MEDICATION RECONCILIATION IN HOME CARE

Getting Started Kit

January 2011

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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 our website at www.saferhealthcarenow.ca

This Getting Started Kit has been written to help engage your interprofessional/ 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 Quebec Campaign: Together, let's improve healthcare safety! works collaboratively with *Safer Healthcare Now!.* The Getting Started Kits for all interventions used in both *Safer Healthcare Now!* and the Quebec Campaigns are the same and available in both French and English.

The Medication Reconciliation in Home Care Getting Started Kit has been adapted from earlier versions of the Canadian *Safer Healthcare Now!* Acute Care and Long Term Care Medication Reconciliation Getting Started Kits which were developed by ISMP Canada for *Safer Healthcare Now!*

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.

VON (**Victorian Order of Nurses**) is a national, not-for-profit health care organization and registered charity offering a wide range of community health care solutions, 24 hours a day, 7 days a week.

Founded in 1897, today VON delivers more than 50 different programs and services through 51 local branches staffed by over 15,000 staff and community volunteers.

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

Safer Healthcare Now!

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Alberta Health Services
Home Living Program
Edmonton, Alberta

Vancouver Coastal Health
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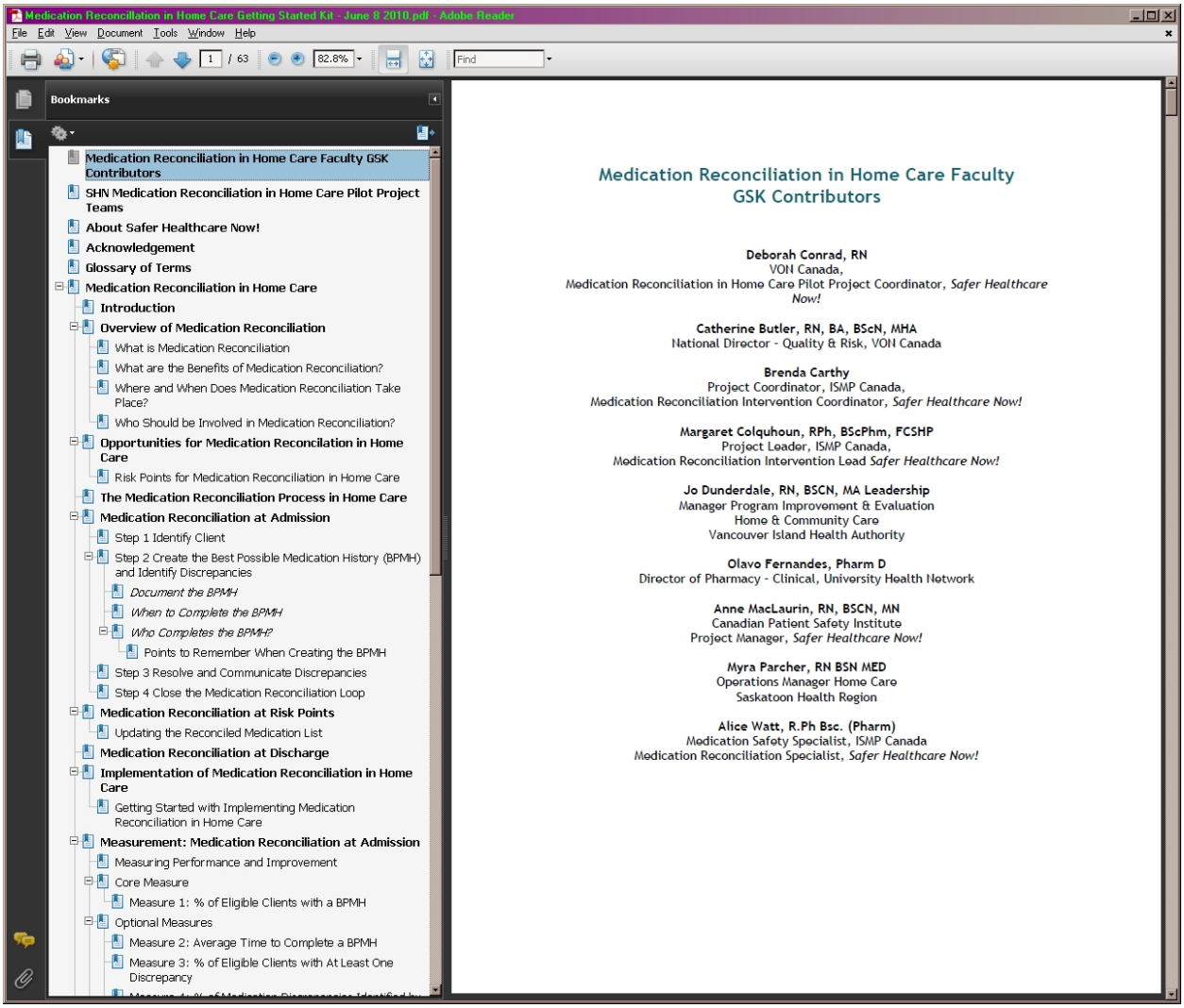
How to use this Electronic Resource Toolkit

This resource toolkit has been created as an electronic PDF. To ensure ease of use, we have created some simple instructions.

How to Use

- The 'Bookmarks' tab or 'select View/Navigation Toolbars/Bookmarks to open the bookmarks on the upper left side of the screen. This now becomes your electronic 'Table of Contents'. This table of contents contains links to all sections of the toolkit. To view a section simply click on the section name and you will automatically be redirected.
- Sections may contain more than one page. To view all pages within the section you can either use the scroll button on your mouse or use the scroll bar on the right-side of the screen.

The PDF will display as below. Click on the links to be re-directed to sections.



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 current medication history which includes all regular and "as needed" (prn) medication used (prescribed and non-prescribed) using a number of different sources including the client interview.[1] Possible sources for information gathering may be:

- Inspection of medication containers, bottles, vials, physician samples
- Client medication calendar
- Referrals, physician orders, discharge summaries
- Best Possible Medication Discharge Plan (BPMDP) from discharging facility
- Pharmacy lists, provincial pharmaceutical data base print outs
- Information gained from discussion with members of the client circle of care

BPMH Form: A form to record the best possible medication history. Discrepancies are identified on the form and delivered to the most responsible physician/nurse practitioner for resolution of discrepancies.

