MEDICATION RECONCILIATION IN THE INPATIENT SETTING – A STUDENT GUIDE[1,2]

DESCRIPTION OF GUIDE

This guide has been developed to provide students with a framework to systematically approach obtaining an accurate and complete medication history as patients transition through care (e.g. on admission to a hospital, when transferring between facilities, and on discharge from a hospital). ***Note:*** *The resource provided here serves as a general guide for use but the practice educator can amend this at any time to better suit their practice environment and patient population. As approaches and resources may vary, students should always discuss their approach with the practice educator on site prior to completing these types of activities for the first time while on practicum.*

LEARNING OBJECTIVES

After reviewing this guide, the student will be able to:

- ✓ Explain what is expected when performing medication reconciliation on admission and on discharge.
- ✓ Describe the steps involved in preparing and communicating a Best Possible Medication History (BPMH) in the inpatient setting.
- ✓ Describe the steps involved in preparing and communicating a Best Possible Medication Discharge Plan (BPMDP) in the inpatient setting.

PROCESS

FOR MEDICATION RECONCILIATION ON ADMISSION:

1) Create a BPMH within 24 hours of admission, if feasible:
   - Gather the patient's medication information:
     i. Review the assigned patient's chart and PharmaNet record to gather their medication information. Use the **Inpatient Patient Work Up Form** and the **Admission Medication Reconciliation Orders - Student Worksheet Form,** or site-specific forms, if available to document the pertinent information.
   - Interview the patient and/or caregiver:
     ii. Prior to interviewing the patient prepare the approach to the interview by:
       - Reviewing the **BPMH Interview Student Guide** and **Requirements Checklist for BPMH Interview.**
       - Filling in the **Medication Reconciliation Orders - Student Worksheet** form or site-specific form if available with the medications the patient is taking as per PharmaNet.
       - Preparing the interview questions.

     iii. Present the patient and the information gathered above to the practice educator, using the **Requirements Checklist for Inpatient Presentation to**

[1] Canadian Patient Safety Institute and ISMP Canada (2017). Medication Reconciliation in Acute Care Getting Started Kit, version 4. Retrieved March 15, 2017 from: https://www.ismp-canada.org/medrec/
[2] ISMP Canada (2015). Hosptial To Home – Facilitating Medication Safety at Transitions: A Toolkit for Healthcare Providers.

Practice Educator as a guide if needed, and specifically discuss the areas you want to focus on and/or clarify with the patient during the interview.

iv. Under the practice educator's guidance and supervision conduct a detailed BPMH medication reconciliation interview and document findings on the **Admission Medication Reconciliation Orders - Student Worksheet Form**, or site-specific form if available, and specifically the Medication History Section – Verified Section.

2) Reconcile Medication Orders
   - Following the patient interview and under the guidance and supervision of the practice educator:
     - Review the patient chart again if necessary to gather or clarify any further information.
     - Compare the BPMH with the admission orders for the patient and identify any discrepancies that need to be clarified.
     - Discuss with the practice educator the process for resolving any discrepancies between the BPMH created and the admission orders.
     - Work with the practice educator to communicate and resolve any discrepancies identified with the most responsible prescriber.

3) Document
   - Under the guidance and supervision of the practice educator, student to draft a note to document patient's BPMH and the interaction as per the site's requirements and/or observe their practice educator document the patient's BPMH and the reconciliation activities performed (i.e. discrepancies, drug therapy problems, and recommendations).

4) Communicate
   - If deemed appropriate, under the guidance and supervision of the practice educator, relay any medication changes to the patient.

MEDICATION RECONCILIATION ON DISCHARGE:

1) Student to create a BPMDP as follows:
   - Gather the patient's medication information
     i. Conduct a review of the assigned patient's medical record and use the **Inpatient Patient Work Up Form** and **Best Possible Medication Discharge Plan – Student Worksheet Form**[1],or site specific forms, if available to document the pertinent information needed. In particular:
        - Review the most up to date medication profile
        - Review the 24-hour Medication Administration Record (MAR) over several days, noting trends in use of PRN and regularly scheduled medications
        - Compare this list and the admission BPMH and record any medications on the BPMDP that are not included on the MAR/most up to date medication profile
        - Record the medications that are relevant to discharge including any new medications that are to start upon discharge
        - Ensure all medications are assessed and identify all discrepancies.

