Reducing Harm | Improving Healthcare | Protecting Canadians

MEDICATION RECONCILIATION IN HOME CARE

Getting Started Kit

Version 2

Effective March 14, 2019, the Canadian Patient Safety Institute has archived the Medication Reconciliation (MedRec) intervention. For additional inquiries, please contact info@cpsi-icsp.ca

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www.saferhealthcarenow.ca

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Safer Healthcare Now!

We invite you to join *Safer Healthcare Now!* to help improve the safety of the Canadian healthcare system. *Safer Healthcare Now!* is a national program supporting Canadian healthcare organizations to improve safety through the use of quality improvement methods and the integration of evidence in practice.

To learn more about this intervention, to find out how to join *Safer Healthcare Now!* and to gain access to additional resources, contacts, and tools, visit www.saferhealthcarenow.ca.

This Getting Started Kit has been written to help engage your inter-professional/ interdisciplinary teams in a dynamic approach for improving quality and safety while providing a basis for getting started. The Getting Started Kit represents the most current evidence, knowledge and practice, as of the date of publication and includes what has been learned since the first kits were released in 2005. We remain open to working consultatively on updating the content, as more evidence emerges, as together we make healthcare safer in Canada.

Note:

The Getting Started Kits for all interventions are available in both French and English.

As of June 1, 2016, Safer Healthcare Now! is no longer collecting data and Patient Safety Metrics is no longer available. Our Central Measurement Team continues to offer expert measurement coaching and consultation.

Acknowledgement

The Institute for Safe Medication Practices Canada (ISMP Canada) is the Medication Reconciliation intervention lead for *Safer Healthcare Now!*

This Medication Reconciliation in Home Care Getting Started Kit, Version 2, has been prepared by ISMP Canada and contains materials, documents and experiences from medication reconciliation teams across Canada, customized to the home care setting.

We wish to thank and acknowledge our Home Care Expert Panel members for their insight and support in the revision of this kit.

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The Canadian Patient Safety Institute (CPSI) is acknowledged for their financial and in-kind support of the *Safer Healthcare Now!* Getting Started Kits.

The Institute for Safe Medication Practices Canada (ISMP Canada) is an independent national not-for-profit agency established for the collection and analysis of medication error reports and the development of recommendations for the enhancement of patient safety.

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Glossary of Terms

The following terms will be used throughout this Getting Started Kit for Home Care:

Admission: The initiation of service by the home care organization.

Best Possible Medication Discharge Plan (BPMDP): The most appropriate and accurate list of medications the patient should be taking after discharge from a medical facility.

Best Possible Medication History (BPMH): A Best Possible Medication History (BPMH) is a history created using 1) a systematic process of interviewing the client/family; and 2) a review of at least one other reliable source of information to obtain and verify all of a client's medication use (prescribed and non-prescribed). Complete documentation includes drug name, dosage, route and frequency.

BPMH Interview Guide: A standard set of questions including visual cues used by the clinician during the client interview when obtaining the BPMH.[1]

Client-Centered Care: An approach in which clients are viewed as whole; it is not merely about delivering services where the client is located. Client-centered care involves advocacy, empowerment, and respecting the client's autonomy, voice, self-determination, and participation in decision-making.[2]

Circle of Care: A group of individuals including the client and family caregivers and healthcare providers who are involved in the client's care within the healthcare setting.

Discrepancy: A difference.

Family caregivers: Defined as family members and other significant people (as identified by the care recipient) who provide care and assistance to individuals living with a debilitating physical, mental or cognitive condition.[3] Similar terms: unpaid caregiver, informal caregiver

Healthcare Professional: a licensed/regulated healthcare team member

Healthcare Provider: includes licensed/regulated and non-licensed/non-regulated healthcare personnel

Improvement: To make better. Improvement comes from the application of knowledge. It also comes from action: from developing, testing and implementing changes which alter how work or activity is done or the make-up of a product or service. Improvement should produce visible, positive differences in results relative to historical norms and have a lasting impact.[4]

Medication Reconciliation: A formal process in which healthcare professionals partner with clients/patients to ensure accurate and complete medication information transfer at transitions of care.[5] It involves a systematic process for obtaining a medication history, and using that information to compare to medication orders in order to identify and resolve discrepancies. It is designed to prevent potential medication errors and adverse drug events.

Medication Review (also known as clinical medication review): A process that addresses issues related to the client/patient's use of medication in the context of their clinical condition in order to improve health outcomes.

Prescribed Medication: This refers to medications in the client medication regimen that have been prescribed by a physician/nurse practitioner. This includes over the counter (non-prescription) medications that have been recommended by the physician/nurse practitioner.

Reconciled Medication List: This is the end result of the medication reconciliation process, where all discrepancies are identified and resolved. It is the most up-to-date accurate medication list for the client.

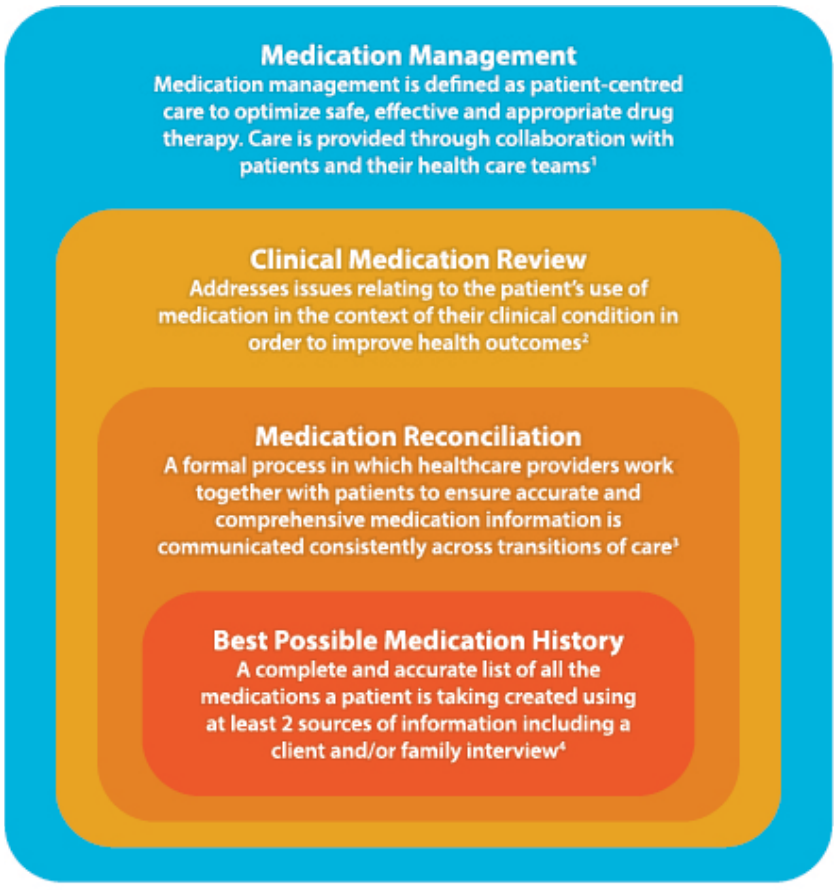
Introduction – What is Medication Reconciliation?

Medication Reconciliation (MedRec) is a formal process in which healthcare providers partner with clients and family caregivers to ensure accurate and complete medication information transfer at transitions of care.

Communication of accurate and up-to-date medication information is the cornerstone for all medication-related decisions as clients move through the healthcare system. As shown in Figure 1, accurate medication information supports safe and appropriate medication management at the time of prescribing, dispensing and administration of medications.

When MedRec is completed in the home care setting, clients/family caregivers and healthcare professionals are working together to identify and prevent potentially harmful medication errors. Specifically, in the home care setting, the MedRec process attempts to prevent medication errors and adverse drug events (ADEs), by identifying and resolving discrepancies between medications a client is actually taking (Best Possible Medication History - BPMH) and medications documented or recorded in a client's health record(s).

Figure 1 - Medication Management



1. Developed collaboratively by the Canadian Pharmacists Association, Canadian Society of Hospital Pharmacists, Institute for Safe Medication Practices Canada, and University of Toronto Faculty of Pharmacy, 2012.
2. www.health.gov.bc.ca/pharmacare
3. ISMP Canada. Medication Reconciliation in Acute Care: Getting Started Kit. 2011
4. ISMP Canada. Medication Reconciliation in Acute Care: Getting Started Kit. 2011

Adapted from Fraser Health, Providence Health Care, Provincial Health Services Authority, Vancouver Coastal Health

In the home care environment, the process starts and ends with the client. The end result is a reconciled medication list which is verified with the client in a manner to support clear understanding by the client/family caregivers and will guide overall medication management going forward.

Why is Medication Reconciliation Important?

A patient was re-admitted two days after discharge with severe hypoglycemia. The treating teams discharged the patient on a new insulin regimen without realizing that the patient also had insulin 70/30 [30/70] at home. The patient continued to take her previous regimen as well as the new one, and was found unresponsive by her husband. The patient was in ICU with the incident likely resulting in permanent neurological deficits.[6]

In 2011, there were 1.4 million individuals receiving home care in Canada, a 55 per cent increase since 2008.[7] The complexity of patients being cared for in their homes has also increased. CIHI reported in 2011-12 that 41.9 per cent of patients had high or very high needs (based on Maple scoring) with this rising to 48.8 per cent of patients in 2013-14.[8] Polypharmacy is prevalent in home care and has been identified as a risk factor for adverse events.[9]

The following literature should be considered when reviewing the importance of MedRec in the home care setting:

- The Pan-Canadian *Safety at Home* study[9] reviewed data extracted from both chart audits and secondary databases and calculated the annual incidence of adverse events in home care as 10.2 per cent and 13 per cent respectively. Furthermore, the researchers found that:
    - 56 per cent of the all adverse events were deemed to be preventable
    - Medication-related incidents were among the most frequently identified types of adverse events
    - Having experienced a medication-related incident directly increased a client's odds of death
- In the *Safer Healthcare Now!* Medication Reconciliation in Home Care Pilot Project, 45.2 per cent of the 611 home care clients who had MedRec completed were found to have at least one discrepancy in their medication regimen that required resolution by a prescriber.[10]
- A 2003 article estimated that one in three home care patients are at risk for a medication error.[11]

- Authors of the Agency for Healthcare Research and Quality (AHRQ) Report "Patient Safety and Quality: An Evidence-Based Handbook for Nurses"[12] found:
  - Discrepancies from 30 per cent to 66 per cent in the medications ordered by the prescribing provider and the actual medications the older adults were taking;
  - Prescribing providers were often unaware of prescribed medications their patients were taking and the larger the number of prescribing providers, the greater the chance of medication discrepancies;
  - 64 per cent of elderly patients were taking at least one medication that was not ordered two days after discharge from hospital;
  - 73 per cent of patients failed to use at least one medication according to instructions; and
  - 32 per cent of patients were not taking all drugs as ordered at discharge.
- A 2014 ISMP Canada aggregate analysis of voluntarily reported home care medication incidents determined that 68 per cent of the incidents occurred following a discharge from hospital.[13] Upon further analysis, it was identified that the incidents had the following themes/issues present:
  1) communication breakdown,
  2) lack of patient engagement; and
  3) unclear or conflicting medication plans.
- A 2013 American study (n=46) found that among clients aged 65 and older recently discharged from hospital, only 6.5 per cent were taking their medications at home as indicated in the discharge medication list found in the client's medical record.[14] It was further noted in this study that:
  - 78.2 per cent of clients were taking at least one additional prescription medication;
  - 43.4 per cent of clients were missing at least one prescription medication;
  - 43.4 per cent of clients were taking the wrong dose of at least one medication; and
  - 41.3 per cent of clients were taking medications at an incorrect frequency.

"Although providers can engage clients, family members and caregivers in conversations and collaborate with them to reduce risk, these home care recipients often make decisions about managing medications and treatments while clearly recognizing that these decisions are not always congruent with or endorsed by their provider".[15]

- A Canadian study by Forster et al. found that nearly a quarter of patients had an adverse event in the 30 day period after hospital discharge from a medical unit. Half of the adverse events were deemed preventable or ameliorable. The most common adverse events noted were drug-related (at a rate of 72 per cent).[16]
- In 2008, Wong et al. concluded that 70 per cent of patients experience an actual or potential unintended medication discrepancy at hospital discharge which can then precipitate an adverse drug event.[17]
- In a study of 101 patients transitioning from hospital to home, home care nurses identified that 94 per cent of patients had at least one discrepancy between the discharge medication list and the medications that patients reported actually taking at home.[18] On average 3.3 such discrepancies were found per patient.

"The potential of medication errors among the home healthcare population is greater than in other healthcare settings because of the unstructured environment and unique communication challenges in the home healthcare system."[19]

"A lot of our clients go home from hospital with different medications, but also have medications they were previously taking. They don't realize that the list they go home with is the list they're supposed to continue on, and a lot of them go back on their old medications."[20]

What are the Benefits of Medication Reconciliation in Home Care?

The following anecdote highlights the importance of MedRec as the foundation for medication review.