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 who are involved in the client's care within the health care setting. This includes health care professionals/providers, as well as formal and informal caregivers. Specifically, those who are involved with the client's care within the community care setting.

Discharge: The discontinuation of service by the home care organization.

Discrepancy: A difference identified between what the client is actually taking versus the information obtained from other sources. Bedell et al defines discrepancies in an out patient setting as, "the difference between the list of medications in the medical record (referred to as recorded medications) and what a patient actually took, based on medication bottles and on self-reports (referred to as reported medications)" [3]

Handoff: The delivery of client information between members within the client's circle of care in order to continue the medication reconciliation process. As handoffs may be points of risk, strategies are utilized to facilitate deliberate, clear and safe communication when moving information from one member of the circle of care to the next.

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1 ISMP Canada, Assuring Medication Accuracy at Transitions in Care: Medication Reconciliation High5s: Action on Patient Safety Getting Started Kit, 2008.

2 Registered Nurses' Association of Ontario (March 2009) Nursing Best Practice Guidelines Shaping the future of Nursing: Client Centered Care Supplemental ,Toronto Canada.

3 Bedell SE, Jabbour S, Goldberg R, et al. Discrepancies in the use of medications: their extent and predictors in an outpatient practice. Arch Intem Med 2000;160; 2129-2134.

Health Literacy: "The ability to read, understand and effectively use basic health care information and instructions."[4]

Medication Reconciliation: **"**A formal process in which health care professionals partner with clients to ensure accurate and complete medication information transfer at interfaces of care. 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".[5] In the home care environment, the process starts and ends with the client. The end result is the reconciled medication list which is verified with the client in a manner to support clear understanding by the client/family and/or caregivers.

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

Readmission: Existing clients who are transferred to another provider of care (e.g., acute care), returns home, and the home care organization resumes service.

Risk point: Specific points of care where a client is susceptible to medication discrepancies related to transfer of medication information from within the client's circle of care.

BPMH Interview Guide: A standard set of questions including visual cues used by the clinician during the client interview when obtaining the BPMH. ISMP Canada in collaboration with *Safer Healthcare Now!* has developed a tool which was used by the pilot teams and is available through the *Safer Healthcare Now!* SHN Shop.

Reconciled Medication List: This is the reconciled BPMH and 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.

[4] Manitoba Institute of Patient Safety, www.safetoask.ca , Information for Providers
[5] ISMP Canada, Assuring Medication Accuracy at Transitions in Care: Medication Reconciliation High5s:Action on Patient Safety Getting Started Kit, 2008

"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 reassessment. Her family doctor was notified and there was a change made to her medication regimen. Her blood pressure stabilized and she no longer requires any home nursing care."

Lindsay Bellavance, RN
VON Perth-Huron
Team Member
September 2009

Introduction

Medication reconciliation is intended to ensure accurate and consistent communication of the client's medication information through transitions of care. Its reach touches every client and most health care professionals through the entire continuum of care.

The *Safer Healthcare Now!* Getting Started Kit for Medication Reconciliation in Home Care is a guide to support organization leaders with implementation of medication reconciliation in their organization.

The focus of this document is to:

- Introduce the framework for medication reconciliation in home care at admission and along points of care;
- Address the factors and challenges to medication reconciliation in home care; and
- Share tools, guides, and resources developed from the experience of the *Safer Healthcare Now!* Medication Reconciliation in Home care Pilot Project.

Overview of Medication Reconciliation

What is Medication Reconciliation?

Medication reconciliation is a formal process in which health care professionals partner with clients and families to ensure accurate and complete medication information transfer at interfaces of care.

It involves a systematic process for obtaining a medication history, and using that information to compare to medication orders to identify and resolve discrepancies. It is designed to prevent potential medication errors and adverse drug events".[1]

[1] ISMP Canada, Assuring Medication Accuracy at Transitions in Care: Medication Reconciliation High5s: Action on Patient Safety Getting Started Kit, 2008.

What are the Benefits of Medication Reconciliation?

Accurate medication information is the cornerstone for all medication-related decisions as clients move through the continuum of care. Taking the time to create a thorough Best Possible Medication History (BPMH) will help coordinate prescribing decisions and decrease the potential for discrepancies in prescribing, reduce medication incidents and potential adverse drug events (ADEs). The Case for Medication Reconciliation in Home Care summarizes the key support for medication reconciliation in the home care setting.

Where and When Does Medication Reconciliation Take Place?

Medication reconciliation should occur at interfaces of care where the client is at risk for medication discrepancies.

Figure 1 Interfaces of Care in the Home Care Setting

Interfaces of care are opportunities for medication reconciliation and improved communication about medications to improve client medication safety.

Care of clients in the community may occur in multiple settings. A client may be cared for at home with medication management support provided by a home care organization, with intermittent visits to the family physician/nurse practitioner/outpatient clinic. If changes to medications are not clearly communicated back to the client/organization, the potential for medication-related adverse events may exist.

The key to the success of medication reconciliation in home care is initiation of the process on admission to the home care organization. Admission medication reconciliation is the foundation to support continued reconciliation as necessary in the community.

Who Should be Involved in Medication Reconciliation?

Medication reconciliation is a shared responsibility of interdisciplinary health care professionals in collaboration with clients and families. Clients and families know their medication-taking practices and provide medication vials, lists and information. Medication reconciliation requires additional training for clinicians. The actual roles and responsibilities for each discipline and clinician are based on the local team's medication reconciliation practice model taking into account staffing resources. Effective models will differ from one organization to the next.

The client's circle of care needs to be identified and kept updated to support successful communication of medication information. This circle of care involves both formal and informal caregivers, the client/family, physicians, pharmacists, case managers and any other health professional involved in the client's care.