- Prepare and present the patient and the findings to the practice educator, using the **Requirements Checklist for Inpatient Presentation to Practice** as a guide if needed, and specifically discuss with practice educator the following:
    i. Any discrepancies identified that need to be clarified such as omitted medications, dose adjustments, formulary adjustments etc.
    ii. For each medication indicate the following:
        1. continue as per prior to admission
        2. adjusted
        3. discontinued
        4. new in hospital

2) Reconcile Medication Orders
- If discrepancies found:
    - Discuss with the practice educator the process for resolving any discrepancies identified.
    - Under the guidance and supervision of the practice educator:
        - Resolve any discrepancies identified with the most responsible prescriber and write new prescriptions if needed.
        - Draft a note to document the BPMDP as per the site's requirements and/or observe the practice educator document the patient's BPMDP. Specifically ensure the documentation for each medication is complete indicating: continue as prior to admission, adjusted, discontinued, or new in hospital.

3) Communicate the BPMDP
- Communicate the BPMDP to the patient and/or caregiver
    - Prior to counselling the patient in preparation for discharge, prepare the approach to the counselling session by reviewing the **BPMDP Counselling Student Guide** and the **Requirements Checklist for BPMDP Counselling**[1]
    - Discuss the areas you want to focus on with the patient and/or caregiver during the counselling session with the practice educator and prepare a medication schedule for the patient using the **Medication Schedule - Student Worksheet** form or site-specific form if available.
    - Under the guidance and supervision of practice educator conduct a BPMDP counselling session with the patient and/or caregiver.
        - Provide medication education and counselling as needed and relay any medication changes to the patient
        - Share **ISMP Canada's 5 Questions to Ask About Your Medications**[1] document, if deemed appropriate by the practice educator.
- Observe the practice educator communicate the BPMDP to the appropriate healthcare providers within the patient's circle of care (e.g. community pharmacy, primary care physician, etc) as applicable.

4) Document

- Under the guidance and supervision of the practice educator, student to draft a note to document the above activities as per the site's requirements and/or student to observe practice educator complete the required documentation.

ACCESSORY RESOURCES

- **Inpatient Patient Work Up Form** (see Appendix 3 – Working Up A Patient in the Inpatient Setting – A Student Guide))
- **Requirements Checklist Inpatient Presentation to Practice Educator** (see Appendix 2)
- Medication Reconciliation - On Admission
    - **Admission Medication Reconciliation Orders - Student Worksheet Form** (see below)
    - **BPMH Medication Interview Student Guide** (see below)
- Medication Reconciliation - On Discharge
    - **Best Possible Medication Discharge Plan - Student Worksheet**[1] (see below)
    - **Medication Schedule - Student Worksheet Form**[1] (see below)
    - **BPMDP Interview Student Guide** (see (see below)
    - ***ISMP Canada - 5 Questions to Ask About Your Medications***[1] (see below)

ADMISSION MEDICATION RECONCILIATION FORM – STUDENT WORKSHEET[1]

NOTE THIS IS NOT A VALID PRESCRIPTION

Medication Reconciliation Orders (Page 1 of 2)	Patient Initials:	Date:

Clinical Information as per PharmaNet:
Adverse Reaction(s) as per PharmaNet (refer to facility-specific documentation for current status):

Please note that the patient's PHARMANET profile MAY contain discontinued medications and MAY NOT contain updated instructions the patient may have received from their physician or such items as non-prescription drugs, samples, investigational or clinical trial drugs, complementary and alternative therapies, selected prescriptions obtained through provincial programs (e.g. antiretrovirals) or prescriptions obtained from outside the province or over the internet.