> ***"I was seeing a client twice daily with severe orthostatic hypotension in which VON was to monitor her blood pressure and provide nursing support. The client was finding it difficult to cope and unable to live her life normally due to extreme dizzy spells when standing/walking. Through medication reconciliation, I realized that she was on multiple blood pressure medications that required re-assessment. Her family doctor was notified and there was a change made to her medication regimen. Her blood pressure stabilized and she was no longer requires any home care nursing."***

Tools and Tips

A Scrapbook of Testimonials includes anecdotes from the participants in the *Safer Healthcare Now*! Home Care Medication Reconciliation Pilot Project, including many describing the benefits of MedRec.[21]

Implementation of MedRec in the home care setting can create many benefits at the client-level and as well as the system level. The prevention of harm from medication use is important to clients and family caregivers, and is also important to keep clients out of hospital and/or long term care facilities. Consider the following key figures from the literature:

- A study published in 2014 in which pharmacists and pharmacist residents performed home-based MedRec on 50 patients discharged from an acute care setting found a median result of two medication discrepancies per patient identified and resolved. The interventions enhanced the continuity of patient care during the transition from hospital to home.[22]
- Post-discharge medication assessment in combination with MedRec by pharmacists was found to decrease readmissions at day seven and 14 (n=243) in a study released in 2013. Study investigators found that 80 per cent of patients had a least one discrepancy.[23]

- A 2012 study also demonstrated that MedRec in combination with medication optimization post discharge led to a 30 per cent reduction in readmissions.[24]
- Results of MedRec processes enhanced by an intensive pharmacotherapeutic intervention at hospital discharge and post discharge home in 254 patients resulted in positive outcomes in both patient-level and system-level measures in a 2011 study. Medication discrepancies decreased from 81 per cent to 65 per cent and system-level discrepancies decreased from 84 per cent to 56 per cent within a one year period.[25]
- In a 2009 study titled "*The effectiveness of a pharmacist – nurse intervention on resolving medication discrepancies for patients transitioning from hospital to home healthcare,"* it was found that a pharmacist – nurse collaboration designed to identify and resolve medication-related discrepancies in patients transitioning from the hospital to home healthcare led to significant improvement in medication discrepancy resolution.[26]
- The clinical outcomes of a home-based MedRec program in 521 health maintenance organization (HMO) members after discharge from a skilled nurse facility were evaluated in a quasi-experimental controlled trial published in 2008. Although there were no significant differences found in adjusted risks of emergency department visits and re-hospitalizations during the 60 days after discharge, adjusted risk of post-discharge mortality was reduced by 78 per cent.[27]
- In a 1997 trial in which a pharmacist was utilized to provide an evaluation of medication in the homes of 20 patients, a decrease in medication discrepancies and problems was noted three to four weeks after the in-home pharmacist visit.[28]

Medication Reconciliation Process in Home Care

Step 1 Collect the Best Possible Medication History (BPMH)

Interview the client/family caregiver using a systematic process to establish a complete list of medications the client is taking. It is important to determine and document how the client is actually routinely taking their medication(s). Their actual medication use may differ from instructions provided by a healthcare professional.

Tools and Tips

- The BPMH Interview Guide provides a script and visual aids to facilitate a systematic process for client/family caregiver interview [1]
- The Top 10 Practical Tips - How to Obtain an Efficient, Comprehensive and Accurate Best Possible Medication History (BPMH)[29]
- When interviewing the client, open the vial with the client and say "tell me how you use/take these"
- See **Appendix F** for sample tools and forms.

Review at least one other reliable source of medication information to obtain and verify all of a client's medication use. The review of other sources of medication information is to support obtaining the most accurate list of medications a client is actually taking (i.e., the BPMH). There are many sources of medication information which can be referenced/ reviewed in conjunction with the client/family caregiver interview that can support the collection of the *best possible*

A Best Possible Medication History (BPMH) is a history created using:

- a systematic process of interviewing the client/family caregiver; and
- a review of at least one other reliable source of information to obtain and verify all of a patient's medication use (prescribed and non-prescribed).

Complete BPMH documentation includes drug name, dosage, route and frequency.

medication history. In the home care setting, examples of sources of medication information may include:

- Client's medication containers in the home, including prescription, non-prescription and natural health products (e.g., blister packs, vials, bottles, sprays, creams, inhalers, injectables, etc.)
- Client/family caregiver generated medication lists
- Medication dispensing records as available from community pharmacy(ies) or provincial community pharmacy databases (e.g., PharmaNet in BC, Drug Information System (DIS) in NS, Pharmaceutical Information Program (PIP) in SK, etc.)

There are other sources of medication information that can be used to support the collection of a BPMH (see "Recorded medication information sources")/Step 2. They differ in their comprehensiveness (e.g., inclusion of prescription and non-prescription medications), currency, clarity and accessibility. Even sources of medication information that are not 100 per cent accurate or complete may still convey valuable information and may facilitate a smoother client/family caregiver interview process. For example, the presence of a medication in community pharmacy records but not yet identified via the client/family caregiver interview can "trigger" a discussion on its current use with the client/family caregiver.

Bear in mind that it may be difficult at times to achieve a 100 per cent complete and accurate list of the medications that a client is actually taking (i.e., the BPMH). Several attempts may be needed to obtain the BPMH, and in some cases it may not be possible to get the complete list. The goal is to obtain the ***best possible*** medication history.

Document the BPMH

Once the client interview and review of medication information source(s) are complete, the BPMH can be documented. The BPMH should include ***all*** types of medications that the client is taking, including the following:

- prescription medications
- non-prescription medications (i.e., over-the counter)
- vitamins and supplements
- natural, herbal and traditional medications
- medications taken on an as-needed basis (e.g., medications for sleep, nitroglycerin spray)
- any other type of medication [e.g., medications taken cyclically (e.g. once monthly), non-oral dosage forms such as drops, inhalers, sprays, patches, injections, etc.)

*Determining **actual medication use** is a key component in preventing adverse drug events through the MedRec process*

It is important to document the drug name, dose and/or strength (as required), route and frequency for each. Organizations should attempt to standardize both the tools used to document the BPMH and the specific desired documentation practices (e.g., use of generic names, etc.). Other pertinent information related to the BPMH (e.g., use of community pharmacy records, completion of a client/caregiver interview) and associated more detailed information (e.g., name of community pharmacy, who was interviewed) should be included in the standardized documentation.

Tools and Tips

- Embed processes into organizational workflow that may support the home healthcare provider in accessing sources of medication information (e.g., determining community pharmacy provider(s) in advance, encouraging client/family caregiver to collect all medications for presentation to home healthcare provider).
- See **Appendix F** for sample tools and forms.

Step 2

Compare – Identify Discrepancies

Compare the BPMH with the most current information found in the client's recorded medication information sources. Recorded information usually indicates how the prescriber intends for the client to take their medications.

Figure 2 - Best Possible Medication Discharge Plan

ISMP CANADA

Best Possible Medication Discharge Plan (BPMDP)

Discharge Date: _____

Allergies: _____

Primary Diagnosis: _____

Community Pharmacy: _____ Phone Number: _____

Patient Addressograph

To be completed by RPh , RN or MD Name: _____ Date _____								To be completed 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 / Codes
New Discharge Medications											

BPMDP Patient Interview Completed: ❑

Refer for *community medication review program* if available: ❑

Physician (print name): _____ Physician's Signature: _____

Date: _____ CPSO Number: _____

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Developed by ISMP Canada with support from the Ontario Ministry of Health and Long-Term Care

Recorded medication information sources in the home care setting, may include:

- Discharge prescriptions/Best Possible Medication Discharge Plan (BPMDP)/Hospital discharge summary/discharge orders
- Information contained on prescription labels
- Primary care provider (e.g., family physician, nurse practitioner) records/orders
- Community pharmacy profile.
- Provincial drug information systems (e.g., PharmaNet in BC, Drug Information System (DIS) in NS, Pharmaceutical Information Program (PIP) in SK, etc.)

Recorded medication information sources also differ in their comprehensiveness (e.g., inclusion of prescription and non-prescription medications), currency, clarity and accessibility. Home healthcare professional should recognize the limitations of each of these sources of recorded medication information. It may be necessary to review more than one recorded medication information source to determine what the client's various healthcare providers understand a client to be taking.

Identify and document discrepancies between the BPMH and recorded medication information sources. The following are examples of discrepancies:

- Client is taking a medication that is not included on a current "recorded medication information source"
- Presence of a medication in the recorded medication information source that the client is no longer taking
- Client is taking a medication differently than prescribed e.g., taking a higher or lower dose, or taking more or less frequently

Tools and Tips

- Organizations should have processes in place to ensure home healthcare professionals have access to the necessary comparative medication information sources. For example, if patient is recently discharged from hospital and no discharge medication instructions have been obtained or shared, the organization has a process in place to obtain this information.

Step 3

Correct - resolve discrepancies

Correct or resolve discrepancies through discussion with the client/family caregiver and/or healthcare provider(s), as appropriate; i.e., reconcile. Evaluate the nature of the discrepancy as this will assist with resolution, including determination of the most appropriate person(s) in the client's circle of care to correct or resolve the discrepancy.

For example:

> *If there is discrepancy between the most current recorded medication information and the client's actual use, discuss this with the client/family caregiver to determine if the reason for the discrepancy is a lack of understanding. If a discrepancy is found to be due to a lack of understanding, the home healthcare provider may resolve this discrepancy by guiding the client to follow the intended medication regimen (provided this function is within the healthcare provider's scope of practice).*
>
> *If resolving a discrepancy involves a prescribing decision, additional client/family caregiver support (e.g., teaching), a need for clinical judgement or additional client monitoring, the resolution of the discrepancy should be directed to an individual with such a scope of practice (e.g., most responsible prescriber). The client/family caregiver should be involved in this process and efforts should be made to obtain his or her agreement on course of action to resolve the discrepancy.*

Any identified discrepancies, the reason for each discrepancy and the course of action taken to resolve it should be documented by the home healthcare provider. When resolution of discrepancies requires input or feedback from healthcare professionals outside of the home, the home healthcare provider should use any available channels to communicate with these individuals. As resolution of discrepancies may often involve reliance on other members of the client's circle of care to respond with a suggested course of action, completion of this resolution step may take place over more than one home care visit.

Update the BPMH (as needed) to accurately reflect the client's current medication regimen once discrepancies are resolved.

- **This updated list becomes the reconciled medication list**. The reconciled list should be considered the most up-to-date and accurate version of the client's medication list for everyone in the client's circle of care. Ensure that this updated list includes the date completed.

Document the reconciled medication list in a clearly visible and easily accessible place in the home care client record.

Tools and Tips

- The MDT©® (Medication Discrepancy Tool) developed by the Care Transitions Program®, provides a structured form to communicate discrepancies requiring resolution by others in a client's circle of care.[30]
- Teams should strive to have a reconciled medication list completed as quickly as possible. Some organizations have reported clients requiring an Emergency department visit related to a delayed resolution of identified discrepancies.

Step 4 Communicate the reconciled medication list

Communicate any medication changes to the client/family caregiver and verify their understanding of the updated medication regimen.

Provide the reconciled medication list, whenever possible to:

- **client/family caregiver**, and
- **others involved in the client's circle of care** (e.g., the client's most responsible prescriber, community pharmacist, those involved in medication administration support, etc.). Convey to providers the rationale for any changes that have been made to the reconciled list whenever this information is available.