Responsibilities of the client circle of care are to:

- Address client safety related to medications;
- Support the completion of the medication reconciliation process;
- Understand their scope of practice and when to hand off to someone within the circle of care to keep the process moving;
- Support the client-centered approach to medication reconciliation; and
- Verify the client/family understands any changes to the medication regimen.

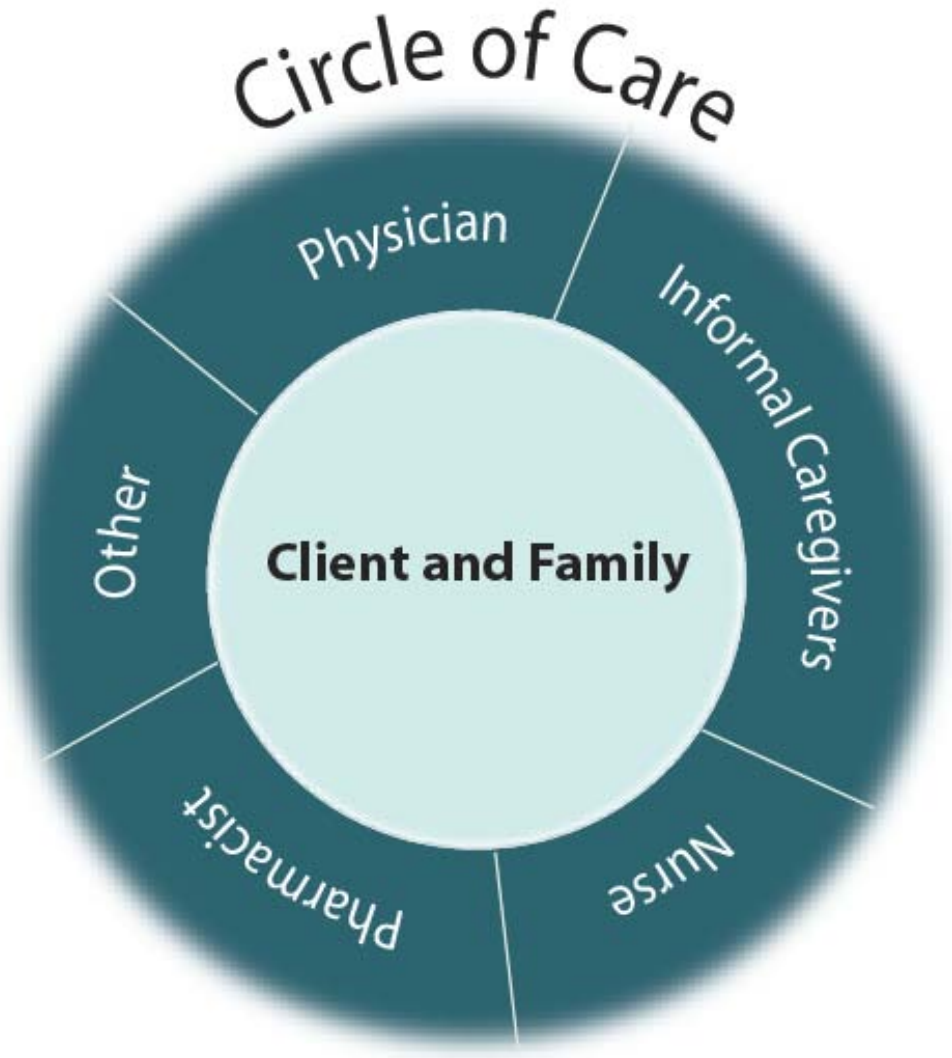


Figure 2 - The Client's Circle of Care in Home Care

Opportunities for Medication Reconciliation in Home Care

Medication reconciliation in home care includes a systematic process for obtaining a medication history through client interview and review of information from other sources.

Risk points are opportunities for clinicians to engage in medication reconciliation in the home care setting. It is up to the individual organization to review minimum standards set by Accreditation Canada coupled with organization policy when developing expectations as a standard of practice within their organization.

