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Ill-30-02: Blister Packed Cards for Oral Chemotherapy

Effective Date: January 29, 2007
Approved by: Provincial Pharmacy Professional Practice Council
Reviewed: April 18, 2007
Revision Date: Oct. 14, 2009; June 10, 2015 (revised title, removed specific references to Capecitabine and Temozolomide, clarified Pharmacy Assistant and Technician roles)

RATIONALE

Oral chemotherapy medications when taken inappropriately can cause serious harm to patients. This risk of harm is increased when a patient needs to take a medication which requires a mix of multiple strengths of tablets/capsules to make up the correct dose. Factors such as the number of medications the patient is on, age and language barriers can further compound the potential problem. Pharmacy may utilize blister packed cards to address these problems. Using blister packed cards should increase compliance with taking the oral chemotherapy.

DIRECTIVE

Pharmacy, at the discretion of the pharmacist, will dispense the oral chemotherapy medications in blister packed cards. Each blister will contain the total dose ordered for a scheduled medication time.

PROCEDURES

1. Pharmacists will check the patient's lab values as per the chemotherapy protocol, before dispensing the chemotherapy medication.
2. Chemotherapy medication orders will be processed into the pharmacy computer system and Pharmanet as per usual procedures.
3. The quantity dispensed will depend on the chemotherapy protocol. Pharmacy will dispense a ONE week supply if the protocol requires a weekly CBC. The quantity dispensed will be adjusted to accommodate long weekends and vacations.
4. Only ONE medication will be packaged in a blister card.
5. A pharmacy assistant or technician will package the chemotherapy medication into the card. The total dose of the chemotherapy medication ordered for a scheduled medication time will be placed in the blister. For example:
   a. Capecitabine 650 mg bid. Each blister will contain ONE 500 mg and ONE 150 mg tab for each 650 mg dose. Generally given twice daily, recommended 12 hours a part. Package dose in morning and evening blisters.
   b. Temozolomide 375 mg daily. Each blister will contain ONE 250 mg, ONE 100 mg, ONE 20 mg and ONE 5 mg capsule for each 375 mg dose. Generally given once daily in the morning. Package dose in the morning blister.
6. The pharmacy assistant or technician will affix the pharmacy computer generated patient specific label(s) on to the top of the blister card. Please use back of card to attach multiple labels.
7. Attach appropriate warning labels, to the top of the card, in the box “Attach Warning Labels Here”.
8. The pharmacy assistant or technician will collect the bulk supply medication bottles used to package the blister card and give to a pharmacist or pharmacy technician for checking.
9. A pharmacist or pharmacy technician will check the dose in each blister and sign off the completed medication order and on the blister packed card as per usual procedures.

10. A pharmacist will hand out and counsel the patient each time the chemotherapy medication is dispensed.

11. Sample Directions – Capecitabine 650 mg po bid
   a. Capecitabine 500 mg tabs - Take the contents of ONE blister (One 500 mg tab PLUS 150 mg = 650 mg) by mouth twice daily.
   b. Capecitabine 150 mg tabs - Take the contents of ONE blister (One 150 mg tab PLUS 500 mg = 650 mg) by mouth twice daily.
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VI-70: Guidelines for Preparation of Parenteral Hazardous Drugs for Latex Allergy Patients

Effective Date: Dec. 2, 2009  
Approved by: Provincial Pharmacy Professional Practice Council

Review Date:  
Revision Date: 10 Dec 2010, 27 Jan 2011, 2 March 2011, May 2014

BACKGROUND

Exposure to natural rubber latex (latex) can pose a health concern to patients with a latex allergy. Reactions to latex can range from mild to life-threatening. To reduce this risk, patients with latex allergy should avoid contact with medical devices and parenteral drug products containing latex.

DIRECTIVE

Patients will be classified by the oncologist as per the regional directive with either a latex sensitivity or as latex allergic (requiring full latex precautions). Patients with a latex sensitivity require no special precautions with respect to their chemotherapy preparation. Patients with a latex allergy require the following special precautions with respect to their parenteral chemotherapy preparation.

PROCEDURE

Full Latex Precautions

1. Patient Identification
   - Patients that have been identified as latex allergic must have this information entered onto their Allergy Status in the pharmacy computer system.