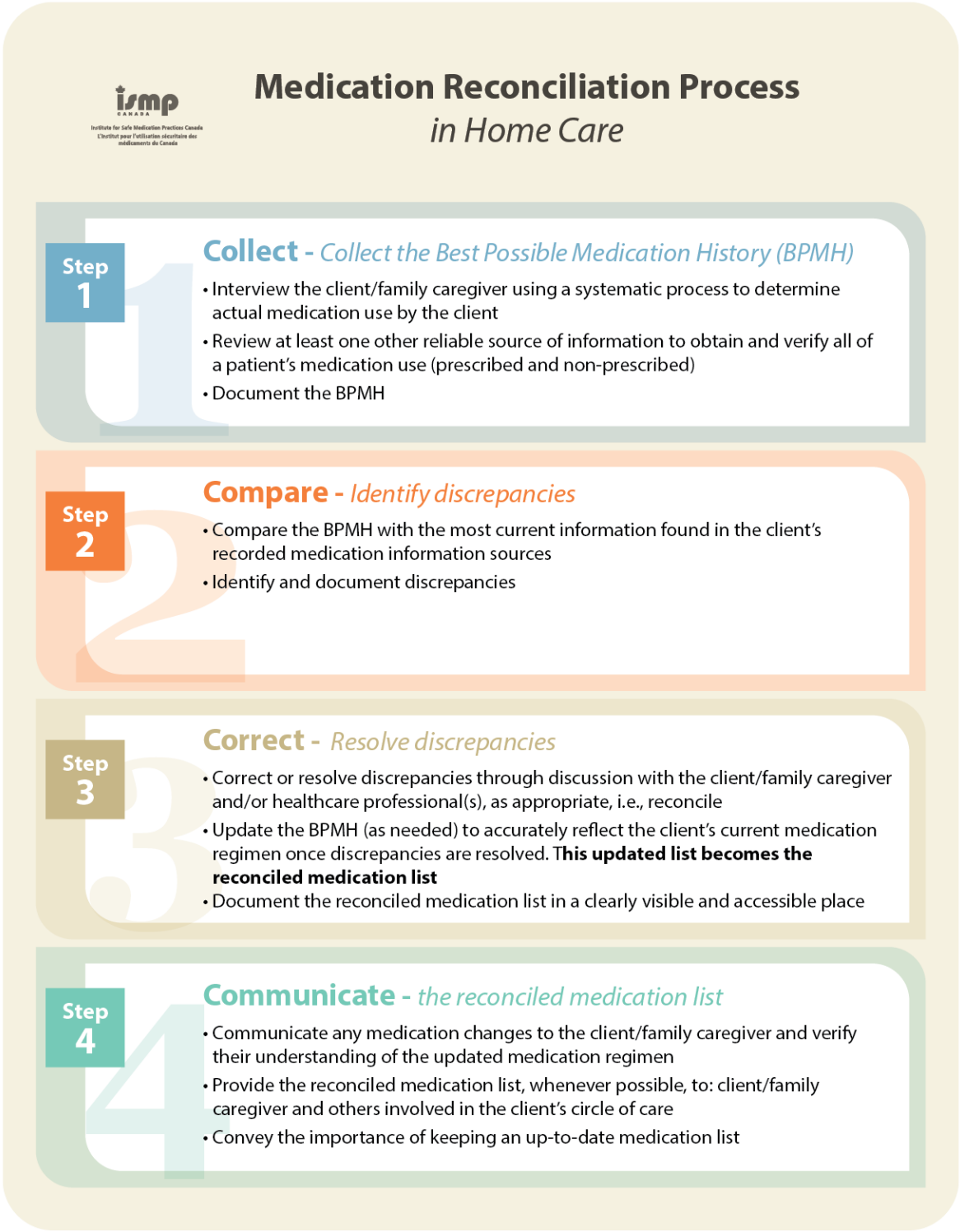
Convey the importance of keeping an up-to-date medication list and sharing this list any time they receive healthcare (both in and out of the home setting).

Tools and Tips

- The *Knowledge is the Best Medicine* program offers downloadable medication list templates which may be completed by hand, or filled in via computer. They also offer a free app, MyMedRec, for smart phones which can be used by clients/family caregivers.[31]
- Canadian Patient Safety Institute/Canadian Home Care Association's Brochure "Using Your Medicines Safely".[32]

See **Appendix A** "The Medication Reconciliation Process and the Client Circle of Care".

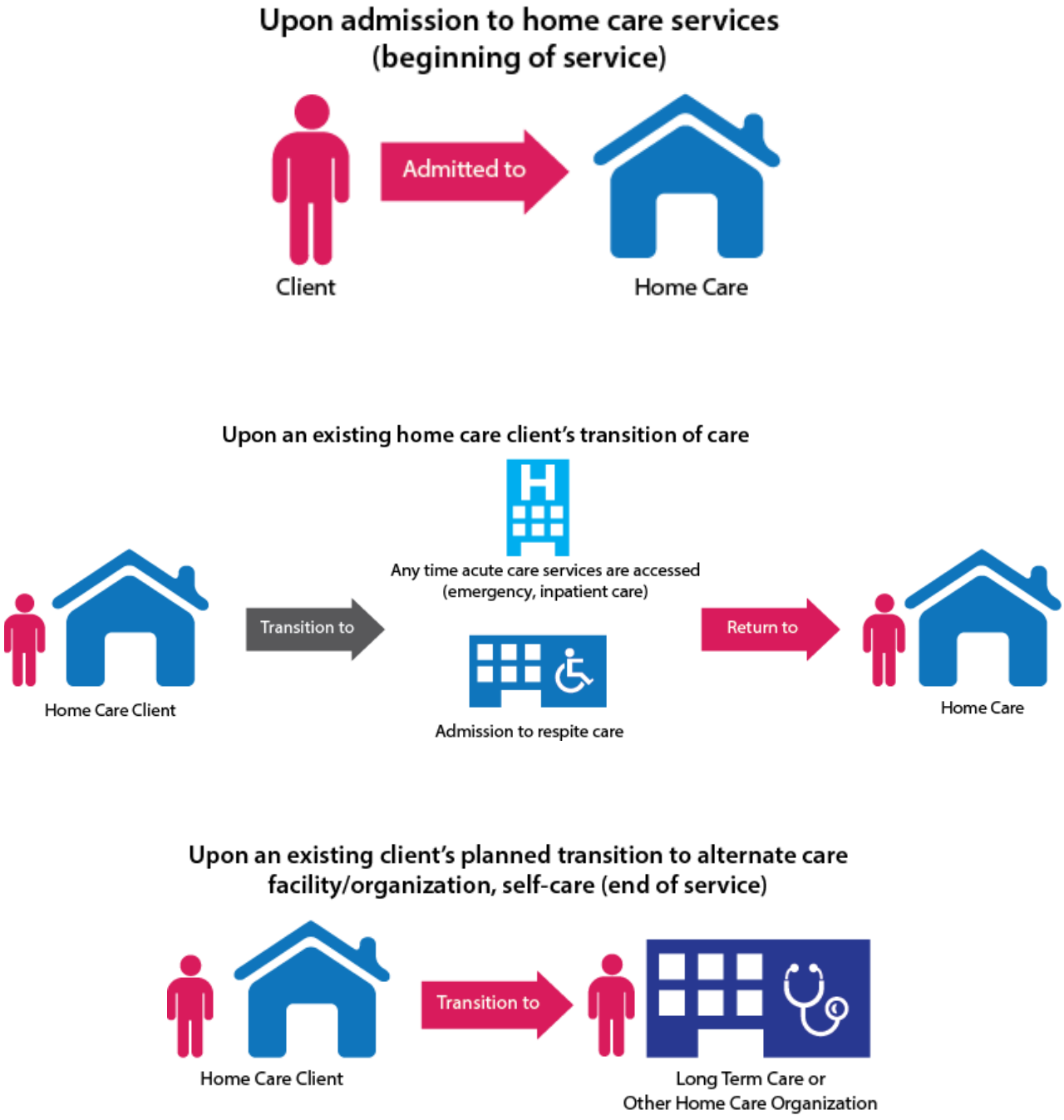
Figure 3 - Medication Reconciliation Process in Home Care



Opportunities for Medication Reconciliation in Home Care

MedRec is a formal process in which healthcare providers partner with clients and family caregivers to ensure accurate and complete medication information transfer at interfaces of care. In the context of home care, there are several specific interfaces of care where a home care client can benefit from MedRec processes. The specific MedRec processes involved at each of these interfaces of care may differ slightly and are discussed earlier in the kit (see "Medication Reconciliation Process in Home Care"). A key to successful MedRec in home care is initiation of the process upon admission to home care services. Interfaces of care where MedRec processes should be considered include those indicated by the pink arrows below:

Figure 4 - Opportunities for MedRec in Home Care



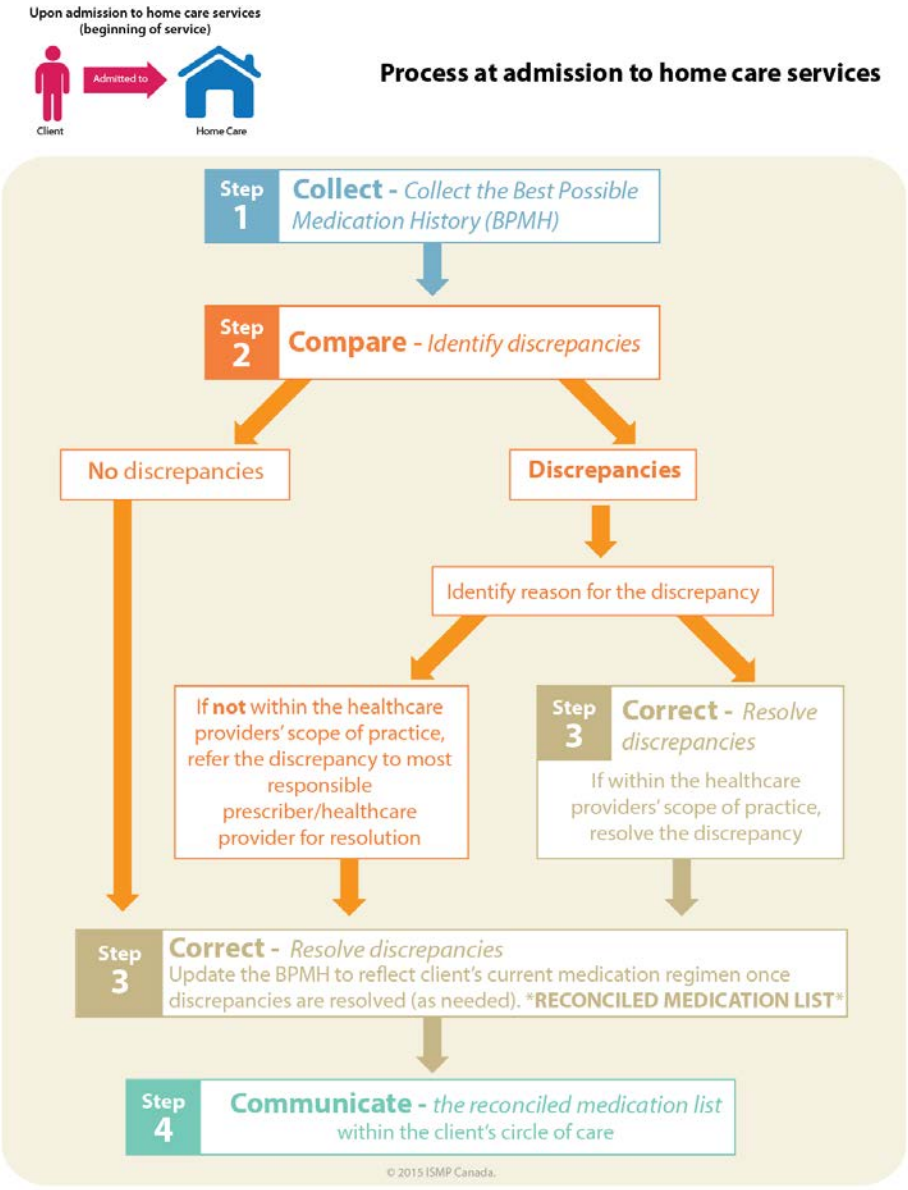
Other opportunities for medication reconciliation processes

Consider assessing if a client can benefit from MedRec processes (based on concepts described in the client selection section) at the time of:

- scheduled reassessments
- family caregiver distress / crisis placement
- change of status noted based on existing client re-assessment
- assessing specialty consult services from their home base
- visits to other prescribers (e.g. clinics, family physicians)

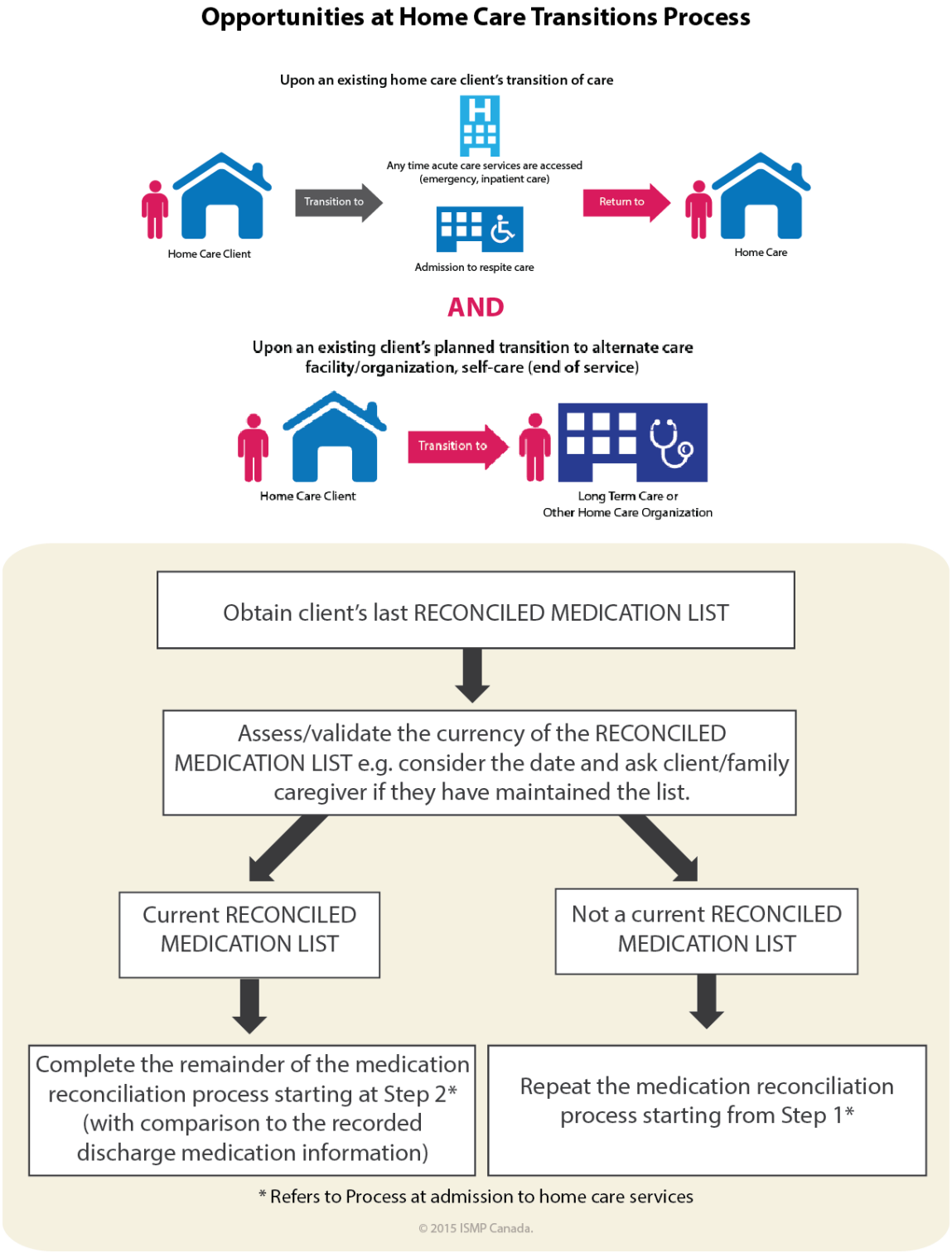
The first time services are put in place for MedRec (e.g., at admission to home care), the assigned healthcare provider must start from the beginning of the MedRec process. Refer to the flow diagram below.