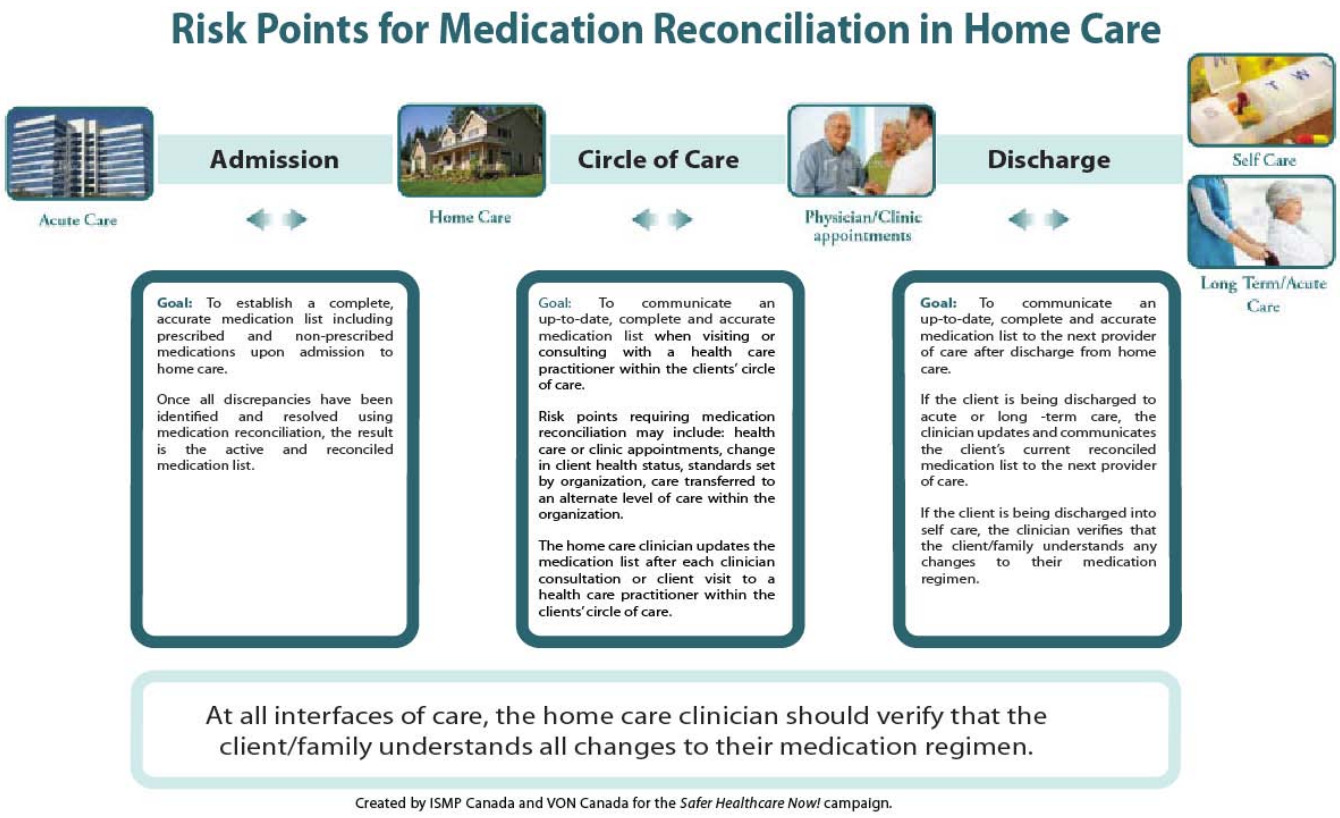


Figure 1 – Risk Points for Medication Reconciliation in Home Care

Risk Points for Medication Reconciliation in Home Care Poster

The Medication Reconciliation Process in Home Care

Medication reconciliation in home care starts and ends with the client and involves four basic steps:

1. Identify the client;
2. Create the Best Possible Medication History (BPMH) and identify discrepancies;
3. Resolve and communicate discrepancies; and
4. Close the medication reconciliation loop.

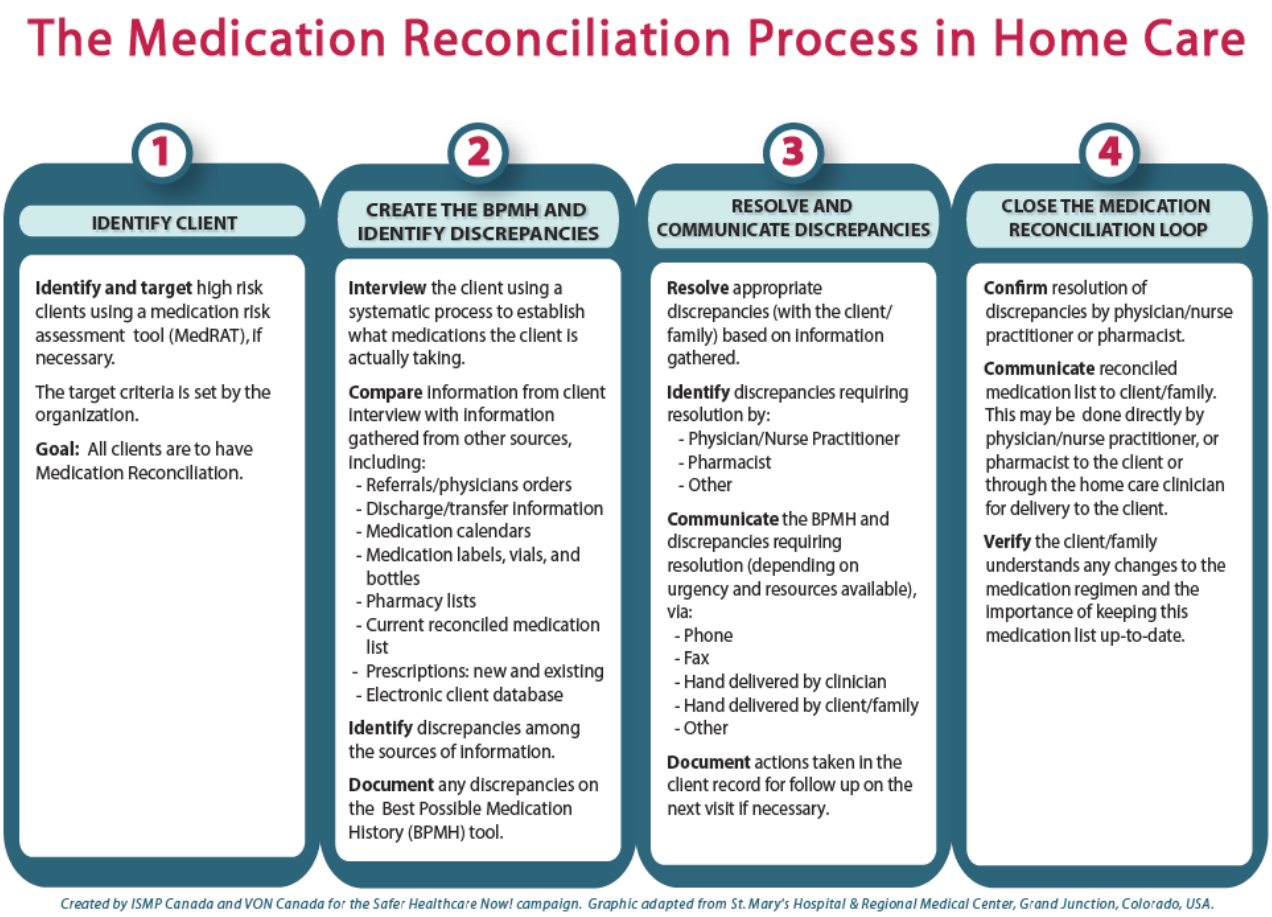
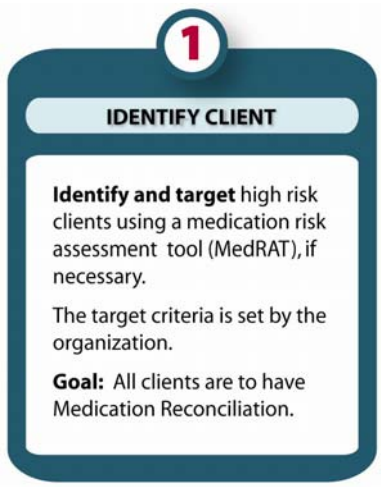


