	Title of document being reviewed:	Yes/No/ Unsure	Comments
7.	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?	Yes	
	Does the plan include the necessary training/support to ensure compliance?	N/A	
8.	**Document Control**		
	Does the document identify where it will be held?	Yes	
	Have archiving arrangements for superseded documents been addressed?	Yes	
9.	**Process to Monitor Compliance and Effectiveness**		
	Are there measurable standards or KPIs to support the monitoring of compliance with and effectiveness of the document?	Unsure	See para. 9.1.
	Is there a plan to review or audit compliance with the document?	No	See para. 9.1.
10.	**Review Date**		
	Is the review date identified?	Yes	
	Is the frequency of review identified? If so is it acceptable?	Yes	
11.	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for co-ordinating the dissemination, implementation and review of the document?	Yes	

Individual Approval			
If you are happy to approve this document, please sign and date.			
Name		Date	
Signature			
Committee Approval			
If the committee is happy to approve this document, please sign and date it and forward copies to the person with responsibility for disseminating and implementing the document and the person who is responsible for maintaining the organisation's database of approved documents.			
Name	Dr Martin English Representing the Chemotherapy Working Group	Date	July 2012
Signature			

Appendix F - Equality Impact Assessment

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

EQUALITY IMPACT ASSESSMENT FORM

SECTION 1:

Department: Haematology Oncology	**Assessor: Nigel Ballantine**
Policy/ Service Title: Procedure of the management of spillage of cytotoxic drugs	**Date of Assessment:** 10-5-2010

1. Describe the purpose of this policy or function	The Children's Cancer Measures 2009 requires the PTC (principal treatment centre) to have a range of policies in place to support the safe and effective delivery of chemotherapy from the perspective of patients, carers and staff. This policy has been in place for a number of years and is being brought to Trust standard as part of the peer view process for cancer services.
2. Who is affected by this policy?	Nursing, support staff and parents/carers within the Haematology Oncology specialty at BCH.
3. What are the outcomes or intended outcomes of this policy/ function?	This policy will ensure that staff who manage spills of cytotoxic drugs are clear as to how such situations should be managed in order to minimise the risk of personal or environmental contamination as required by the Health & Safety at Work Act 1974 Secondarily, compliance with Children's Cancer Measures 2009.
4. What consultation has been undertaken during the development of this policy/function?	Stakeholders identified in the policy
5. What information or evidence has been used to assess the potential impact across the equality strands?	This policy will have minor implications with respect to Equality Impact

IMPACT		
1. What is the impact or likely impact, either positive or negative, of the initiative on individuals, staff, or the public at large? None		
2. Please complete the following list and identify if there is, or likely to be, an impact on a group		
a) Grounds of race, ethnicity, colour, nationality or national origins.	~~Yes~~ ☐ No ☐	Adverse? ☐ Provide further details:
b) Grounds of sexuality or marital status	~~Yes~~ ☐ No ☐	Adverse? ☐ Provide further details:
c) Grounds of gender	Yes ☐ ~~No~~ ☐	Adverse? ☐ Provide further details: Female staff who are pregnant may not wish to deal with such situations but this is dealt with separately in the policy on the handling of chemotherapy by staff who are pregnant or breastfeeding.
d) Grounds of religion or belief	~~Yes~~ ☐ No ☐	Adverse? ☐ Provide further details:
e) Grounds of disability	~~Yes~~ ☐ No ☐	Adverse? ☐ Provide further details:
f) Grounds of age	~~Yes~~ ☐ No ☐	Adverse? ☐ Provide further details:
If you have stated that there is an adverse impact a Full Impact Assessment is Required. Complete Section 2.		

SECTION 2:

Modifications
1. If you stated that the policy/ function has or could have an adverse impact on any group, how could you modify it to reduce or eliminate any identified negative impacts? It is not possible to modify the policy to accommodate staff who are pregnant or breastfeeding. However, such staff may opt out of handling chemotherapy according to the policy on the handling of chemotherapy by staff who are pregnant or breastfeeding and those who have done so would not be expected to deal with a spillage of cytotoxic drugs. Staff who are pregnant or breastfeeding and have opted to continue to handle cytotoxic drugs would be expected to manage a spillage should the need arise.
2. If you make these modifications, would there be an impact on other groups, or on the ability of the policy to achieve its purpose?
Consultation **Under the Race Relations (Amendment) Act 2000 you are required to consult on the impact of new policies, functions and service change.**
3. How do you plan to consult on these modifications? Specify who would be involved, timescales and methods.

Decision Making
1. Who will make the decision?
2. What is the decision? ☐ Reject the policy/ function ☐ Introduce the policy/ function ☐ Amend the policy/ function ☐ Other (Please explain)

Monitoring and Review
1. How will the implementation of the policy/ function and its impact be monitored?
2. What are the overall learning points from this assessment?
3. What actions are recommended from this assessment?
4. When is the review date?

For advice in respect of answering the above questions, please contact the Equality and Diversity Officer on Ext: 8611. A completed form must be returned with your procedural document.

Appendix G - Version Control Sheet

Version	Date	Author	Comment (Identify any significant changes to the procedural document)
2.0	July 2012	J.Hawkins	Discussed at Chemo Working Group meeting on 21st June. No revisions required. Amend review dates and re-issue

Appendix H - Plan for Dissemination of Procedural Documents

To be completed and attached to any document which guides practice when submitted to the appropriate committee for consideration and approval.

Title of document:	Procedure for the management of spillage of cytotoxic drugs		
Date finalised:	July 2012	**Dissemination lead: Print name and contact details:** Julia Bottle	BCH email Ext: 9143
Previous document already being used?	**Yes / ~~No~~** (Please delete as appropriate)		
If yes, in what format and where?	Paper copies in policy files in key clinical areas within the Specialty		
Proposed action to retrieve out-of-date copies of the document:	Review of all policy files		

To be disseminated to:	**How will it be disseminated, who will do it and when?**	**Paper or Electronic**	**Comments**
HaemOnc Policy files	JB	P	
Speciality policies 'p' drive	JH	E	

Dissemination Record – to be used once document is approved.

Date put on register / library of procedural documents		**Date due to be reviewed**	

Disseminated to: (either directly or via meetings, etc)	**Format (i.e. paper or electronic)**	**Date Disseminated**	**No. of Copies Sent**	**Contact Details / Comments**