Medication History		**Medication Orders**
Medications as per PharmaNet	Verified with: D patient Dother:	
	☐ Taking differently (specify): ☐ Per PharmaNet ☐ No longer taking ☐ Unable to verify Last dose taken at:	☐ Give as per verified history ☐ Give as per PharmaNet ☐ Discontinue ☐ Change to:
	☐ Taking differently (specify): ☐ Per PharmaNet ☐ No longer taking ☐ Unable to verify Last dose taken at:	☐ Give as per verified history ☐ Give as per PharmaNet ☐ Discontinue ☐ Change to:
	☐ Taking differently (specify): ☐ Per PharmaNet ☐ No longer taking ☐ Unable to verify Last dose taken at:	☐ Give as per verified history ☐ Give as per PharmaNet ☐ Discontinue ☐ Change to:
	☐ Taking differently (specify): ☐ Per PharmaNet ☐ No longer taking ☐ Unable to verify ☐ Last dose taken at:	☐ Give as per verified history ☐ Give as per PharmaNet ☐ Discontinue ☐ Change to:

Medication History taken by:	Prescriber:
Prescriber or Designation:_______________ Date and Time: ______________ Initials:____________	Date______________________Time______________________ Signature *N/A as this is not a valid prescription* Printed Name__________________College ID __________________

[1] Adapted from the University of British Columbia Faculty of Pharmaceutical Sciences Integrations Activity Team. © The University of British Columbia, Faculty of Pharmaceutical Sciences, 2016. All rights reserved.

ADMISSION MEDICATION RECONCILIATION FORM - STUDENT WORKSHEET[Error! Bookmark not defined.] *NOTE THIS IS NOT A VALID PRESCRIPTION*		
Medication Reconciliation (Page 2 of 2)	Patient Initials:	Date:
Clinical Information as per PharmaNet: Adverse Reaction(s) as per PharmaNet (refer to facility-specific documentation for current status):		

Additional Medication History D Not taking any/additional medications (herbal, non-prescription, antiretroviral, sample, etc.)	**Medication Orders**
Drug, Dose, Route, Frequency, and Duration	▭ Give as per verified history ▭ Discontinue ▭ Change to:
Drug, Dose, Route, Frequency, and Duration	▭ Give as per verified history ▭ Discontinue ▭ Change to:
Drug, Dose, Route, Frequency, and Duration	▭ Give as per verified history ▭ Discontinue ▭ Change to:
Drug, Dose, Route, Frequency, and Duration	▭ Give as per verified history ▭ Discontinue ▭ Change to:
Drug, Dose, Route, Frequency, and Duration	▭ Give as per verified history ▭ Discontinue ▭ Change to:

Medication History taken by: Prescriber or Designation:_____ Date and Time: _____ Initials:	Prescriber: Date_____Time_____ Signature *N/A as this is not a valid prescription* Printed Name_____College ID _____

Best Possible Medication History Interview – Student Guide[1]

Note: The template provided here serves as a general guide for use but the practice educator can amend this at any time to better suit the practice environment and patient population. As approaches and resources may vary, students should always discuss their approach with the practice educator on site prior to conducting a BPMH interview for the first time while on practicum.

Introduction
✓ Hello Mr./Mrs./Ms./Miss. _____; I'm a student pharmacist and my name is _____. This is _____ my practice educator, who is a pharmacist. ✓ I have a list of medications from your chart (and/or PharmaNet record) and I want to make sure that it is complete and accurate so that the correct medications are ordered while you are in the hospital. ✓ Are you familiar with your medications? If not, is there a caregiver I can talk to? ✓ Can we take ~ 10-15 minutes to discuss your medications? Is this a good time?
Information Gathering
Medical and Social History - if not specifically described in the chart may need to clarify with patient: ✓ Contact and demographic information (name, address, phone, physician, specialist) ✓ Reason for encounter/hospital admission ✓ Medication experience (expectations, concerns, compliance aids) ✓ Immunization status ✓ Social drug use (tobacco, caffeine, alcohol, recreational drugs) ✓ Family medical history
✓ Do you have any medication allergies? If yes, what happens when you take ___?
✓ Did you bring your medication list/blister pack/medication vials with you to the hospital? ✓ Ask patient to list his/her medications or review each medication from the chart or PharmaNet record → How do you take _____(dose, route, and frequency)? → Do you know why you are taking _____(indication, start date)? ✓ Are there any prescription medications you have that you are not taking? ✓ Are there any other prescription medications that you are taking? [use their medical conditions to prompt for possible medications] ✓ Were there any recent changes to your medications (e.g. new starts, dose changes etc)? Any recent antibiotic use?
✓ Do you take anything that you would buy without a doctor's prescription? Give example, e.g. ASA
✓ Do you take any vitamins (ex. multivitamin)? If yes, how do you take _____? ✓ Do you take any minerals (ex. Calcium, iron)? If yes, how do you take _____? ✓ Do you use any supplements (ex. Glucosamine, St. John's Wort)? If yes, how do you take _____?
✓ Do you use any eye drops? If yes, how many and how often? ✓ Do you use any ear or nose drops/nose sprays? If yes, how many and how often?