Figure 1 - The Medication Reconciliation Process in Home Care

The Medication Reconciliation Process in Home Care Poster

Medication Reconciliation at Admission

Step 1 Identify Client

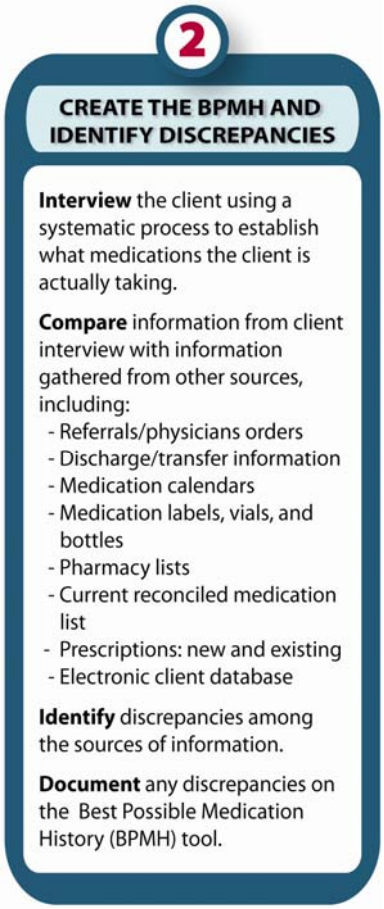


Identify and target high risk clients. Medication reconciliation for all clients admitted to the home care organization should be considered. However, this may not be possible for organizations at the onset of implementation for a variety of reasons. As a result, for some organizations, criteria will need to be set to identify target clients.

The utilization of a medication risk assessment tool (MedRAT) may assist the clinician in determining the appropriateness of applying medication reconciliation. This can be developed by the organization to guide the clinician in identifying clients the organization determines to be at greatest risk. (See: Sample Medication Risk Assessment Tool)

Example criteria: All clients admitted to the home care organization for medication management services. Such services may include 'preloading/pre-pour' or administration of medication.

Step 2 Create the Best Possible Medication History (BPMH) and Identify Discrepancies



Interview the client/family using a *systematic process* to establish the clients' medication regimen including drug, dose, route and frequency. The information gathered will reflect what the client is actually taking versus what is prescribed.

The use of visual aids to support the interview process may be effective with clients who demonstrate health literacy deficits. For examples see BPMH Interview Guide and Top 10 Practical Tips. The *BPMH Interview Guide* is available from the *Safer Healthcare Now!* Campaign SHN Shop.

Compare the information from this interview with other sources such as:

- Prescription bottles/labels, physician/nurse practitioner samples;
- Admission orders/referral information;
- Best Possible Medication Discharge Plan (BPMDP) from a health care facility;
- Current reconciled medication list;
- Client medication calendars;
- Physician/nurse practitioner records;
- Previous organization health record;
- Pharmacy lists, provincial pharmaceutical database print outs; and
- Other sources.

Identify any discrepancies between what the client is actually taking and what was prescribed (per the information gathered from other sources).

Document all medications (prescription and non prescription) including dosage, route, and frequency on the Best Possible Medication History tool. Documentation needs to include clear identification and the nature of discrepancies to facilitate resolution by the most responsible physician/nurse practitioner. See Types of Medication Discrepancies Requiring Clarification.

It is up to the organization to adapt or develop a BPMH tool that will best fit the organization's needs and the community base it serves. Examples are available on the *Safer Health Care Now!* Medication Reconciliation Communities of Practice. See sample BPMH tools from New Brunswick Regional Health Authority B and VON Perth-Huron.

Document the BPMH

Document the BPMH on the tool developed or adapted by the home care organization. The BPMH tool should become a permanent record on the client chart and be kept in a central location for all health care professionals to access. This location is most often in the client home.

Before implementing medication reconciliation, careful selection of a BPMH tool is necessary. The organization needs to ensure that the tool is user-friendly and captures all required information such as:

- Required information by Accreditation Canada;
- Discrepancies identified;
- Reconciliation of identified discrepancies; and
- Appropriate date and signatures.

Note: Caution should be taken when using shaded areas on tools as facsimile quality of documents may be reduced.

When to Complete the BPMH

The optimal time to complete the BPMH is during the initial visit. However, this may not be possible for different reasons. Home care organizations need to set a standard of expectation for initiation of admission medication reconciliation preferably as soon as possible after admission. As the organization's presence in the client home is intermittent, it may be reasonable to set timelines for completion of the BPMH in number of visits instead of number of days.

Who Completes the BPMH?

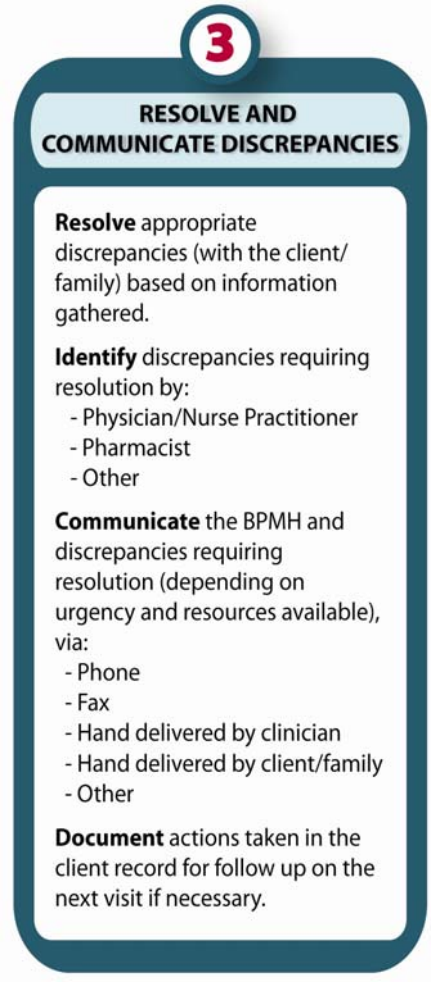
Responsibility for completing the BPMH may be assigned to any health care professional in the client's circle of care provided the clinician:

- Has received formal training;
- Uses a systematic process; and
- Conducts the medication history in a conscientious and responsible manner. They are accountable for the information they record and will consult drug information resources when required.