2. Assessment of Medications and Medical Supplies
   - Medications and manufacturing supplies used to prepare parenteral products will need to be assessed for latex content before being used by consulting the centralized list of latex-free products or by contacting the manufacturer (see appendix I).
   - When the latex content is not known, an item is assumed to contain latex until proven otherwise.
   - All parenteral medications manufactured in pharmacy will be prepared using full latex precaution procedures of the regional centre. The final compounded products will be clearly identified with an auxiliary label indicating “latex free product-Use latex precautions”.

Aseptic Preparation

1. Special Supplies
   - Latex-free tubing, syringes, and chemotherapy gloves
   - Low-lint-towels and bottle of 70% alcohol (avoid using a spray bottle; the nozzle may contain latex)
   - Low-lint-towels and bottle of aqueous antibacterial solution (e.g., 0.05% chlorhexidine solution or Wet Ones®)

2. Determining Latex Content
   - The technician/assistant setting up medications and supplies for the first treatment of a protocol using latex precautions will need to determine the latex content of medications and supplies. Note: latex content will need to be determined here if there is a brand change.
   - The rubber stopper in vials may be made from natural rubber latex or synthetic rubber. If it is made from synthetic rubber, then preparation may proceed as usual.
   - For vials with natural rubber latex stoppers or vials with stoppers of unknown composition, use a new vial for each dose and limit vial access to a maximum of two punctures. This minimizes patient exposure to any latex particles which may have transferred to the needle.
### VI-70: Guidelines for Preparation of Parenteral Hazardous Drugs for Latex Allergy Patients

**Effective Date:** Dec. 2, 2009  
**Approved by:** Provincial Pharmacy Professional Practice Council  
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#### 3. Preparing the biological safety cabinet
- The fan/blower must be turned on and all unnecessary equipment and items containing latex be removed from the biological safety cabinet.
- The inside surfaces of the biological safety cabinet must be cleaned and disinfected according to standard procedures while wearing full PPE including two pairs of latex-free chemotherapy gloves.
- The placement of supplies and compounding preparations (for non-latex allergic patients) in the same biological safety cabinet is not permitted until the latex-free preparations have been completed and removed from the biological safety cabinet.

#### 4. Withdrawing drugs
   a) PhaSeal™
      - Withdraw the calculated volume of drug according to the process outlined in the BCCA Pharmacy Practice Standards for Hazardous Drug manual Module 1 Checklists – Withdrawal from One Hazardous Drug Vial Using PhaSeal™
      - If more than one syringe is required to withdraw a dose from one vial, use a PhaSeal™ ‘Connector/Injector Port Saver’ as described in the “Reconstituting drugs-PhaSeal™” section below or use a new vial for each volume of drug withdrawn
   b) Chemotherapy vent
      - Insert a chemotherapy vent into the vial stopper
       - Using the smallest gauge needle possible, withdraw a single dose into a syringe
       - Change the needle before adding drug to an IV solution bag
       - If dispensing the drug in a syringe, remove the needle and cap the syringe tip with a latex-free luer lock syringe tip cap
       - Discard the vial after the single dose is removed or use remainder of drug for non-latex allergic patient(s)

#### 5. Reconstituting drugs
   a) PhaSeal™
      - Refer to the BCCA Pharmacy Practice Standards for Hazardous Drug manual Module 1 Checklists - Reconstitution of a Hazardous Drug Using PhaSeal™
      - To maintain a maximum of two pokes into the vial stopper when reconstituting drug in a vial using PhaSeal™, a PhaSeal™ ‘Connector/Injector Port Saver’ must be used
       - To create a Connector/Injector Port Saver:
         - Attach a Connector Luer Lock to an Injector Luer Lock
         - Using a push-turn-push motion, attach the Injector Luer Lock to the Protector on the vial
         - The Connector/Injector Port Saver must remain attached to the Protector for the duration of drug preparation for latex allergic patients
VI-70: Guidelines for Preparation of Parenteral Hazardous Drugs for Latex Allergy Patients

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b) Negative pressure technique (Note: negative pressure technique is not recommended for hazardous drugs).