[1] Adapted with permission from the LMPS (SPH, SMH, VGH) EEF's Mutually Beneficial Activity Checklists (with contributions from Dr. M. Leung and her directed studies students March 2016). Reference: Chhibbar S, Ingram S, Fernandes O, et al. Best possible medication history interview guide. Toronto, Ont.: University Health Network and ISMP Canada. Last revised May 2009.

✓ Do you use any inhalers? Medicated patches? Medicated creams or ointments? ✓ Do you use any injectables? ✓ Did your doctor give you any medication samples to try?
Community Pharmacy
✓ Do you have a pharmacy that you normally go to? (Name and Location) →Is it okay if we call the pharmacy to clarify your medications? [omit if not relevant] ✓ Do you get your medications from more than one pharmacy? ✓ Do you have difficulties taking your medications or remembering to take your medications? Any cost concerns? If you are using compliance aids (blister packs, daily delivery) how is that working for you?
Closing
✓ Ask patient if he/she has any questions. ✓ Let the patient know that the most updated medication list will be inserted into the patient's medical chart once the pharmacist confirms the list and any follow-ups that may be needed. ✓ Thank patient.

Best Possible Medication Discharge Plan (BPMDP) STUDENT WORKSHEET - NOTE THIS IS NOT A VALID PRESCRIPTION[1]											
Patient Initials:								**Discharge Date:**			
Allergies:								**Primary diagnosis:**			
Community Pharmacy:								**Phone number:**			
To be completed by pharmacy student:								**To be confirmed by MD:**			
Current Medications	Dose	Route and Directions	Source: BPMH/MAR	Same as prior to admission	Adjusted in hospital	Discontinued in hospital	New in hospital	Do not continue	Quantity	Repeats	Comments
New Discharge Medications											

Date BPMDP Interview Completed _____
Physician Name _____

[1] Adapted with permission from ISMP Canada. Reference: Canadian Patient Safety Institute and ISMP Canada (2017). Medication Reconciliation in Acute Care Getting Started Kit, version 4. Retrieved December 15, 2017 from: https://www.ismp-canada.org/medrec/

Prepared for:
Prepared by:
Date:

MEDICATION SCHEDULE-STUDENT WORKSHEET[1] - This is not a prescription

Allergies:		**Comments:** **Times are only approximates and to be used as a guide**			
	MEDICATION NAME (Trade Name*) DIRECTIONS REASON FOR USE	**TIME**			
		Breakfast 8am	Lunch 12pm	Supper 6pm	Bed 10pm
1					
2					
3					
4					
5					
6					

*Represents the most common trade name; not necessarily the brand that you are currently using.

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Best Possible Medication Discharge Plan (BPMDP) Counselling Student Guide[1,2,3]

Note: The template provided here serves as a general guide for use but the practice educator can amend this at any time to better suit the practice environment and patient population. As approaches and resources may vary, students should always discuss their approach with the practice educator on site prior to conducting BPMDP counselling session for the first time while on practicum.

Pre-counselling Preparation

- ✓ Confirm the patient's discharge time with your practice educator and/or the physician to ensure you have adequate time for medication reconciliation and discharge counselling. This is important; as patients are eager to leave hospital once they find out they are being discharged.
- ✓ Try to schedule the counselling session as soon as the discharge date is known and medications are confirmed and at a time the patient's family/caregiver is available (if they wish to be present)
- ✓ Ensure discharge prescriptions have been prepared and confirmed with the physician, if not already done so, and that any noted discrepancies, or drug therapy problems such as medications with no appropriate indications or medical conditions with no medications have been resolved.
- ✓ Confirm that all Pharmacare (including First Nations Health Benefits Plan, Plan W), private drug plan, and special authority requests have been completed (if applicable).
- ✓ Prepare patient friendly medication list, date it, and review it with the practice educator. Once verified by practice educator, provide it to the patient/caregiver at the beginning of the BPMDP counselling session.