Points to Remember When Creating the BPMH

- If the client/family is unable to participate in a medication interview, other sources may be utilized to obtain medication histories and or clarifying conflicting information. ***Other sources should not be a substitute for a thorough client/family interview, if it is possible.***
- Verification of medication information with more than one source if available in addition to the client interview.
- When deciding on sources of information to use for comparison, consider the date and reliability of the source. (e.g., medication calendars, prescription bottles).
- Never assume that the client is taking medication according to the directions on vials, pill bottles/packaging or that new prescriptions are filled. Ask questions to determine how each medication is ***actually*** being taken.
- Never assume that medication lists are updated. Review the list with the client to ensure accuracy.
- The Best Possible Medication Discharge Plan (BPMDP) from an acute care facility should be excellent sources of information on admission to the home care facility. The BPMDP should not be a substitute for medication reconciliation on admission because there may be additional medications that a client takes at home and differences in how the client actually takes their medications.

Step 3 Resolve and Communicate Discrepancies



Home care clinicians have an opportunity to prevent potential medication errors from becoming adverse events. At times, the client/family does not understand what their medication regimen should be in the home. Issues, such as resuming home medications which have been discontinued or duplicating medications, are not uncommon and are primarily due to the client/family not having a clear understanding of the changes.

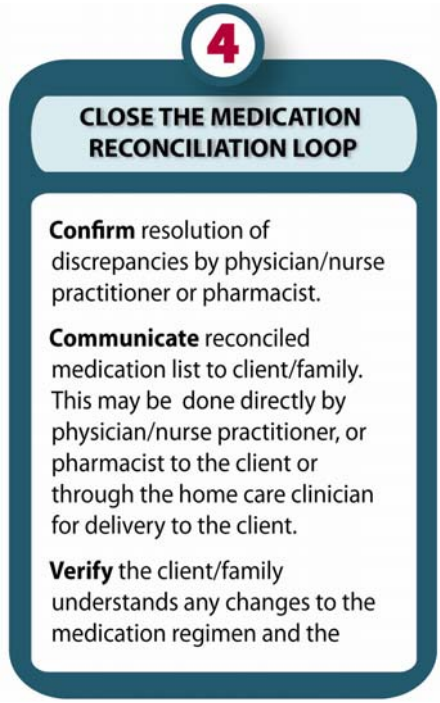
The clinician will:

- *Resolve* appropriate discrepancies with the client/family if the changes required are consistent with the prescription.
- *Identify* discrepancies that need to be resolved by the physician/nurse practitioner, pharmacist or other member of the client circle of care. The urgency of the reconciliation and resources available need to be considered when choosing the method of communicating the discrepancy.
- *Communicate* discrepancies to other members of the client circle of care via:
  - Phone
  - Facsimile
  - Hand delivery by the clinician
  - Hand delivery by the client/family
  - Face-to-face discussion

Strategies should be developed by the home care organization to manage the transfer of information to the primary care physician/nurse practitioner or any member of the client circle of care.

- *Document* actions taken to resolve discrepancies in the client record for follow up during subsequent visits if necessary and appropriate.

Step 4 Close the Medication Reconciliation Loop



To close the medication reconciliation loop, the most relevant health care professional will:

Confirm resolved discrepancies. It is at this point that the reconciled BPMH becomes the *Reconciled Medication List.*

Communicate the reconciled medication list via:

- Phone discussion with the client/family or clinician.
- Facsimile to the organization to communicate the discrepancy with the client/family.
- Face to face discussion with the client/family.

Communication is facilitated by the physician/nurse practitioner, pharmacist or other member of the client circle of care.

Verify the reconciled medication list with the client/family. This process is key to the success of medication reconciliation in home care and needs to be done in a manner that facilitates understanding by the client, family and/or care giver.

Verifying the client/family understands any change to medication regimen is imperative in the community setting since the client, family or care givers will be primarily responsible for medication administration.

A good reminder is to counsel the client, family and/or care giver to keep the reconciled medication list up-to-date, accurate and with them at all times especially during healthcare appointments (e.g. dentist, specialist, emergency room visit, out-patient clinics, family physician) or when purchasing non-prescription and prescription medications at a community pharmacy. Organizations need to develop strategies to support successful and effective completion of the medication reconciliation loop.

Note: Risk does exist when transferring information between those within the client circle of care. Strategies need to be in place to support safe, accurate transfer of client information. This is particularly important in the community as each member of the client circle of care may be at different locations / sites. See The Medication Reconciliation Process and the Client Circle of Care for an example of the medication reconciliation process identifying points of risk.

Medication Reconciliation at Risk Points

Updating the Reconciled Medication List

Updating the reconciled medication list should be done in the same manner as creating the initial BPMH. Any adjustments to the reconciled medication list should be dated and signed off by the clinician in a manner that is in compliance with professional and organizational documentation policies/standards.

Medication Reconciliation at Discharge

The goal of medication reconciliation at discharge is to provide the next provider of care with an accurate medication list to support the medication reconciliation process on admission to the new facility. If the client is being discharged into self care, the goal is to ensure that the reconciled medication list is updated and verified with the client/family in a way that facilitates understanding.

As care in the community is intermittent, the home care organization may not be in the home at the time or even aware of a transfer or discharge.

Keeping the reconciled medication list updated and accurate is the best way to be prepared for external transfer and discharge at any time.

Example

A client is on a waiting list for a long term care bed. Once a bed becomes available, the client can be transferred in a matter of hours to the facility. The home care organization can be notified by family after the client has been moved.