Figure 5 - Process at admission to home care services



If a client has had MedRec completed previously, and they experience a care transition, two options exist for healthcare providers. They can complete the process by assessing the validity of the existing reconciled medication list, then start the MedRec process at either Step 1 or Step 2. Refer to the flow diagram below.

Figure 6 - Opportunities at Home Care Transitions Process



Which Clients should Receive Medication Reconciliation?

All home care clients could benefit from MedRec.

A lack of robust home care-based studies leads to challenges in attempting to define situations or client populations who would benefit "most" from MedRec processes in the home care setting. The following section will highlight relevant publications to provide guidance on selecting or prioritizing MedRec clients.

> ***"The most interesting discovery by our team on this pilot was that all clients are at risk for discrepancies. We did a BPMH on all clients discharged from an acute care setting and found that approximately 51 per cent had discrepancies. So therefore, we feel all clients, not just those identified as high risk, would benefit from a well done BPMH."***
>
> ***Home Care MedRec Pilot Team 2010***

Recommendation: Select or prioritize clients discharged from a hospital inpatient stay

System Level: Risk related to specific transitions of care

The majority of clients are admitted into home care after hospitalization.[33] There is a growing body of evidence that discharge from acute care/hospital to home/home care is a transition whereby patients/clients are at significant risk for potential and actual adverse drug events.

Canadian researcher Alan Forster examined 400 patients and found that in the 30 day period after discharge from a hospital medical service that 11 per cent of patients experienced an adverse drug event (ADE). Of these, 60 per cent of the adverse drug events were deemed to be preventable or ameliorable. He found that the risk of ADEs increased with the number of medications.[34] Similarly, a US based study found 18.7 per cent of patients recently discharged experienced ADEs, with 35 per cent deemed preventable. They added that more than half of the ADEs occurred within 14 days of discharge.[35]

Within hospitals, MedRec at admission has been widely implemented. However, MedRec at discharge is not done consistently.[36] Without acute-care based discharge MedRec, home care clients are at risk for experiencing discrepancies with their medications. In one study where

a medication discrepancy was defined as any difference seen between the medications listed on discharge prescriptions (along with those listed in the physician discharge summary) and a Best Possible Medication Discharge List, a Canadian hospital found that 70 per cent of patients had an unintentional discrepancy at the time of discharge, which in the absence of reliable discharge MedRec processes, would then "carry over" to their discharge destination.[37]

The Pan-Canadian Home Care Safety Study [9] identified that there was an increased risk of experiencing an adverse event in the home care setting in clients who were discharged from hospital in the previous 30 days. Specifically, discharge from hospital in the previous 30 days was associated with a 60 per cent increase in the odds of a client experiencing an adverse event.

A 2014 ISMP Canada aggregate analysis [13] of medication incidents in home care found that 68per cent of reported incidents occurred after a discharge from hospital. Themes/underlying issues surrounding these medication incidents included communication breakdown, lack of patient engagement and unclear or conflicting medication plans.

In a study of 46 patients aged 65 years or older discharged from a hospital medical or surgical service, researchers identified upon home visit that only three of the 46 patients (6.5 per cent) were taking their medications according to the hospital discharge instructions.[38]

The available body of evidence suggest that medication discrepancies post-hospital discharge are frequent and that communication failures are a cause. This places an increased emphasis on the **need for improved communication and collaboration with discharging hospitals when conducting home care-based MedRec post-discharge**. Processes need to be in place, such as hospitals forwarding a discharge medication plan, in order for the home care provider to aid the client in successfully implementing changes to their medication regimens once home. In the event that information sharing does not occur, home care providers need to advocate for their clients in order to ensure they are following intended medication regimens once home from hospital.

Recommendation: Select or prioritize clients with characteristics associated with increased risk of potential or actual adverse drug events

Client level: Risk related to client specific factors/characteristics

The MARQUIS investigators*, based largely on expert consensus, have developed a list of patient characteristics that constitute a patient at high risk for the development of potential or actual adverse drug events associated with errors in the MedRec process. They include:

- Being 65 years old or older
- High number of medications or high number of medication changes in the hospital
- Taking three or more high risk medications** (warfarin, oral antiplatelets, digoxin, oral hypoglycemic and insulin)
- Having three or more co-morbid conditions

- Being "vulnerable"-defined as trouble with activities of daily living, presence of cognitive impairment, non-English speaking, poor understanding of medications
- High healthcare utilization (i.e., seen by more than two outpatient providers/having more than 10 outpatient visits in the past year)

* investigators focus largely on acute care based MedRec

** high risk medications are defined as those associated with hospitalizations for adverse drug event[39,40]

Bedell et al. identified that in a group of patients seen in specialist clinics that the two significant predictors for actual medication use differing from recorded medication use were:

1) patient age; and
2) number of medications.[41]

Recommendation: Select or prioritize clients taking medications which are known to be more harmful when used in error (i.e., "high-risk medications")

Client level: Risk related to specific medication use

Discrepancies between actual medication use and recorded medication use can contribute to client harm. There are particular medications which when used in error (or differently than intended) have a greater potential to cause harm. These medications are sometimes referred to as "high-alert medications". The Institute for Safe Medication Practices in the US has developed 2 lists of such medications; one specific to the hospital setting[42] and another more specific to the community and ambulatory setting.[43]

Using the community and ambulatory high alert medication list as a basis*, home care organizations/staff may wish to prioritize MedRec for clients taking the following medications or classes or medications:

Drug classes:

- Anticoagulants (e.g., warfarin, heparin, including unfractionated and low-molecular weight)
- Anti-retroviral medications (e.g. ritonavir, efavirenz, combination products)
- Hypoglycemic agents (e.g. insulin, glyburide, gliclazide, metformin)
- Immunosuppressant agents (e.g. azathioprine, cyclosporine, tacrolimus)
- Opioids (e.g. hydromorphone, morphine, methadone, fentanyl)
- Oral chemotherapeutic agents (e.g. cyclophosphamide, mercaptopurine, temozolomide)

Individual medications:

- carbamazepine
- chloral hydrate or midazolam when used for pediatric sedation
- methotrexate for non-oncologic use (e.g., for rheumatoid arthritis)
- propylthioruracil

Other:

- Any paediatric liquid medication that requires measurement
- Any pregnancy "category X" drugs (e.g. bosentan, isotretinoin)

*This list describes high-alert medications in the community setting, as compiled by ISMP (US). With the increasing complexity of medications being used outside of hospitals, home care organizations may wish to also consult the acute care setting high alert medication list.

Recommendation: Select or prioritize clients who are receiving home care services related to medication administration or support.

System/Client Level: Risk related to types of home care based medication services

Given that having a reconciled list of medications is strongly associated with safe medication administration, selection or prioritization of clients who are receiving services related to medication administration or support should also be considered for MedRec. This can include nursing administered medications (e.g., via feeding tubes, insulin), support activities (e.g., filling a weekly dosette), co-ordinating weekly compliance packaging with their community pharmacist or for clients who get medication reminders/ assistance from non-regulated healthcare providers (e.g., personal support workers, home care aides).

Considerations for application of a client selection/client prioritization approach

As previously stated, all home care clients can benefit from MedRec. It is recognized that while this is the ultimate goal, there is currently a mismatch between both human and technological resources available to support completion of MedRec for all home care clients. Therefore organizations may wish to determine which clients meeting specified criteria will receive MedRec processes. Furthermore, from a practical perspective, the scope of practice and training of those individuals involved in each step of the MedRec process should be considered. For example, if resolving discrepancies either on their own or with the reliable support of another care professional is not possible, perhaps another healthcare provider may be better suited to see such clients. In this case, organizations may wish to select or target those clients seen by these care healthcare providers or receiving specific services from these care providers.

The following guidance is adapted from the MARQUIS manual[44] and gives some practical considerations for applying a risk-assessment approach at the organizational level:

- Review local data sources to identify clientele characteristics that might inform a risk assessment approach
- Review relevant literature (ensuring as much as possible that the findings would be generalizable to your organization's clientele)
- Discuss ability to readily gather information on risk characteristics (i.e., is this information currently being gathered as part of an intake process) and at what stage the risk assessment will take place (i.e., at intake, or at the point of care)

- Get organizational buy-in into your risk-assessment approach.
- Evaluate the impact of this agreed upon approach as it pertains to matching those identified as 'at risk' and the resources available to support the process.
- If there is a mismatch between resources and clients at risk, continue to lower/raise the threshold for clients at risk, with the ultimate goal of working towards ensuring all home care clients receive MedRec.

Given the paucity of evidence in this realm, differences in home care clientele, models of service, resources, and a lack of standardized systems to readily identify the absence or presence of any risk factor, a "one-size-fits-all" approach client selection or prioritization to receive MedRec is not appropriate or feasible. Moreover, there are no validated tools that help to screen clients to identify which home care clients would benefit most from MedRec processes. This is an area where additional research and the development of validated tools would be of great value.

"In the Pan-Canadian Home Care Safety Study it was observed that there currently are no standard policies in home care regarding the type, timing and process of routine risk assessments. In some cases, there were no policy mechanisms in home care to ensure that changes in the client' condition identified through risk assessments were flagged and followed up to resolution. Evidence-based screening tools could be used to help identify clients and family/informal caregivers who are most at-risk."[45]

Who should be Involved in Medication Reconciliation?

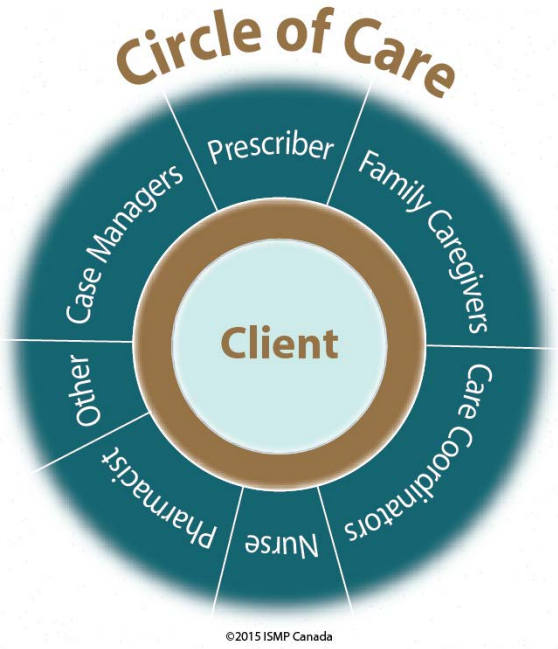
MedRec is a shared responsibility of interdisciplinary healthcare providers in collaboration with clients and family caregivers. Collectively these individuals are referred to as a client's "circle of care" (see **Figure 7**).

Responsibilities within the client's circle of care include:

- addressing client safety related to medications and
- supporting the client-centred completion of the MedRec process.

While MedRec is a shared responsibility, it is important that each individual understand their specific roles and responsibilities based on their respective scopes of practice and capacities.

Figure 7 - Circle of Care



"Remember, for a team approach to be effective, it is imperative that roles are clearly defined. If there is ambiguity around an individual's role, the process cannot be successful. To help drive this point home, here is an often shared-story about four people: EVERYBODY, SOMEBODY, ANYBODY and NOBODY.

There was an important job to be done and EVERYBODY was asked to do it. ANYBODY could have done it, but NOBODY did it. SOMEBODY got angry about that because it was EVERYBODY'S job. EVERYBODY thought ANYBODY could do it, but NOBODY realized that EVERYBODY wouldn't do it. It ended up that EVERYBODY blamed SOMEBODY when actually NOBODY did what ANYBODY could have done."[46]

Step 1 Step 2

Who should collect the Best Possible Medication History (BPMH) and identify discrepancies?

