Birmingham Children's Hospital NHS
NHS Foundation Trust

POLICY FOR THE USE OF PERSONAL PROTECTIVE EQUIPMENT WHEN HANDLING CHEMOTHERAPY, SPILLAGE OF CHEMOTHERAPY, BODY WASTE AND/OR CLINICAL SAMPLES FROM PATIENTS RECEIVING CHEMOTHERAPY.

Version:	3.0
Ratified by:	Head of Chemotherapy (HoC)/ Lead cancer clinician (LCC) / Lead cancer nurse (LCN)
Date ratified:	Reviewed by Chemo Working Group April 2016
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 April 2019
Target audience:	Medical, nursing and support staff within the Haematology Oncology Specialty

Contents

1 Introduction

For many years it has been well understood that certain cancer chemotherapeutic agents may be carcinogenic (cancer-producing), mutagenic (DNA-damaging) and/or teratogenic (producing malformation of the foetus). However, it should be appreciated that not all cancer chemo-therapeutic agents (chemotherapy) have such properties and those that do may exhibit combinations of the above without producing all three.

Because cancer chemo-therapeutic agents may have the effects listed above, and others, it is appropriate that staff exposure to such drugs should be the minimum achievable.

2 Purpose

This policy sets out the personal protective equipment (PPE) that should be worn by all staff handling or administering chemotherapy, dealing with body waste or clinical samples from patients receiving chemotherapy or dealing with a spillage of a cytotoxic drug within 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 Blood, Stem Cell and Cancer services Specialty Meeting; nursing and support staff within the Haematology Oncology specialty.

Outside BCH: The West Midlands Children's Cancer Network Group 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.

The policy was reviewed, minor changes made and approved by the CWG April 2016, and subsequently reissued.

5 Content

5.1 Issues

In deciding on the PPE that is appropriate a balance needs to be found between:

- The need to protect staff from drugs which are potentially hazardous by contact with skin, eye and/or mucous membrane and ingestion, whether by swallowing, inhalation or needle-stick.

- The need for staff wearing PPE to be able to carry out the duties required of them. As such the PPE worn should not restrict free movement and should not impair, to any significant degree, manual dexterity or vision.

- The need to avoid frightening young children and their extended family who may not understand the need for such precautions, particularly during the early phase of treatment.

5.2 Policy

5.2.1 At all times staff must handle cytotoxic drugs, in whatever form, in a manner which minimises the risk of contamination of themselves, other staff, patients and visitors, and the ward environment (Health & Safety at Work Act 1974).

5.2.2 ALL staff should wear PPE at all times when chemotherapy is being handled or administered. The person handling the chemotherapy must wear the PPE appropriate to the task being performed – see below. The assistant or checker should at a minimum wear gloves and apron but for maximum protection should wear the full PPE as listed below.

5.2.3 The PPE worn should be appropriate to the risk, as follows:

5.2.3.1 When handling prepared injectable chemotherapy or closed bottles of oral formulations – tablets, capsules or suspensions – gloves should be worn (See Appendix I).

The situations included under this heading will include, but not be limited to:

- putting away prepared injectable chemotherapy delivered to the ward
- removing prepared injectable chemotherapy from the refrigerator or cupboard
- obtaining or replacing bottles containing oral formulations from the cupboard or drug trolley.

While this may seem restrictive, staff should be aware that it has been demonstrated that vials of injectable chemotherapy as supplied by the manufacturer are contaminated with drug on the outside of the vial. This makes it impossible to be sure that such contamination is not transmitted down through the whole process by which treatment is delivered to the patient. Staff will also be aware that bottles of tablets commonly contain dust, which may also contaminate the outside of the container, and that crusts, potentially containing cytotoxic drug, are often found around the neck of bottles of liquid formulations.

5.2.3.2 When preparing chemotherapy for administration to the patient, gloves, armlets, safety glasses (See Appendix II) and a plastic apron should be worn.

The situations included under this heading will include, but not be limited to:

- administration of bolus doses of cytotoxic drug
- setting up of infusions of cytotoxic drug and their connection to the patient
- handling of oral solid dosage form of cytotoxic drugs which are to be given to the patient without opening the capsule or crushing the tablet. (Only gloves are required in this situation).
- handling liquid formulations of cytotoxic drugs.

5.2.3.3 When preparing oral chemotherapy which requires a capsule to be opened or a tablet to be crushed gloves, armlets, safety glasses, a face mask (See Appendix III) and a plastic apron should be worn.

The potential risk arising from the inhalation of dry powder containing cytotoxic drug makes it appropriate for additional measures to be taken in this situation in addition to those appropriate to a lower level of risk.

In addition to the contents of this policy, staff should be aware of related policies which set out how other situations should be managed.

5.2.3.4 When dealing with body waste from patients receiving chemotherapy, or within seven days of the last dose of chemotherapy.

As a minimum staff must wear plastic apron and gloves but it is recommended for optimum safety that PPE as for the preparation of chemotherapy (5.2.3.2) should be worn.

5.2.3.4 Managing a spillage of chemotherapy.

PPE as for the preparation of chemotherapy (5.2.3.3) should be worn as a minimum but the use of full protection as per the Cytotoxic Spillage Kit may be required.

See also associated policies (Section 10)

6 References

MARC Guidelines www.marcguidelines.com

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 Approval, Dissemination and Implementation

7.1 Approval of document

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

7.2 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.

7.3 Implementation

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

8 Monitoring Compliance With and the Effectiveness of the policy

8.1 Process for Monitoring Compliance and Effectiveness

Routine audit of clinical areas.

8.2 Standards/Key Performance Indicators

All staff handling cytotoxic drugs wearing/using PPE appropriate to the task being undertaken.

9 Associated Documentation

Policy on cytotoxic drug spillage.
Policy on handling chemotherapy in pregnancy.
Policy on the management of body waste.
Guidelines for the administration of Chemotherapy for Malignant Disease.

Appendix I

Gloves.

There is no consensus as to the type and quality of glove most appropriate for use when handling cytotoxic chemotherapy.

In making decisions about the purchasing of gloves for use when handling cytotoxic chemotherapy the following considerations should be addressed:

No glove is completely impermeable to all cytotoxic agents (so don't waste time trying to find one that is!)

- Is the glove of a suitable thickness and integrity to maximise protection?
- Industrial thickness gloves (> 0.45mm. thick) made from latex and neoprene, nitrile or synthetic rubber should be available to clean up large scale spills.
- Can manual dexterity be maintained whilst wearing the glove?
- Latex gloves should be avoided because of the increasing awareness of sensitivity to latex.
- Powder-free gloves should always be used since it is now recognised that the powder may act as a carrier of protein residue from the glove and permit surface or airborne transmission of latex.
- Individuals who are latex sensitive should stop using latex gloves, be provided with alternatives and avoid areas where latex glove powder may be airborne.
- Recognise that airborne carriage of latex residues from gloves has the potential to affect individuals, other staff, patients and/or visitors, who are latex sensitive even if they are not in direct contact with latex gloves.

See guidance issued by the Health & Safety Executive (HSC 1999/186) and the Medical Devices Agency (MDA DB 9601 and MDA SN 9825)

Appendix II.

Eye protection:

- Eye protection that conforms to BS EN 166:2002 is required for handling cytotoxic chemotherapy in an 'uncontrolled' environment such as a ward or clinic.

- The most suitable form of eye protection is safety glasses in which the entire periphery of the goggle is in contact with the face. For protection against liquid chemicals the frame should be marked 'C' and the glass '3'.

- The difficulty in providing a range of safety glasses such that this can be achieved for all staff working in a particular clinical area is recognised.

- The issue of raising concerns amongst patients and parents/visitors through the wearing of safety glasses is recognised. If a unit makes a policy decision not to wear eye protection this decision, and the reasons for it, should be fully documented.

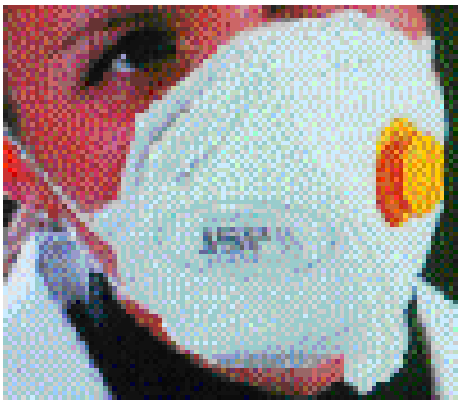
Appendix III.

Respiratory protection.

- Respiratory protection which conforms to BS EN 149 should be used whenever there is a risk from inhalation of cytotoxic drug. This is defined as a spill estimated to be in excess of 10ml. of fluid or any preparation, handling or spillage of powder, such as a crushed tablet or capsule contents.

- It is essential that any respiratory protection fits correctly so that it is sealed tightly to the wearer's face. The size and shape of the face, facial hair, spectacles and jewellery may all affect the fit.

- The type of mask which conforms to BS EN 149 is illustrated below:



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
3.0	April 2016	Amendments made by Hannah Craig	Discussed at Chemo Working Group meeting on 28th April. Minor revisions required. Amend review dates and reissue

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:	Policy for the use of personal protective equipment when handling chemotherapy, spillage of chemotherapy and body waste and/or clinical samples from patients receiving chemotherapy.		
Date finalised:	April 2016	**Dissemination lead: Print name and contact details:** Hannah Craig Heather Petts	BCH email Ext: 9600 / 8680
Previous document already being used?	**Yes** (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	HC	P/E	
Trust policies	HP	E	

Dissemination Record – to be used once document is approved.

Date put on register / library of procedural documents		**Date due to be reviewed**	April 2019

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