The home care organization will send the most recent medication list to the new facility when notified. This medication list will become a 'source of information' for the new facility when creating a BPMH and medication orders to facilitate medication reconciliation.

Implementation of Medication Reconciliation in Home Care

At first glance, the challenges of medication reconciliation 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 add a layer of complexity to these challenges.

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

Getting Started with Implementing Medication Reconciliation in Home Care

The following key steps for getting started in medication reconciliation include:[2]

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: SHN recommends using a Quality Improvement (QI) method when implementing medication reconciliation in your organization. The term "QI" refers to a systematic, data-guided activity, designed to bring about immediate, positive changes in the delivery of health care in particular settings[3]. QI methods include the Model for Improvement, Six Sigma and Lean among others.

For more information refer to:

- Quality Improvement and Medication Reconciliation in Home Care
- Factors in the Home Care Environment
- Challenges and Strategies
- Considerations for Implementation of Medication Reconciliation

[2] Reconciling Medications Collaborative of the Massachusetts Coalition for the Prevention of Medical Errors and the Massachusetts Hospital Association. The Collaborative was funded by a cooperative agreement between the Agency for Healthcare Research and Quality (AHRQ) and the Massachusetts Department of Public Health (Grant #U18 HS11928).

[3] Baily, M., et al. "The Ethics of Using QI Methods to Improve Health Care Quality and Safety," *Hastings Special Report* (July-August 2006): S2-39.

Measurement: Medication Reconciliation at Admission

Measuring Performance and Improvement

Measuring quality using a consistent set of measures evaluates the improvement strategy, identifies positive or negative effects on the organization and secures senior management support. Measure on an ongoing basis:

- Start by collecting baseline data prior to the implementation of medication reconciliation and report it to the SHN Central Measurement Team. See SHN Instructions for Data Entry and Submission using Measurement Worksheets for more information.
- Report the core medication reconciliation measure to the Central Measurement Team of *SHN!* This data should also be presented to the organization's senior leadership monthly during the baseline and early initial implementation stages and less frequently during the full implementation stage to check the quality of improvement.
- This core measure represents the minimum measure required to evaluate the success of medication reconciliation. Home Care organizations may add additional measures to evaluate improvement as they see fit.
- If measures do not reflect improvement, your team should investigate the reason why (e.g., processes which are not working, non-compliance to these processes and/or existence of barriers which prevent the process from working effectively).
- Optional measures are intended to assist the organization to understand time requirements for operational purposes and measure local medication reconciliation impacts and issues.

Core Measure

Type of Measure	Measure	Description
Process	Measure One (MedRec-HC-1)	Percentage (%) of eligible clients with a Best Possible Medication History (BPMH) and with discrepancies communicated to the appropriate health care practitioner

Measure One - (MedRec-HC-1): Percentage (%) of Eligible Clients with a Best Possible Medication History

This is a measure of the percentage (%) of eligible clients who had a BPMH completed and discrepancies communicated to the appropriate health care practitioner within the **first two visits** from a home care clinician.

This measure allows teams to gauge their capacity to reach as many eligible clients as possible. A completed BPMH with identified discrepancies communicated to the appropriate health care provider within the first two visits is ideal to prevent potential harm.

$$\text{\% of eligible clients with a BPMH completed and discrepancies communicated to the appropriate health care practitioner} = \frac{\text{Total number of eligible clients with a BPMH completed and discrepancies communicated to the appropriate health care practitioner}}{\text{Total number of eligible clients}} \times 100$$

Goal: Ninety-five percent (%) of all eligible home care clients have a BPMH completed and discrepancies communicated to the appropriate health care practitioner.

Numerator Inclusion: Those clients identified as eligible by the home care organization (clients receiving medication management as a component of their service).

Optional Measures

Type of Measure	Measure	Description
Process	Measure Two (MedRec-HC-2)	Average Time to Complete a Best Possible Medication History
Outcome	Measure Three (MedRec-HC-3)	The Percentage (%) of Eligible Clients with At Least One Discrepancy
Outcome	Measure Four (MedRec-HC-4)	Percentage (%) of Medication Discrepancies Identified by Type (A1 – E)

Measure Two - (MedRec-HC-2): Average Time to Complete a Best Possible Medication History

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

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

The time (minutes) includes the following steps in completing a BPMH:

- the initial review of medications from client referral (preparation time);
- interviewing the client and/or the family;
- gathering all sources of information;
- identifying discrepancies among the sources of information; and
- documenting any discrepancies and the BPMH.

Goal: Each team will set individual goals.

Numerator Exclusion: This measure does not include the clarification and resolution of discrepancies.

Numerator Inclusion: The time to document the BPMH and identify all sources of information for all eligible clients.

Measure Three (MedRec-HC-3):
The Percentage (%) of Eligible Clients with At Least One Discrepancy

This is a measure of the percentage (%) of eligible clients who had at least one discrepancy **requiring clarification**. The intent is to collect data for one week at the beginning of implementation and intermittently thereafter (e.g. 6 month intervals).

$$\text{Percentage of eligible clients with at least ONE discrepancy} = \frac{\text{Total number of eligible clients with at least one medication discrepancy}}{\text{Total number of eligible clients with a BPMH}} \times 100$$

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

Numerator Inclusion: Those clients with a BPMH and at least one discrepancy identified that requires clarification.

Measure Four (MedRec-HC-4):
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.

Each medication order identified as having a discrepancy that requires clarification may be assigned to only one discrepancy category (refer to Chart A below). Clinicians can select whichever they think is the most important. However, for those medication orders for which more than one discrepancy category applies, choose the discrepancy code by alphabetical order. For example, a medication order which is has an incorrect medication (A1), and dose (B1), select A1.

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

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**

Discrepancy Category		Types of Medication Discrepancies (Code/Description)
		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).

Note: It may not be essential to monitor this measure on a continual basis. This measure will 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.

Collecting Baseline Data

Collecting baseline data is important when initiating any quality improvement activity to determine the effectiveness of the improvement. This means collecting measurement data using current processes before the introduction medication reconciliation.

When to Collect Data

Core measurement data should be collected monthly to provide opportunities for timely analysis in order to identify areas for improvement.