Responsibility for completing the BPMH may be assigned to any healthcare professional in the client's circle of care provided the individual:

- Has received training on how to collect and document a BPMH using a systematic process;
- Is conscientious, responsible, and accountable for conducting the BPMH collection process.

Step 3

Evidence from other sectors suggests that pharmacists and pharmacy technicians are particularly well suited to conduct BPMH due to their knowledge of medications.[47] The environmental scan conducted in preparation for this revision identified that at the time of writing, for home care, this process is most often undertaken by nursing.

Who should resolve discrepancies?

Responsibility for resolving discrepancies may be assigned to any healthcare professional in the client's circle of care provided the individual has an appropriate scope of practice and knowledge level associated with medications.

The specific roles and responsibilities related to resolution of discrepancies will differ across MedRec teams and clients. The following factors may influence who is involved in this step:

- nature of the discrepancy (see "Process- Step 3" for examples)
- cognitive status of the client/family caregiver
- scope of practice
- skill set/training
- availability and accessibility

Tools and Tips

- Community pharmacists can help support many aspects of the MedRec process. Many Canadian jurisdictions have provincially funded medication review programs, which can facilitate collection of a BPMH as well as helping to resolve identified discrepancies (e.g., MedsCheck in Ontario or Medication Review Services in British Columbia). In a Canadian study, use of these programs had a beneficial impact on completion of MedRec in the ambulatory setting.[48]
- Pharmacists can provide direct patient/client care for complex clients who require a full medication review in addition to MedRec (e.g., a client with a history of falls – a pharmacist could reconcile medications and also assess for medications associated with fall-risk).

Step 4 Who should communicate the reconciled medication list?

The client's circle of care needs to be kept updated to support successful communication of medication information. The healthcare professional involved in creating the reconciled medication list should ensure that the client understands any changes to their medication regimen (as applicable). They should also be responsible for communicating the reconciled medication list within the client's circle of care with support from the care coordinator/case manager.

How to Implement Medication Reconciliation in Home Care

At first glance, the challenges of MedRec in home care may not seem any different than those in the acute care and long term care sectors. However, factors within the home care sector add additional complexity.

When developing a plan for implementation consideration of these factors will be important in process, tool and strategy development.

Getting Started with Implementing MedRec in Home Care

The following key steps for getting started in MedRec include:[49]

1. Secure Senior Leadership Commitment
2. Form a Team
3. Use the Model of Improvement to Accelerate Change by:
    A. Setting Aims (Goals and Objectives)
    B. Establishing Measures
    C. Selecting Changes
    D. Testing Changes
4. Implement Changes
5. Spread Changes

Note: *Safer Healthcare Now!* recommends using a Quality Improvement (QI) method when implementing MedRec in your organization. The term "QI" refers to a systematic, data-guided activity, designed to bring about immediate, positive changes in the delivery of healthcare in particular settings.[50] QI methods include the Model for Improvement, Six Sigma and Lean among others.

Who should be Included on the Implementation/Improvement Team?

Including the right people on a process improvement team is critical to a successful improvement effort. Teams vary in size and composition. Each organization builds teams to suit its own needs.

A team approach is needed to ensure MedRec is completed successfully. To lead the initiative, we recommend the organization identify a multidisciplinary team to organize implementation of MedRec and to conduct tests of change.

Some organizations may have different teams (e.g., a management team to guide the process and provide support; a frontline team to implement and refine the process).

Representation of the site coordination team could include:

- Senior administrative leadership (executive sponsor)
- Clinical leaders
- Care coordinators/case managers
- Direct care - interdisciplinary clinicians
  - Prescribers
  - Nursing Staff
  - Community & Home Care Pharmacists
- Clerical support
- Quality, risk and client Safety staff
- Staff from referring/receiving organizations (e.g. hospital discharge planners, long term care coordinators)
- Clinical educators
- Information technology staff
- Client/family caregiver representatives

Tools and Tips

- For overall project/implementation team guidance on determining roles and responsibilities, consult:
  - The MARQUIS Implementation Manual: A Guide for Medication Reconciliation Quality Improvement[44], and
  - The MATCH Toolkit for Medication Reconciliation[51]
- The Medication Communication Failures Impact EVERYONE! Poster[52] has been endorsed by several healthcare organizations, including many organization representing healthcare professionals involved in the MedRec process.

Refer to **Appendix B** for more information on implementation.

Measuring for Quality Improvement - Medication Reconciliation in Home Care

Organizations and teams involved in implementing, spreading and sustaining MedRec in the home care setting are encouraged to use improvement frameworks such as the Model for Improvement to inform their efforts. This model provides a framework for developing, testing and implementing changes that lead to improvement.

Improvement (definition): to make better

Improvement comes from the application of knowledge. It also comes from action: from developing, testing and implementing changes which alter how work or activity is done or the make-up of a product or service. Improvement should produce visible, positive differences in results relative to historical norms and have a lasting impact.[53]

Tools and Tips

- More detailed information on quality improvement frameworks including the Model for Improvement can be found in the:
  - **Appendix C**: `Quality Improvement and Medication Reconciliation in Home Care` section
  - *Safer Healthcare Now!* Improvement Frameworks Getting Started Kit[53]

The Model for Improvement consists of 2 parts: a set of 3 questions and a cycle for learning and improvement; i.e., the Plan, Do, Study, Act (PDSA) cycle.

Three fundamental questions, which can be addressed in any order, guide the improvement effort. These questions help to provide direction, focus and context for the improvement.

The three questions are:

1. What are we trying to accomplish? (i.e., What is/are the aim(s)?)
2. How will we know a change is an improvement? (i.e., What are quantitative measures that we can use to determine if we are meeting our aim?)
3. What changes can we make that will result in improvement? (i.e., What are changes that we can put in place to help us meet our aim/meet our measurement goals?)

The question "How will we know that a change is an improvement?" relates to the need to establish measures. Once the measures are established, the home care project team can then set out to determine their baseline "status" for the measure(s), discuss ways that they feel they can positively influence the measure(s), and then conduct the plan, do, study, act (PDSA) cycle. The "study" portion of the cycle will support the home care team to evaluate if the changes they have put in place have led to improvements in their established measures.

What are we trying to accomplish with MedRec?

> **"Measure can help teams to learn about, manage, and improve care. They also provide a common base for communication…. Measures are of greatest value to those working in the system and those who are able to exert direct influence on a process that delivers care."[54]**

It is important to first consider the aim, as this will drive the selection of measures. The overarching goal or purpose of MedRec in any setting is to prevent actual or potential harm from medications that results from the poor communication of medication information across transition points. This is accomplished by following the steps in the MedRec process (as previously described in detail in the Process section) which include:

- STEP 1. Collect the Best Possible Medication History (BPMH)
- STEP 2. Compare – Identify discrepancies
- STEP 3. Correct – Resolve discrepancies
- STEP 4. Communicate – the reconciled medication list

As indicated above, the MedRec process incorporates several steps. Each of these steps plays a role in helping to prevent harm from medication use (as it pertains to communication of medication information across transitions).

What measures will help us determine if a change leads to an improvement in MedRec?

The measures for improvement are categorized and characterized as follows:

Category	Description
Outcome measures	Reflect the impact on the client and show the end result of your improvement work.[53]
Process measures	Reflect the way your systems and processes work to deliver the outcome you want.[53]
Balancing measures	Reflect whether changes designed to improve one part of the system are causing new problems in other parts of the system.[55]

For example, failure to complete MedRec consistently (process measure) may lead to the client receiving the wrong medication (outcome measure) due to a miscommunication of medication information. A balancing measure might look at the impact of a home care MedRec program on the hospital readmission rate.

Deciding on a measurement approach can be challenging. The overall aim of MedRec is to prevent potential or actual harm from medication use that results from poor communication across transitions. However, there are inherent challenges in measuring this potential and actual client harm, making it challenging to identify an ideal outcome measure.

While outcomes related to MedRec are difficult to measure, process measures can provide important information for learning and improvement. Two process measures are suggested below for consideration. These measures have been selected to evaluate Steps 1, 2, and 3 of the MedRec process in home care on the basis that organizations can measure and track improvement over time. To assess if changes are leading to improvement, 2 to 6 measures are usually adequate.[54]

Organizations may identify additional measures based on their program goals. Additional measures are offered in **Appendix D**, which are purely "informational"; while they may have statistical or workload planning value, they cannot be used to evaluate the MedRec process itself.

Tools and Tips

For more information on topics such as sampling approach, when and how often to measure, how to present data for the measures, how to interpret the data, etc., please consult "The How-to Guide for Measurement for Improvement"[54]

Percentage (%) of Selected Clients* with a Quality BPMH

(Process measure - evaluates Step 1)

This measure will assess the completion of a quality BPMH based on completion of:

i) a systematic process of interviewing the client/family caregiver;

ii) review of at least one other reliable source of information to obtain and verify all of a client's medication use (prescribed and non-prescribed); and

iii) complete documentation

$$\text{Percentage of selected clients with a BPMH} = \frac{\text{Total number of selected clients with a quality BPMH completed}}{\text{Total number of selected clients}} \times 100$$

*For the purposes of this measure, "selected clients" refers to clients identified to receive MedRec based on the home care organization's individualized policies and procedures (ideally based on content in the "Which clients should receive MedRec?" section).

Goal: Ninety-five percent (95%) of selected home care clients have a quality BPMH.
Note: This is an overall suggested goal. Teams may wish to set their own goals.

Percentage (%) of Selected Clients* with a Reconciled Medication List

(Process measure – evaluates Steps 2 and 3)

Use of this measure will provide information on the extent to which the overall MedRec process has been completed.

$$\text{Percentage of selected clients with a reconciled medication list} = \frac{\text{Total number of selected clients with a reconciled medication list}}{\text{Total number of selected clients}} \times 100$$

*For the purposes of this measure, "selected clients" refers to clients identified to receive MedRec based on the home care organization's individualized policies and procedures (ideally based on content in the "Which client should receive MedRec?" section).

Goal: Ninety-five per cent (95%) of selected home care clients have a reconciled medication list. *Note: This is an overall suggested goal. Teams may wish to set their own goals.*

Tools and Tips

Organizations may wish to create more specific measures to evaluate different client groups (e.g., post hospital discharge, prior to long term care admission).

Conclusion

This kit is intended to serve as a practical guide and resource to support teams with initiating MedRec in their organizations or enhancing current MedRec processes. The tools and information in this kit have been designed to provide teams with a starting point and can be adapted to meet specific organization needs.

The concept of MedRec is not new to the home care environment. The very nature of the home care setting dictates strong collaboration between client, family caregivers and healthcare providers at all times to provide effective and safe care. Therefore, for some organizations the information within this kit will support the *formalization* of MedRec activities already in place, while others will use it to initiate new processes.

> ***"Home Care had been doing a form of reconciliation for some/many of its clients for many years, the big difference is that now we are going to be looking at all clients, and with a very formal organized approach which will definitely improve our ability to support our clients by decreasing the potential for and very real harm from medication errors."*** [21]

Appendices

Appendix A - The Medication Reconciliation Process and the Client Circle of Care

Adapted from the January 2011 Medication Reconciliation in Home Care GSK

To minimize change, an organization may implement MedRec through simple modifications to current work flows. The first step should be to map your current process.

Development of new or modification of existing work flows to accommodate MedRec should consider the follow points:

- The process is client-centered; start and end with the client;
- Keep the process as simple as possible; remembering that there is ***risk*** with every step in a process;
- Implement strategies to support the handoff and communication of information from one member of the client of circle of care to another; for example - standard fax cover sheets;
- Tools for handoff / transition, communication and verification of the reconciled medication list to client/family in way that facilitates understanding; and
- Requirements of Accreditation Canada

The flow of information within the client circle of care is dependent on the members involved and the resources at hand to support the flow. Points of risk may exist when moving information between members.

Before the handoff / transition takes place, decisions related to the following questions need to be addressed:

1. **When is it time to handoff / transition the process to a member within the client's circle of care?**
   The decision of when to handoff / transition the process is always client-specific and dependent on whose hands the process is in at any given point. Listed below are points along the process when the process may be handed off or transitioned to another member within the client's circle of care:
   - Action needed is outside the clinician's scope of practice;
   - Not enough information for the clinician to carry on any further along the process;
   - The clinician/organization is no longer within the circle of care;
   - To continue and/or complete the process; and
   - The client does not want to engage in the process.

2. **To which members within the circle of care do you handoff / transition the process?**
   The process should be handed off / transitioned to the most appropriate member of the client's circle of care that will support safe transfer of the information and move the MedRec process along. This depends on some of the following points:
   - Membership of the client's circle of care;
   - The point along the process that the hand off occurs;
   - The client's level of self-care;
   - The client's available family caregivers;
   - Availability of community resources; and
   - Client's request.

3. **How is the process handed off / transitioned between members of the client circle of care?**
   Communication of information though handoff / transition points needs to be clear and precise to reduce the chance of process failure and compromising client safety.

   The method of the handoff / transition depends on the following:
   - Who the process is being handed off / transitioned to;
   - Urgency of the resolution of discrepancies;
   - Resources available; and
   - Organization standards and operational processes.