- Using the smallest gauge needle possible, add diluent to the vial using negative pressure technique
- Carefully remove the needle from the vial stopper
- Gently agitate the vial until drug is completely dissolved and no particles are visible
- Using a new needle with the smallest gauge possible, withdraw the appropriate dose into a syringe
  - Puncture the vial stopper in a different area than the diluent needle punctures
- Change the needle before adding the drug to an IV solution bag
- If dispensing the drug in a syringe, remove the needle and cap the syringe tip with a latex-free luer lock syringe tip cap
- Discard the vial after the single dose is removed or use remainder of drug for non-latex allergic patient(s)

6. Preparing dose for final product check

- Ready supplies and the final product for the final product check as per the BCCA Pharmacy Practice Standards for Hazardous Drugs Manual Module 1 Checklists

7. Labelling and packaging of doses

- Dispense in a sealed latex-free zip lock bag.
- Apply a “Latex free product-Use Latex precautions” auxiliary label to the final container and the transport bag in addition to the patient-specific and standard auxiliary labels.

DEFINITIONS

Latex sensitivity - is a “nonallergic” irritant contact dermatitis, characterized by redness, cracking, scaling and vesicle formation on exposed areas. With repeated exposure to natural rubber latex, sensitization may be increased and may progress to a systemic allergic reaction.

Latex allergy - there are two types:

a. Allergic contact dermatitis is a type IV, delayed hypersensitivity to chemicals added to latex during processing, and is characterized by an initial acute eczematous dermatitis often with vesicle formation. Typical presentation occurs 48-96 hours after exposure and skin may subsequently become dry, cracked and thickened.

b. Allergic immunoglobulin E (IgE)-mediated systemic reaction is a type I immediate hypersensitivity with symptoms that may include urticaria, flushing, edema, rhinoconjunctivitis, asthma, and anaphylaxis. Life threatening allergic reactions have most often been associated with mucosal, inhalation or parenteral exposure to latex proteins.
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**VI-70: Guidelines for Preparation of Parenteral Hazardous Drugs for Latex Allergy Patients**

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<td>10 Dec 2010, 27 Jan 2011, 2 March 2011, 2014</td>
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**REFERENCES:**

1. BCCA - Vancouver Centre. Preparation of Chemotherapy for Latex Allergy Patients. 1998
5. Vancouver Hospital and Health Sciences Centre. Pharmaceutical Sciences Policy and Procedure. Latex Allergic Patients. May 17, 2004
APPENDIX I: Creating and Maintaining a Centralized list of Latex-Free Products

1. Creating a centralized list of latex-free medical supplies
   - Pharmacy staff (e.g. purchasing technician/assistant) will call the manufacturer to determine latex content of medical supplies used to prepare medication (e.g. chemo pins, filters, syringes, non-PVC bags, zipper storage bags), if not indicated on the packaging material.
   - Information will be forwarded to the Pharmacy Systems Application Technician/Assistant to be recorded and tabulated in a centralized list (see Table 1) and be available to pharmacy staff involved in preparing the medication and inform nursing staff preparing support medication.
   - Lot numbers will need to be recorded only when the latex content of a medical supply changes between lot numbers. Information will need to be obtained from the manufacturer by the pharmacy staff as needed and recorded in the centralized list by the Pharmacy Systems Application Technician/Assistant.
   - This chart is located on H:\Pharm-prov\Latex Allergies as a reference for all centers.

<table>
<thead>
<tr>
<th>Medical Supplies</th>
<th>Manufacturing Company</th>
<th>Latex Free (Yes/No)</th>
<th>Lot Number, if applicable</th>
<th>Date</th>
</tr>
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2. Creating a centralized list of latex-free medications
   - Pharmacy staff (e.g. purchasing technician/assistant) will call manufacturer to determine latex content of medication, by asking whether there is latex in the vial stopper.
   - Information will be forwarded to the Pharmacy Systems Application Technician/Assistant to be recorded and tabulated in a centralized list (see Table 2) and be available to pharmacy staff involved in preparing the medication at that regional centre and inform nursing staff preparing support medication.
   - Lot numbers will need to be recorded only when the latex content of a medication changes between lot numbers. Information will need to be obtained from the manufacturer and recorded in the centralized list.
   - This chart is located on H:\Pharm-prov\Latex Allergies as a reference for all centers.