Counselling Session

- ✓ When reviewing the medication list with the patient and/or caregiver:
  - Review and counsel the patient on each of the discharge medications +/- devices: the purpose of each medication, how it works, onset of action, dose, timing, intended duration, adverse drug reaction's (ADR's) of all medications (with emphasis on any new medications and their intended duration).
  - Ensure you communicate the changes, particularly the changes to the home regimens the patient was on prior to hospital admission so they can make adjustments accordingly i.e. for each medication indicate the following, if applicable:
    - Medications that have CHANGED in hospital
    - Medications that are NO LONGER REQUIRED on discharge
    - Medications that are to CONTINUE on discharge
    - Medications that are NEW and to be taken on discharge
  - Counsel patient on when to seek medical care.
  - Ensure counselling on all other miscellaneous points have been completed (e.g. non-drug measures).
  - Identify any barriers to non-adherence and offer solutions, e.g. discuss blister packages/dosettes with patient and if this is something they want, document this on prescriptions that are being sent to community pharmacy.
    - To assess adherence, consider asking patient how often he/she forgets to take medications in a given week
    - Assess visual impairment, dexterity
- ✓ Ensure outpatient lab requisition is prepared and forwarded to patient (if applicable and not already done by others).
- ✓ Discuss future steps patient must take (e.g. follow-up with physician in a timely manner, which tests will be needed, etc.).
- ✓ Ask patient to return all discontinued medications to his/her own pharmacy to minimize any risk of confusion.

Summary

- ✓ Assess the patient's/caregiver's understanding by having him/her summarize the counselling points and/or demonstrate how to use the devices, if applicable.
- ✓ Summarize the main points and then ask patient/caregiver if he/she has any questions.
- ✓ Advise patient/caregiver to keep the medication list on him/her at all times and share with his/her family physician, specialist(s) or dentist at every appointment.
- ✓ Ask the patient about his/her preferred pharmacy and have the discharge prescription faxed there.
  - Advise patient/caregiver to use ONE community pharmacy to fill all prescriptions.

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[3] ISMP Canada (2015). Hospital to Home – Facilitating Medication Safety at Transitions: A Toolkit for Healthcare Providers.

Post-Counselling

- ✓ Under the guidance and supervision of practice educator document service provided in the chart.
- ✓ If possible and where appropriate, prepare communication to GP and/or community pharmacist and provide them with a name and number to contact about any inquiries.
  - Notify them of all changes that were made and document:
    - All NEW medications, including indication, intended duration and Pharmacare/non-Pharmacare special authority approval
    - All medications that are to be CONTINUED (or reassessed by GP for continuation)
    - Medications that have been switched or CHANGED (e.g. dose/frequency changes)
    - Medications that have been DISCONTINUED (include prior-to-admission medications that should be discontinued and those that were started in hospital and no longer needed)
    - Discharge monitoring plan and follow up
- ✓ Be available to respond to questions from patients/caregivers and/or community partners if needed.

5 QUESTIONS TO ASK ABOUT YOUR MEDICATIONS

when you see your doctor, nurse, or pharmacist.

1. CHANGES?

Have any medications been added, stopped or changed, and why?

2. CONTINUE?

What medications do I need to keep taking, and why?

3. PROPER USE?

How do I take my medications, and for how long?

4. MONITOR?

How will I know if my medication is working, and what side effects do I watch for?

5. FOLLOW-UP?

Do I need any tests and when do I book my next visit?

Keep your medication record up to date.

Remember to include:

- ✓ drug allergies
- ✓ vitamins and minerals
- ✓ herbal/natural products
- ✓ all medications including non-prescription products

Ask your doctor, nurse or pharmacist to review all your medications to see if any can be stopped or reduced.

ismp CANADA Institute for Safe Medication Practices Canada / Institut pour la sécurité des médicaments aux patients du Canada

cpsi icsp Canadian Patient Safety Institute / Institut canadien pour la sécurité des patients

Visit safemedicationuse.ca for more information.

Canadian Society of Hospital Pharmacists / Société canadienne des pharmaciens d'hôpitaux

Canadian Pharmacists Association / Association des pharmaciens du Canada

SafeMedicationUse.ca

Patients for Patient Safety Canada / Patients pour la sécurité des patients du Canada

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