4. **Common methods of handoff / transition are listed below**:
   - Facsimile
   - Phone
   - Hand delivery of paper copy by client/family
   - Hand delivery of paper copy by clinician
   - Referral to community resources related to medication safety
   - Face-to-face discussion with the client/family encouraging them to access community resources to ensure they are taking their medications accurately

   As indicated earlier, handoff/transition and communication between members of the client circle of care may be points of risk along the MedRec process. The organization will need to manage these risk points by implementing strategies to support the safe transfer of medication information from one member to another.

A Day in the Life of a Home healthcare provider completing Medication Reconciliation: *Information Flow in the Client Circle of Care*

The scenario illustrated below may be common among home care organizations whose clinicians are primarily nurses visiting the client home. This flow of information involves the client/family caregiver, clinician (who is the home care nurse in this situation) and the physician/nurse practitioner. In this scenario, the flow of information through the steps of the medication reconciliation process is as follows:

Create the BPMH

- The home care nurse initiates the creation of the BPMH through the client/family caregiver interview
- The home care nurse gathers information from various medication sources of information to complete the BPMH

Identify Discrepancies

- The nurse identifies discrepancies between the client's BPMH and their recorded medication information sources

Resolve Discrepancies

- The nurse does not have enough information or the appropriate scope of practice to resolve the discrepancies with the client/family and must decide who to handoff and communicate the information to
- The process is handed off and communicated to the physician/nurse practitioner for resolution of discrepancies. The method is based on resources available and the urgency of the resolution.
- The method of handoff and communication of the BPMH along with identified discrepancies is via facsimile
- The clinician will apply strategies for safe handoff and communication of the BPMH as determined by the organization. An example of this may be a standard facsimile cover page letter, giving the physician/nurse practitioner standard information required to keep the medication reconciliation process moving
- The clinician may also make contact with the physician/nurse practitioner via telephone indicating that the information is pending via facsimile
- The physician/nurse practitioner reviews the BPMH and resolves identified discrepancies

Communicate the reconciled medication list

- Once all discrepancies are resolved the BPMH then becomes the reconciled medication list
- The physician/nurse practitioner hands-off and communicates the reconciled mediation list to the organization via facsimile for communication and verification with the client/family
- The organization/clinician hands off and communicates the reconciled medication list to the client/family at the next appropriate home visit
- The clinician uses strategies to verify the medication list with the client/family. Strategies used are based on resources available, the client's level of self-care and health literacy of the client/family

Appendix B - Considerations for Implementation of Medication Reconciliation in Home Care

Adapted from the January 2011 Medication Reconciliation in Home Care Getting Started Kit

Over the course of the *Safer Healthcare Now!* Medication Reconciliation Pilot Project, challenges, successes and lessons learned were identified, shared and applied where and when appropriate. Interestingly, some the key challenges were also ranked high as successes. Listed below are some of the identified key lessons learned from those who participated in the project.

1. **Acknowledgement and understanding of factors in home care is key to the successful implementation of MedRec into the community setting.** Successful management of challenges in the home care environment will have considered these unique factors in their strategy development.
2. **Investigate available community or professional resources to utilize in the implementation of MedRec.**
    - Identify programs related to MedRec already in place in the community. For example, Ontario *MedsCheck* program through participating pharmacies.
    - Available databases for over-the-counter and herbal medications
    - Available drug information services at a cost
3. **Education and training of clinicians on:**
    - MedRec process as a client safety initiative
    - Clinician's role within the MedRec process
    - Creating the Best Possible Medication History using a systematic interview guide
    - Available community or professional resources to support the process. Specifically, the role and services offered of the local community pharmacist.
    - Scope of practice of key players within the client's circle of care

    The planning phase of this client safety initiative can be labour intensive but is imperative in setting the stage for successful implementation of the process in individual organizations. Without this component, clinician engagement and commitment may give way to frustration and resistance. The organization and clinician need to have a solid knowledge base related to MedRec in order to facilitate successful implementation.

    Understanding available community resources and professional scopes of practice will provide clinicians with the tools to share the workload with appropriate members of the client's circle of care.
4. **Develop strategies to secure physician commitment and buy-in.** The degree of physician commitment and buy-in will directly impact the success of the MedRec process in the home care setting. Accessibility of formal linkages with physicians/nurse practitioners

varies from one organization to the next. Each organization should develop strategies to engage community physicians/nurse practitioners based on resources available.

Possible strategies to engage physicians/nurse practitioners might include:

- Develop a plan to formally announce MedRec as a client safety initiative being launched by the organization. Access any formal linkages the organization may have to get the message communicated. Use these opportunities to sell the concept of MedRec in home care by demonstrating the benefits to the physician/nurse practitioner as well as the client. Use testimonials of successes and failures related to physician/nurse practitioner involvement in the process, where possible. Demonstrate how this initiative can positively impact their role and the safety of their clients. It is important here to keep client-focused on all approaches.
- Recruit a physician/nurse practitioner champion to support your initiative and communicate to the physician / nurse practitioner community on your behalf. Ask for input on tools and processes development. Win them over one at a time!
- Work to ensure that all tools are efficient and user-friendly. Physicians/nurse practitioners may be familiar with MedRec tools in the acute care and long term care settings. Assess the applicability of using tools from other settings in the home care community. Try to keep the tool similar in appearance so the view is familiar to the physician/nurse practitioner. Keep the paperwork to a minimum.
- Use the community pharmacist to support communication with the physician/nurse practitioner, especially when there are multiple prescribers involved.
- Develop and use a standard cover page to be attached to all BPMH forms when faxing to the physician/nurse practitioner for review and reconciliation. Keep the cover letter short and to the point.
- Investigate possible payment for physician/clinician communication. Cite the billing code on the standard cover letter, when appropriate.
- If the client is mobile, one option for delivery of the BPMH may be by the client during a physician/nurse practitioner appointment.

5. **Strong, committed, dedicated leadership is another key element to successful implementation.** It is important to identify and dedicate someone to this client safety initiative. Without this, the client safety initiative may crumble as barriers arise. Competing organizational and care priorities will always be a potential barrier. Staff shortages related to sickness and resignations, labour relation issues and the threat of a major pandemic (H1N1 virus) were just a few competing priorities the *Safer Healthcare Now!* Medication Reconciliation in Home Care Pilot Project teams encountered. Those pilots with strong leadership may have shown a decrease in activity (for example - data submission) but activity rebounded quickly once the team revaluated, realigned priorities and implemented strategies to move forward. Those teams without strong leadership support struggled to meet measurement commitments and activity expectations.

6. **Keep your target population reasonably small at the onset of the initiation phase.** Before starting, the organization will need to know what the acceptable minimum standards are as set by Accreditation Canada. Implementation is labour intensive at the beginning so start small. Start with a program, geographic location, or focus on select clients, for example those clients who are being admitted for medication management. Only increase the scale of implementation once the process is successfully adapted to work flows, tools have been developed and refined, strategies have been identified and successfully used to manage challenges. Using the Model for Improvement and trying small tests of change is an approach for implementing MedRec in home care. Initiating this client safety initiative as a pilot project may be an appropriate approach to keep the target population manageable.

7. **Consider an ultimate goal of "All clients admitted to the home care organization will have MedRec."** *Safer Healthcare Now!* Medication Reconciliation in Home Care Pilot Project Sept 2008 teams found evidence to indicate that even clients who are not identified as high risk are presenting with discrepancies. Therefore, consider an ultimate ***goal*** of all clients having MedRec done at the very minimum on admission to the organization and work towards this over time.

8. **Utilization of a systematic guide for interviewing the client along with visual aids to enhance the understanding for the client/family and support communication between the family & clinician.** *Safer Healthcare Now!* in collaboration with ISMP Canada have developed a standard tool. Consider adapting this tool for use by clinicians when creating the Best Possible Medication History.

9. **Standardize tools, guides and processes.** Evidence from the *Safer Healthcare Now!* Medication Reconciliation in Home Care Pilot Project indicates that current tools in home care agencies are not robust enough to gather all information necessary for the BPMH. Tools specifically designed for capturing all information necessary are client-focused and recommended for use.

   In order for the MedRec process to be successful and effective it needs to start and end with the client/family. Tools also need to be developed to support the completion of the medication loop and returning the reconciled medication list back to the client ensuring the client understand all changes.

   A variety of tools are available on the *Safer Healthcare Now!* Communities of Practice.

   Review the current tools and processes in use by the organization. Compare them to the tools and processes recommended in this document. Are they client-focused? Does the process start and end with the client? Client-centered tools and processes are essential to the successful implementation of MedRec in home care.

Appendix C – Quality Improvement and Medication Reconciliation in Home Care*

Adapted from the January 2011 Medication Reconciliation in Home Care Getting Started Kit

*This example uses the Model for Improvement

1. Secure Senior Leadership Commitment

Implementing a successful MedRec process requires clear commitment and direction from the highest level of the organization. Visible senior leadership support can help to remove obstacles and allocate resources, enhancing the ability of teams to implement MedRec.

Actively engage senior leadership by building a business case for MedRec and demonstrating the need for ADE prevention and reductions in work and rework. Present progress to senior leadership monthly: present data on errors prevented by the MedRec process; identify resources needed to be successful. Sharing qualitative stories is important especially for teams with small numbers and less reliable quantitative data.

2. Form a Team

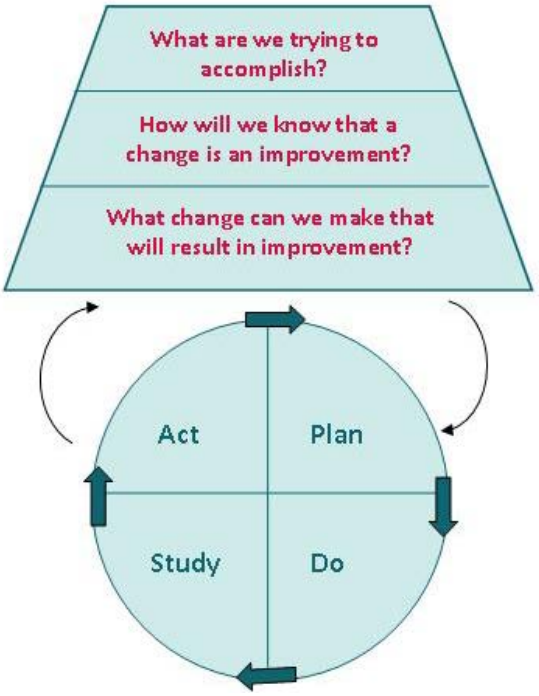
Including the right people on a process improvement team is critical to a successful improvement effort. Teams vary in size and composition. Each organization builds teams to suit its own needs.

A team approach is needed to ensure MedRec is completed successfully. To lead the initiative, we recommend the organization identify a multidisciplinary team to organize implementation of MedRec and to conduct tests of change.
Some organizations may have different teams (e.g., a management team to guide the process and provide support; a frontline team to implement and refine the process.)
Representation of the site coordination team could include:

- Senior administrative leadership (executive sponsor)
- Clinical leaders
- Care coordinators/case managers
- Direct care - interdisciplinary clinicians
- Prescribers
- Nursing Staff
- Community & Home Care Pharmacists
- Clerical support
- Quality, risk and client Safety staff
- Staff from referring/receiving organizations (e.g. hospital discharge planners, long term care coordinators)
- Clinical educators
- Information technology staff
- Client/family caregiver representatives

3. Use the Model for Improvement to Accelerate Change

The ***Model for Improvement***, developed by Associates in Process Improvement, is a simple yet effective tool not meant to replace change models that organizations may already be using, but rather to accelerate improvement.



Set Aims (What are we trying to accomplish?)

Improvement requires setting aims. An organization will not improve without a clear and firm intention to do so. The aim should be time-specific and measurable; it should also define the specific population of clients that will be affected. Agreeing on the aim is crucial; so is allocating the people and resources necessary to accomplish the aim.

Setting an aim can assist teams to focus on what they are hoping to achieve when implementing MedRec. The aim should be time-specific, measurable and define the specific population of clients who will be affected.

The following are examples of aims at the organizational level:

- Complete the team charter by December 2016;
- Develop and implement a Medication Risk Assessment tool starting January 2015;
- Implement the MedRec process by December 2016;
- Team comes together on a monthly basis to identify areas for improvement starting January 2016;
- 100 per cent of eligible clients will have a BPMH completed at the first face to face visit by March 2016; and
- Reduce the time to complete the BPMH from the baseline data by 50 per cent by April 2016.

As teams work on different points along the client care process, the aims should be specific to what they are trying to achieve at that point.

Establish Measures (How will we know that a change is an improvement?)

Measurement is a critical part of testing and implementing changes; measures tell a team whether the changes they are making actually lead to improvement.

Measuring for improvement in MedRec starts with collecting baseline data then collecting data regularly to track the effectiveness of changes over time. Suggested measures for consideration are described in the "Quality Improvement and Medication Reconciliation in Home Care" section.

Select Changes (What changes can we make that will result in improvement?)
While all changes do not lead to improvement, all improvement requires change. The ability to develop, test and implement changes is essential for any individual, group, or organization that wants to continuously improve. There are many kinds of changes that will lead to improvement, but these specific changes are developed from a limited number of change concepts.