<table>
<thead>
<tr>
<th>Drug name and strength</th>
<th>Manufacturing Company</th>
<th>Latex free (Yes/No)</th>
<th>Lot Number, if applicable</th>
<th>Date</th>
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3. Maintaining a centralized list of latex-free products
   - According to manufacturers, latex content does not change between lot numbers of products. If any changes occur, communication from the manufacturer, in the form of a “Dear Healthcare Professional” letter, will be faxed or emailed to all dispensing pharmacies indicating the lot numbers affected.
   - Pharmacy staff (e.g. purchasing technicians/assistants) will be responsible for forwarding this information to the Pharmacy Systems Application Technician/Assistant who will update the centralized list of latex-free products at that point specifying the date and the lot numbers affected.
   - If new products or strengths of medications become available, pharmacy staff will call the manufacturer to determine latex content and will forward that information to the Pharmacy Systems Application Technician/Assistant to update the centralized list and record the date of activity.
   - The Provincial Pharmacy Systems Application Technician/Assistant will be responsible for updating the centralized list of latex-free products when a new drug has been added to the Benefit List and annually by contacting the manufacturers to determine if there is any new information regarding latex status.
Provincial Pharmacy Directive

VI-90-02: Outpatient Prescription Labels: Guiding Principles for Patient Instructions

Effective Date: May 9, 2011
Approved by: Provincial Pharmacy Professional Practice Council

Review Date: Revision Date:

RATIONALE:

A recognized strategy to improve comprehension of the directions on outpatient prescription labels and to reduce inadvertent medication errors is to standardize drug labelling practices. Standardization should be based on a critical review of factors that promote or distract from patient understanding of prescription medication instructions.

DIRECTIVE:

The following general principles for patient instructions were compiled based on evidenced-based and best practice guidelines. These principles will be applied when developing new short codes or modifying existing short codes for patient instruction fields on outpatient prescription labels.

These principles are not intended take the place of clinical judgment if a situation requires alternate instructions due to pharmacological differences between medications. However, if no clinical reason prevails, then the principles will be followed.

PROCEDURES:

1. Use whole numbers instead of alphabet characters to describe doses, concentrations, and frequencies as much as possible. (e.g., Use ‘2’; not ‘two’)

2. For doses that include partial tablets, use alphabet characters instead of fractions (e.g., Use ‘half’, ‘quarter’; not ‘1/2’, ‘1/4’, etc.), (Use ‘one and a half’; not ‘1.5’).

3. Dose and interval should be clearly separated and contain specific dosing and interval times as much as possible. (e.g., ‘Take 2 tablets in the morning and take 2 tablets in the evening’; not ‘Take two tablets twice a day’), (e.g., ‘Take 1 tablet in the morning’; not ‘Take once daily’)

4. Avoid awkward terms such as ‘twice’, ‘bi-monthly’, ‘bi-weekly’, etc; (e.g., Use ‘2’).

5. Use common terminology (e.g., no medical jargon).

6. Use capital letters only in the first letter of sentence (avoid all capital letters for full sentences). Use all capital letters to selectively make key words stand out.

7. Avoid negative statements. Tell the patient what they should do, and not what they shouldn’t do. (e.g., Use ‘Take by mouth’, not ‘Not for rectal use’)

8. Different strengths of the same medication should be expressed in the same manner. (e.g., ‘250 mg, 500 mg, 1000 mg’, not ‘1 g’).

9. Include properly spaced commas for dose numbers above 9999. (e.g., Use ‘10,000’, not ‘10000’)

10. Use standard metric abbreviations. (e.g., Use ‘kg, g, mg, mcg, or mL’, not ‘mLs, gm, or gms’)

11. Include a space between the drug name, strength, dosage form, and dosage units unless it causes the strength and dosage unit to fall on separate lines. (e.g., Use ‘capecitabine 500 mg’, not ‘capecitabine 500mg’)

12. Avoid symbols and abbreviations on the Institute for Safe Medication Practices (ISMP) ‘Do not Use’ list. (e.g., spell out the word ‘unit’, not ‘u’) See directive PIM 060 – IV-B-65B. Use of Abbreviation.pdf – Under the following link: file://H:\EVERYONE\BCCA Policy Manual\IX. Patient Information Management
13. Ensure the most essential information is at the beginning of the directions (e.g., ‘On radiation therapy days only’). Keep less essential information near the end. (e.g., ‘Total dose = 500 mg’)

14. When more than one strength for a drug is dispensed, include information at the end of the directions to instruct the patient to take the two strengths together. (e.g., ‘Take EACH dose with ___ x ___ mg tablets’)

REFERENCES:


