Safe Handling of Cytotoxic Drugs

Claire Imlah
Senior Pharmacy Technician
CancerCare Manitoba
And
Jodi Hyman RN BSCN
Nurse Educator, CCPN
CancerCare Manitoba
Objectives

Discuss the potential risks for health care workers and steps to minimize exposure to hazardous drugs.

• Niosh Alert and CAPhO Standards
• Safe Handling of Cytotoxic Drugs Relating to Pharmacy & Nursing
• Protecting Ourselves (PPE)
• Summary
• References
The National Institute for Occupational Safety and Health (NIOSH)

Working with or near hazardous drugs in health care settings may cause skin rashes, infertility, miscarriage, birth defects and possibly leukemia or other cancers.
NIOSH Recommendations

• Train staff on how to handle hazardous drugs safely.
• Staff recognize sources of exposure.
• Staff use personal protective equipment (PPE).
• Staff know how to handle hazardous waste.
Canadian Association of Pharmacy Oncology (CAPhO)

The standards of Practice for Oncology Pharmacy in Canada (version 2, Nov 2009) are the standard of practice used at CCMB.
What are Hazardous Drugs?

NIOSH definition:
Drugs are hazardous if studies in animals or humans indicate that exposures to them have a potential for causing cancer, developmental or reproductive toxicity or harm to organs.
CAPhO definition:

The majority of anti-cancer drugs are identified as hazardous drugs and require safe handling practices.
Sources of Exposure

- Via skin, inhalation or injection
- Indirect Contact
- Direct Contact
Protecting Ourselves

Wearing Personal Protective Equipment (PPE)
• receiving drugs
• before going into the sterile room
• in the BSC “hood”
• during and after administration
Cytotoxic Waste

• All waste exposed to cytotoxic products

• Trace Waste

• Bulk Waste
Recent Changes Within Pharmacy

- Vial Decontamination
- Trays
- Cleaning
- Surface Safe
Housekeeping

• Within Pharmacy

• Policy and Procedure
CCMB Policy for Safe Handling of Cytotoxic Agents- Nursing

- Staff education / awareness – during and post
- Chemotherapy gloves
- Additional PPE as appropriate
- Manitoba Workplace Safety and Health Regulation
CCMB Policy for Cytotoxic Administration

- Site specific policies
- Spill kits
- Accidental contact or skin puncture
Chemotherapy Administration (Adult)

- Confirmation of IV access
- PPE
- Blue absorbent pads
- Luer Lock
- Infusion bag tubing sets are to be primed with non cytotoxic compatible fluids
- 50ml flush
Personal Protective Equipment as per CCMB policy for Cytotoxic Administration

- Gloves – Required
- Gowns – Recommended
- Face Protection – Recommended if in danger of face contact
The Evidence for Safe Handling

• Contamination is present in areas where hazardous drugs are handled, including the pharmacy, oncology units and the rooms of patients who have received chemotherapy

Are We Protected?

There is no safe exposure standard. In view of the seriousness of the potential effects, prudent practice requires that the exposure be reduced as much as technically possible (Turci, 2006).
Best Practice

• BC Cancer Agency (2000)– gloves (1) & gowns always required. Eye protection if risk of contact.

• Safe Handling of Hazardous Drugs ASSTSAS, Quebec (2008)- gloves (1or 2 pairs) & gown always. Face shield if risk of contact
• CAPhO (2009)- 2 pairs of gloves & gown recommended

• NIOSH (2004) & Oncology Nursing Society (ONS)(2011) - double glove, gown and eye goggles / face shield
• It has been found that concentrations of various hazardous drugs could be found in the urine of those administering or preparing the drugs.

The members of our Committee do not recommend measuring biological contamination levels in workers (other than for research purposes), as it is currently impossible to interpret the results.

Safe Handling of Hazardous Drugs
ASSTSAS, Quebec (2008)
Future Considerations

• WRHA /CCMB Safe Handling of Cytotoxic Agents Policy currently under review

• Yearly demonstration of continuing competence in cancer chemotherapy as described by Canadian Association of Nurses in Oncology (CANO)
• Closed System Drug Transfer Devices?

• Cytotoxic / hazardous drug orientation to all employees employed within a health care setting?
Summary

• Hazardous drugs may cause serious health concerns.
• Remember to protect yourselves at all times by wearing PPE
• Follow hospital policy and procedure.
• The highest standards of care needs to be maintained at all times including the sterile mixing of cytotoxic agents in the BSC, administration of cytotoxics and with all aspects of patient care activities.
• With the proper training, education and PPE, health care workers can feel safe when handling, mixing, administering and caring for patients receiving cytotoxic agents.
References

• CAPhO – Standards of Practice for Oncology Pharmacy in Canada, version 2 Nov 2009
• NIOSH Alert: Preventing Occupational Exposures to Antineoplastic and other Hazardous Drugs in Health Care Settings www.cdc.gov/NIOSH
References


• Canadian Association of Nurses in Oncology (CANO) (2011) Standards and Competencies for Cancer Chemotherapy Nursing Practice

• Cancer Care Manitoba (2007) Safe Handling of Cytotoxic Agents. Policy