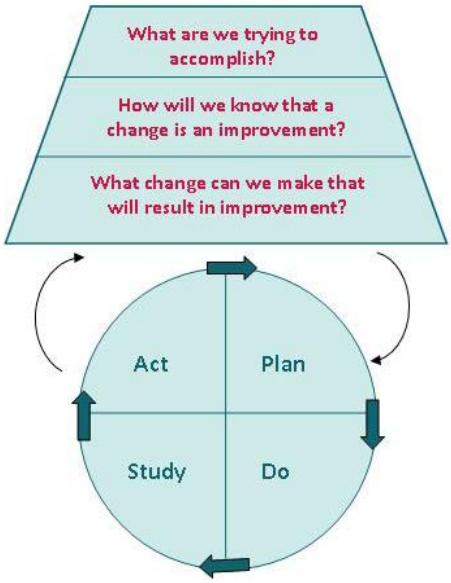
A change concept is a general notion or approach to change that has been found to be useful in developing specific ideas for changes that lead to improvement. Creatively combining these change concepts with knowledge about specific subjects can help generate ideas for tests of change. After generating ideas, run Plan-Do-Study-Act (PDSA) cycles to test a change or group of changes on a small scale to see if they result in improvement. If they do, expand the tests and gradually incorporate larger and larger samples until you are confident that the changes should be adopted more widely.

Test Changes (Conduct Plan-Do-Study-Act cycle)
Once a team has set an aim, established its membership, and developed measures to determine whether a change leads to an improvement, the next step is to test a change in the real work setting. This is the scientific method used for action-oriented learning.

Reasons to Test Changes

- To increase your belief that the change will result in improvement.
- To decide which of several proposed changes will lead to the desired improvement.
- To evaluate how much improvement can be expected from the change.
- To decide whether the proposed change will work in the actual environment of interest.
- To decide which combinations of changes will have the desired effects on the important measures of quality.
- To evaluate costs, social impact, and side effects from a proposed change.
- To minimize resistance upon implementation.

Steps in the PDSA Cycle



Step 1: Plan
Plan the test or observation, including a plan for collecting data.

- State the objective of the test.
- Make predictions about what will happen and why.
- Develop a plan to test the change. (Who? What? When? Where? What data need to be collected?)

Step 2: Do
Try out the test on a small scale.

- Carry out the test.
- Document problems and unexpected observations.
- Begin analysis of the data.

Step 3: Study

Set aside time to analyze the data and study the results.

- Complete the analysis of the data.
- Compare the data to your predictions.
- Summarize and reflect on what was learned.

Step 4: Act

Refine the change, based on what was learned from the test.

- Determine what modifications should be made.
- Prepare a plan for the next test.

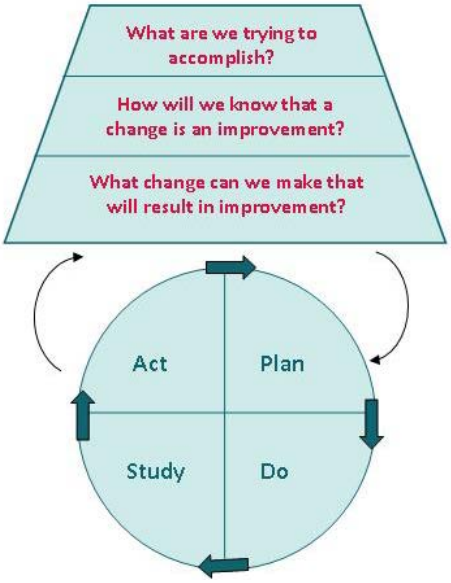
Example of a Test of Change (Plan-Do-Study-Act Cycle)

Depending on the aim, teams choose promising changes and use Plan-Do-Study-Act (PDSA) cycles to test a change quickly on a small scale, see how it works, and refine the change as necessary before implementing it on a broader scale. The following example shows how a team started with a small-scale test.

Implementing a Medication Reconciliation Form in a Home Care Environment

Plan:	Test a draft of a MedRec form used to collect the Best Possible Medication History (BPMH).
Do:	Test the form for 3 to 5 new clients by 2 trained clinicians.
Study:	Obtain specific feedback via a questionnaire from the 2 clinicians on the format of the form, ease of use, etc.
Act:	Make modifications to the form where needed.

4. Implement Changes



After testing a change on a small scale, learning from each test, and refining the change through several PDSA cycles, the change is ready for implementation on a broader scale - for example, for an entire pilot population or on an entire client group. Implementation is a permanent change to the way work is done and, as such, involves building the change into the organization. It may affect documentation, written policies, hiring, training, compensation, and aspects of the organization's infrastructure that are not heavily engaged in the testing phase. Implementation also requires the use of the PDSA cycle.

Example

Testing a change: Three clinicians use a new MedRec order form to obtain feedback on ease of use, format of the form etc.

Implementing a change: All 10 clinicians at the pilot site begin using the new MedRec and order form.

Example of Implementing a MedRec Process on a Select Site

a. Initially implement a MedRec process on a smaller scale with select groups of clients, at one site in the organization, to develop forms and tools that work in your organization and to gain expertise in the MedRec process.
b. Use a simple process flow diagram to outline the current process in place. Note: keep this process simple, its purpose is to identify the sequence of events, who is doing what and where opportunities exist for change and/or how MedRec would 'fit-in'.
c. Adapt and test a MedRec form. Specific sample forms are available in the appendices for this document as well as on the SHN Communities of Practice.
d. The purpose of these forms is to aid in the collection of a Best Possible Medication History (BPMH), to share the information with prescribers, and to facilitate reconciliation (of the prescriber decisions about medication orders). Many organizations adapt a physician's order form for this purpose and a number of forms have been developed by different organizations. The forms will require modifications before use in your organization. As with any changes you make, our recommendation is to test the form first on a small scale and modify as needed.

5. Spread Changes

Spread is the process of taking a successful implementation process from a pilot site or population and replicating that change or package of changes in other parts of the organization or other organizations. During implementation, teams learn valuable lessons necessary for successful spread, including key infrastructure issues, optimal sequencing of tasks, and working with people to help them adopt and adapt a change.

Spread efforts will benefit from the use of the PDSA cycle. Sites adopting the change needs to plan how best to adapt the change to their site and to determine if the change resulted in the predicted improvement.

As experience develops and measurement of the success of your MedRec process reflects sustained improvement the process can be implemented for more residents in more areas. Evaluate at each new step before adding more sites to the process. Retest the pilot process at new sites in order to identify any revisions that may be needed. The roll-out across an organization requires careful planning to move through each of the major implementation phases.

A key factor for closing the gap between *best* practice and *common* practice is the ability of healthcare providers and their organizations to spread innovations and new ideas. The Institute for Healthcare Improvement's (IHI) 'A Framework of Spread: From Local Improvements to System-Wide Change[1] will assist teams to develop, test, and implement a system for accelerating improvement by spreading change ideas within and between organizations. This paper will assist teams to "prepare for a spread; establish an aim for spread; and develop, execute, and refine a spread plan." Some issues to address in planning for spread include training and new skill development, supporting people in new behaviours that reinforce the new practices, problem solving, current culture regarding change, degree of buy-in by staff, and assignment of responsibility.

It is recommended that organizations review the IHI White Paper '**A Framework for Spread: From Local Improvements to System-Wide Change'** [56] for further information on sustaining and spreading improvements.

Example: If 1 to 5 clinicians at a pilot site successfully implement a new MedRec order form, then spread would be replicating this change in all sites in a step-wise fashion throughout the organization and assisting the sites in adopting or adapting the change.

Appendix D – Additional Measures

Average Time to Complete a Best Possible Medication History

This is a measure of the average time for the BPMH process to be completed.

$$\text{Average time to complete a BPMH} = \frac{\text{Total time (minutes) to complete all BPMHs}}{\text{Total number of selected clients with a BPMH}}$$

Numerator: The time in minutes includes the following steps in completing a BPMH (i.e., Step 1):

- the initial review of medications from client referral (preparation time);
- interviewing the client and/or the family;
- gathering all sources of medication information

*For the purposes of this measure, "selected clients" refers to clients identified to receive MedRec based on the home care organization's individualized policies and procedures (ideally based on content in the "Which clients should receive Medication Reconciliation?" section).

Percentage (%) of Medication Discrepancies Identified by Type (A1 – E)

This measure involves categorizing the identified discrepancies which require clarification by type, then determining the frequency of this type of discrepancy compared with other types.

This measure may be helpful to identify trends and may provide opportunities for collaborative work to proactively develop strategies to support client safety at points of transfer of information and care.

$$\text{Percentage of Medication Discrepancies Identified by Type (A1 - E)} = \frac{\text{Total number of discrepancies by Type (A1 – E)}}{\text{Total number of discrepancies Identified}} \times 100$$

Note: Clinicians can select whichever discrepancy category(ies) that apply they think is the most important for a given identified discrepancy.

Chart A: Types of Medication Discrepancies Requiring Clarification

Discrepancy Category		Types of Medication Discrepancies (Code/Description)
A	**Drug**	**A1 – Client Taking A Medication Not Currently Prescribed** Prescription medications which the client is now taking but is not currently prescribed by the prescriber (includes samples, prescription medications and non-prescription medications) **A2 - Client No Longer Taking A Prescribed Medication** The client is no longer taking the medication but it has been prescribed **A3 - Non-Prescription (Over-The-Counter) Medications Not Taken As Prescribed** Client has not been taking non-prescription (Over-the-counter (OTC)) medication as prescribed **A4 - Allergy** Client has a clinically significant medication allergy to prescribed medication **A5 - Duplication** Client has inadvertently been taking two medications from the same therapeutic class **A6 - Drug Interaction** Client has a clinically significant drug interaction to prescribed medication **A7 - Formulation** Client is taking a different or incorrect formulation than what is prescribed. (e.g., sustained-release vs. immediate-release)
B	**Dose**	**B1 - Dose** • Dosage the client has been taking is different from what was prescribed, • Not adjusted for renal function (only if info available).
C	**Route**	**C1 - Route** • Route of the medication the client has been taking is different from what was prescribed.
D	**Frequency**	**D1 - Frequency** • Frequency of the medication the client has been taking is different from what was prescribed, • Not adjusted for renal function (only if info available).
E	**Other (specify)**	**E1 – Other discrepancies** not identified above which may cause harm to the client (includes illegible orders).

Average Number of Discrepancies Identified

This is a measure of the average number of medication discrepancies identified per selected* clients.

The purpose of this measure is to determine the current state of the problem and depicts the need for MedRec in home care.

$$\text{Average number of medication discrepancies identified} = \frac{\text{Total number of discrepancies identified}}{\text{Total number of selected clients with a BPMH}}$$

*For the purposes of this measure, "selected clients" refers to clients identified to receive MedRec based on the home care organization's individualized policies and procedures (ideally based on content in the "Which clients should receive Medication Reconciliation?" section).

Percentage of selected clients with a discrepancy

This measure captures the percentage of selected* home care clients who have one or more discrepancy(ies) identified.

The purpose of this measure is to determine the current state of the problem and depicts the need for MedRec in home care.

$$\text{Percentage of selected clients with a discrepancy} = \frac{\text{Total number of selected clients with a discrepancy}}{\text{Total number of selected clients with a BPMH}} \times 100$$

Numerator Inclusion: Selected clients with one or more discrepancy(ies) identified (i.e., whether a selected client has one or 20 discrepancies, they are to be include in the numerator)

*For the purposes of this measure, "selected clients" refers to clients identified to receive MedRec based on the home care organization's individualized policies and procedures (ideally based on content in the "Which clients should receive MedRec?" section).

Appendix E - Posters and Guides

- Medication Management
- Medication Reconciliation Process in Home Care
- Process at Admission to Home Care Services
- Opportunities at Home Care Transitions Process
- Best Possible Medication History Interview Guide
- Top 10 Practical Tips to obtain a BPMH

Medication Management

Medication management is defined as patient-centred care to optimize safe, effective and appropriate drug therapy. Care is provided through collaboration with patients and their health care teams[1]

Clinical Medication Review

Addresses issues relating to the patient's use of medication in the context of their clinical condition in order to improve health outcomes[2]

Medication Reconciliation

A formal process in which healthcare providers work together with patients to ensure accurate and comprehensive medication information is communicated consistently across transitions of care[3]

Best Possible Medication History

A complete and accurate list of all the medications a patient is taking created using at least 2 sources of information including a client and/or family interview[4]

1. Developed collaboratively by the Canadian Pharmacists Association, Canadian Society of Hospital Pharmacists, Institute for Safe Medication Practices Canada, and University of Toronto Faculty of Pharmacy, 2012.
2. www.health.gov.bc.ca/pharmacare
3. ISMP Canada. Medication Reconciliation in Acute Care: Getting Started Kit. 2011
4. ISMP Canada. Medication Reconciliation in Acute Care: Getting Started Kit. 2011

Adapted from Fraser Health, Providence Health Care, Provincial Health Services Authority, Vancouver Coastal Health

ismp CANADA
Institute for Safe Medication Practices Canada
L'Institut pour l'utilisation sécuritaire des médicaments du Canada

Medication Reconciliation Process
in Home Care

Step 1

Collect - *Collect the Best Possible Medication History (BPMH)*

- Interview the client/family caregiver using a systematic process to determine actual medication use by the client
- Review at least one other reliable source of information to obtain and verify all of a patient's medication use (prescribed and non-prescribed)
- Document the BPMH

Step 2

Compare - *Identify discrepancies*

- Compare the BPMH with the most current information found in the client's recorded medication information sources
- Identify and document discrepancies

Step 3

Correct - *Resolve discrepancies*

- Correct or resolve discrepancies through discussion with the client/family caregiver and/or healthcare professional(s), as appropriate, i.e., reconcile
- Update the BPMH (as needed) to accurately reflect the client's current medication regimen once discrepancies are resolved. T**his updated list becomes the reconciled medication list**
- Document the reconciled medication list in a clearly visible and accessible place

Step 4

Communicate - *the reconciled medication list*

- Communicate any medication changes to the client/family caregiver and verify their understanding of the updated medication regimen
- Provide the reconciled medication list, whenever possible, to: client/family caregiver and others involved in the client's circle of care
- Convey the importance of keeping an up-to-date medication list

Upon admission to home care services
(beginning of service)

Process at admission to home care services

Step 1 — **Collect** - *Collect the Best Possible Medication History (BPMH)*

Step 2 — **Compare** - *Identify discrepancies*

- **No** discrepancies
- **Discrepancies**
  - Identify reason for the discrepancy
    - If **not** within the healthcare providers' scope of practice, refer the discrepancy to most responsible prescriber/healthcare provider for resolution
    - **Step 3** — **Correct** - *Resolve discrepancies*: If within the healthcare providers' scope of practice, resolve the discrepancy

Step 3 — **Correct** - *Resolve discrepancies*
Update the BPMH to reflect client's current medication regimen once discrepancies are resolved (as needed). ***RECONCILED MEDICATION LIST***

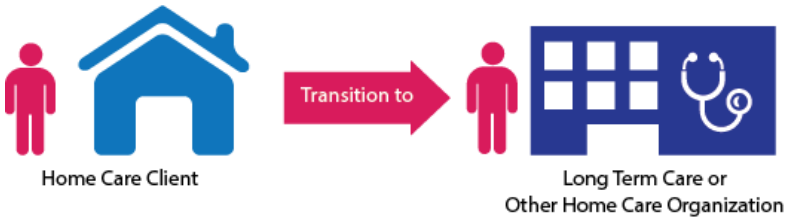
Step 4 — **Communicate** - *the reconciled medication list* within the client's circle of care

Opportunities at Home Care Transitions Process

Upon an existing home care client's transition of care

AND

Upon an existing client's planned transition to alternate care facility/organization, self-care (end of service)



Obtain client's last RECONCILED MEDICATION LIST

Assess/validate the currency of the RECONCILED MEDICATION LIST e.g. consider the date and ask client/family caregiver if they have maintained the list.

Current RECONCILED MEDICATION LIST

Not a current RECONCILED MEDICATION LIST

Complete the remainder of the medication reconciliation process starting at Step 2* (with comparison to the recorded discharge medication information)

Repeat the medication reconciliation process starting from Step 1*

* Refers to Process at admission to home care services

Medications: More Than Just Pills

Prescription Medicines

These include anything you can only obtain with a doctor's order such as heart pills, inhalers, sleeping pills.

Over-The-Counter Medicines

These include non-prescription items that can be purchased at a pharmacy without an order from the doctor such as aspirin, acetaminophen, laxatives, other bowel care products, **herbs** like garlic and Echinacea or **vitamins** and **minerals** like calcium, B12 or iron.

DON'T FORGET THESE TYPES OF MEDICATIONS

Eye/Ear Drops

Inhalers

Nasal Spray

Patches

Liquids

Injections

Ointments/Cream

Prompt the patient to include medicines they take **every day** and also ones taken **sometimes** such as for a cold, stomachache or headache.

Adapted from Vancouver Island Health Authority

Best Possible Medication History Interview Guide

Prevent Adverse Drug Events through Medication Reconciliation

www.SaferHealthcareNow.ca

Introduction

- Introduce self and profession.
- I would like to take some time to review the medications you take at home.
- I have a list of medications from your chart/file and want to make sure it is accurate and up to date.
- Would it be possible to discuss your medications with you (or a family member) at this time?
  - Is this a convenient time for you? Do you have a family member who knows your medications that you think should join us? How can we contact them?

Medication Allergies

- Are you allergic to any medications? If yes, what happens when you take (allergy medication name)?

Information Gathering

- Do you have your medication list or pill bottles (vials) with you?
- *Use show and tell technique when they have brought the medication vials with them*
  - How do you take (medication name)?
  - How often or When do you take (medication name)?
- *Collect information about dose, route and frequency for each drug. If the patient is taking a medication differently than prescribed, record what the patient is actually taking and note the discrepancy.*
- Are there any prescription medications you (or your physician) have recently stopped or changed?
- What was the reason for this change?

Community Pharmacy

- What is the name and location of the pharmacy you normally go to? *(Anticipate more than one).*
  - May we call your pharmacy to clarify your medications if needed?

Over the Counter (OTC) Medications

- Do you take any medications that you buy without a doctor's prescription? *(Give examples, i.e., Aspirin)*. If yes, how do you take (OTC medication name)?

Vitamins/Minerals/Supplements

- Do you take any vitamins (e.g. multivitamin)? If yes, how do you take (vitamins name(s))?
- Do you take any minerals (e.g. calcium, iron)? If yes, how do you take (minerals name(s))?
- Do you use any supplements (e.g. glucosamine, St. John's Wort)? If yes, how do you take (supplements name(s))?

Eye/Ear/Nose Drops

- Do you use any eye drops? If yes, what are the names? How many drops do you use? How often? In which eye?
- Do you use ear drops? If yes, what are the names? How many drops do you use? How often? In which ear?
- Do you use nose drops/nose sprays? If yes, what are the names? How do you use them? How often?

Inhalers/Patches/Creams/Ointments/Injectables/Samples

- Do you use inhalers?, medicated patches?, medicated creams or ointments?, injectable medications (e.g. insulin)? For each, if yes, how do you take (medication name)? *Include name, strength, how often.*
- Did your doctor give you any medication samples to try in the last few months? If yes, what are the names?

Antibiotics

- Have you used any antibiotics in the past 3 months? If so, what are they?

Closing

This concludes our interview. Thank you for your time. Do you have any questions?

If you remember anything after our discussion please contact me to update the information.

Note: *Medical and Social History, if not specifically described in the chart/file, may need to be clarified with patient.*

Adapted from University Health Network

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Top 10 Practical Tips

How to Obtain an Efficient, Comprehensive and Accurate Best Possible Medication History (BPMH)

1. **Be proactive.** Gather as much information as possible prior to seeing the patient. Include primary medication histories, provincial database information, and medications vials/ lists.

2. **Prompt questions about non-prescription categories:** over the counter drugs, vitamins, recreational drugs, herbal/traditional remedies.

3. **Prompt questions about unique dosage forms:** eye drops, inhalers, patches, and sprays.

4. **Don't assume patients are taking medications according to prescription vials** (ask about recent changes initiated by either the patient or the prescriber).

5. **Use open-ended questions:** ("Tell me how you take this medication?").

6. **Use medical conditions as a trigger** to prompt consideration of appropriate common medications.

7. **Consider patient adherence with prescribed regimens** ("Has the medication been recently filled?").

8. **Verify accuracy:** validate with at least two sources of information.

9. **Obtain community pharmacy contact information:** anticipate and inquire about multiple pharmacies.

10. **Use a BPMH trigger sheet** (or a systematic process / interview guide). Include efficient order/optimal phrasing of questions, and prompts for commonly missed medications.

Adapted with permission from O. Fernandes PharmD, University Health Network, 2008

Appendix F – Sample Tools and Forms

The documents are provided solely for illustration, instructional purposes, and general information and convenience. Appropriate qualified, professional advice is required to apply any of this information to a specific healthcare setting or organization.

Any reliance on the information contained in the documents is solely at the user's risk.

The Institute for Safe Medication Practices Canada and contributing facilities are not responsible or liable for the accuracy or completeness of information provided.

- Medication Reconciliation Form
- Best Possible Medication History Discharge Form
- Medication Reconciliation Documentation Tips
- Eastern Health Fax Transition

MEDICATION RECONCILIATION FORM

ismp CANADA
Institute for Safe Medication Practices Canada
L'Institut pour l'utilisation sécuritaire des

Ontario
Health Quality Ontario
Qualité des services de santé Ontario

This is a schematic representation of potential elements of a MedRec form for use in paper or electronic charts.

BEST POSSIBLE MEDICATION HISTORY

Sources of Information Use to Complete History:

- [x] (please check all that apply)
- [ ] Patient interview
- [ ] Caregiver interview
- [ ] Medication vials / boxes
- [ ] Blister packs
- [ ] Patient's own list
- [ ] Community pharmacy profile
- [ ] MedsCheck
- [ ] Ontario Drug Benefits Drug Profile Viewer
- [ ] Specialist letter
- [ ] Hospital Discharge Summary
- [ ] Best Possible Medication Discharge Plan
- [ ] Rapid Response Nurse BPMH
- [ ] Ontario Telemedicine Network BPMH
- [ ] Other: _____

Date:

PATIENT'S NAME:

COMMUNITY PHARMACY NAME:

Phone Number:

Medication Management:

- [ ] Self-administration
- [ ] Caregiver administration

Compliance packs:

- [ ] No
- [ ] Yes If yes, [ ] Pharmacy filled blister pack [ ] Personal dosette

Medication Allergies:

Reaction:

Medication Name	Dose	Route	Frequency	Indication	Start Date	Prescriber	Comments

Determine practice documentation guidelines (e.g., brand names v. generic names, combination products etc.)

Include additional information that would provide value in establishing the patient's medication regimen

BPMH completed by:

Are there differences between the BPMH compared to what is documented in the patient's chart?

Recommendations by the nurse or pharmacist to PCP on possible options for resolution of the discrepancy

RECONCILIATION PLAN

Discrepancies Identified	Suggested Resolution Plan	Reconciliation Decision

Reconciliation completed by:

RECONCILED MEDICATION LIST FLOWSHEET

The reconciled list should be the current and accurate medication list that is updated at each subsequent patient visit

Medication Name	Dose	Route	Frequency	Indication	Prescriber	Date/Initials	No Change	Modify
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ISMP Canada, Health Quality Ontario, Ontario Primary Care Medication Reconciliation Guide, www.ismp-canada.org/download/PrimaryCareMedRecGuide_EN.pdf, pg 44.

Best Possible Medication Discharge Plan (BPMDP)

Discharge Date: _____

Allergies: _____

Primary Diagnosis: _____

Community Pharmacy: _____ Phone Number: _____

Patient Addressograph

To be completed by RPh , RN or MD Name: _____ Date _____								To be completed 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 / Codes**
New Discharge Medications											

BPMDP Patient Interview Completed: ❑

Refer for *community medication review program* if available: ❑

Physician (print name): _____ Physician's Signature: _____

Date: _____ CPSO Number: _____

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Medication Reconciliation Documentation Tips

It is important to develop guidelines for documentation, for both electronic and paper charting, to ensure that documentation is comprehensive and standardized between practitioners in the same setting.

Recommendations for Medication Reconciliation (MedRec) Documentation

BPMH Section	Reconciliation Section
Date history is taken	Discrepancies identified
Medication allergy and reaction information	Actions taken to resolve discrepancies
Community pharmacy name and number	Updated reconciled list (medication name, dose, route, frequency, start date, stop date, indication, prescriber name)
Medication management information (e.g., self-administration or caregiver administration; use of compliance packs)	Name of person that completed the reconciled list
Sources of information used to complete BPMH	
Name (generic name preferred)	
Dose	
Route	
Frequency	
Start date	
Indication	
Prescriber name	
Comments (additional information that would provide value in establishing the patient's medication regimen e.g., average number of as-needed medications consumed in a week, prescribed medication use if different than actual medication use)	
Name of person that completed the BPMH	

This table depicts how the elements listed may be incorporated into a MedRec form for paper charting and data fields on a screen for electronic charting.

Eastern Health

FAX TRANSMISSION

This is an URGENT REQUEST required for care today

ATTENTION: _____
Pharmacy Name

Please provide the most recent medication profile for the following patient/client/resident:

Name: _____ **MCP: _____**
Patient/Client/Resident

DOB: _____
DD/MM/YYYY

==========

Requesting Site: _____ **Unit: _____**
Care Facility (Hospital/LTC facility/H&CC location)

Unit Phone Number: _____ **Unit Fax Number_____**
Unit Manager:_____

From: _____ **Date of Request: _____**
Requestor (RN/Pharmacist/physician) *DD/MM/YYYY*

NOTE: To Eastern Health Requestor
Please save and submit this faxed request to the unit manager.

Confidentiality Warning

This is a confidential transmission containing information for a specific individual and purpose. This information is private and meant only for the intended recipient. If you are not the intended recipient, you are notified that any disclosure, copying, distribution or any action in reference to the contents is strictly prohibited. If you have received this communication in error, please notify us immediately by the telephone number provided above and return the original to us by mail.

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