Tools and Approaches to Data Collection

The selection or development of tools for data collection will depend on available resources. The organization needs to determine a way for the data to be transferred from the client's home and captured on a master tool (e.g., spread sheet) until submission to the *Safer Healthcare Now!* Central Measurement Team (CMT). This will also allow the organization to analyse the data in an aggregate format.

Sample tools include:

- Client data collection tool to transfer information from the client home.
- Master organization collection tool to house information gathered.
- BPMH tools which includes areas for data collection New Brunswick Regional Health Authority B and VON Perth-Huron.

Conclusion

The concept of medication reconciliation is not new to the home care environment. The very nature of the home care setting dictates strong collaboration between client, family, caregiver and the clinician at all times to provide effective and safe care. Therefore, for some organizations the information within this kit will support the *formalization* of medication reconciliation.

This getting started kit serves a practical guide and resource to support teams with initiating medication reconciliation in their organizations or enhancing current medication reconciliation processes. The tools and information in this kit are intended to provide teams with a starting point and can be adapted to meet specific organization needs.

Additional, information may be obtained from the *Safer Healthcare Now!* Medication Reconciliation Communities of Practice.

"Home Care had been doing a form of reconciliation for some/many of it's 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."

Mary Jane Callaghan RN
Pilot Team Leader September 2009
PEI Department of Health Continuing Care

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Appendices

The Case for Medication Reconciliation in Home Care

Adverse Drug Events in Health Care:

Within the realm of patient safety, safe use of medication has consistently been identified as a key area of concern. Two key reports in the past decade, the Institute of Medicine report *To Err is Human* (Kohn et al., 1999)[1] and the Canadian Adverse Events Study (Baker et al., 2004)[2] highlighted issues with adverse drug events.

As part of a background paper for the *Safer Healthcare Now!* Medication Reconciliation in Home Care Pilot Project[3] carried out from 2008 - 2010, a literature review was conducted. A summary of the key results related to the occurrence of adverse drug events and the need to improve overall medication management post discharge from an acute care facility are summarized below:

- In the Canadian Adverse Events study, drug and fluid-related events were the second most common type of procedure or event to which adverse events were related. (Baker et al., 2004)[2].
- In another Canadian study, *"Adverse events among medical patients after discharge,"* Forster et al. (2004)[4] concluded that, "approximately one-quarter of patients in their study had an adverse event after hospital discharge and half of the adverse events were preventable or ameliorable." In this study the most common (72%) adverse events noted were drug-related.
- Coleman et al (2003)[5] concluded that ineffective transitions in care lead to poor outcomes including: wrong treatment, delay in diagnosis, severe adverse events, patient complaints, increased health care costs and increased length of stay. They also provided an outline of some key problems that illustrate the inadequacies of care transitions that are seen by physicians and other health care providers daily in their practices or sometimes elicited through patient satisfaction surveys and other emerging literature. The key issues identified include medication errors, increased health care utilization, inefficient/duplicative care, inadequate patient/caregiver preparation, inadequate follow-up care, dissatisfaction and litigation/bad publicity.
- Rozich et al. (2001)[6] reported a reduction in the rate of medication errors from 213 per 100 admissions before implementation of a medication reconciliation intervention at admission, transfer and discharge to 63 per 100 admissions post implementation.

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1 Kohn, L., Corrigan, J., & Donaldson, eds.. To Err is Human: Building a Safer Health System. Washington, DC: Institute of Medicine, National Academy Press; 1999.

2 Baker, R., Norton, P., Flintoff, V., Blais, R., Brown, A., Cox, J., Etchells, E., Ghali, W.A., Hebert, P., Majumdar, S.R., O'Beirne, M., Palacios-Derflingher, L., Reid, RJ., Sheps, S. Tamblyn, R. 2004. "The Canadian Adverse Events Study: The Incidence of Adverse Events among Hospital Patients in Canada". CMAJ 2004;170: 1678-86.

3 Safer Healthcare Now! Medication Reconciliation in Home Care Pilot Project 2008 – 2010. Co-lead by VON Canada and ISMP Canada

4 Forster AJ, Clark HD, Menard A, et al. Adverse events among medical patients after discharge from hospital [published correction appears in CMAJ 2004;170(5). Doi:10.1503/cmaj.1040215] CMAJ 2004;170(3):345-349. http://www.cmaj.ca/cgi/data/170/3/345 Accessed June 10, 2008.

5 Coleman EA, Boult C. American Geriatric Society Health Care Systems Committee. Improving the quality of transitional care for persons with complex care needs. J Am Geriatr Soc 2003;51:556-557.

6 Rozich JD, Resar RK. Medication safety: one organization's approach to the challenge. Journal of clinical outputs management: JCOM. 2001;8:27-34.

- In the Organization for Healthcare Research & Quality (AHRQ) Report: "Patient Safety and Quality in Home Health Care", Meredith (2002)[7] found that medication use improved for 50% of intervention patients. This report also noted that nearly one-third of elderly home health care patients have a potential medication issue or are taking a drug considered inappropriate for older individuals. The report continued to discuss additional issues that make the home care environment even more complex as elderly patients are especially vulnerable to adverse events from medication errors; they often take multiple medications for a variety of co-morbidities that have been prescribed by more than one provider. One of the concluding comments in this report identified that the potential of medication errors among home health care population is greater than in other health care settings due to the nature of the unstructured environment and unique communication challenges in the home health care system. (Ellenbecker et al, 2008).[8]
- In another AHRQ report titled, "*Barriers Associated with Medication Information Handoffs",* Bayley et al. (2005)[9] reported that "the major failures associated with medication information transfer are (1) wrong or incomplete admitting orders; (2) inadequate discharge orders; (3) insufficient explanation of discharge medications; and (4) poor communication with the primary care provider regarding discharge medications. The key issues identified at the time of discharge included, "medications held during the hospital stay not resumed, particularly chronic disease medications." In the study, the group concluded that these issues most likely existed because the home medication list was incorrect from the time of admission and "prescriptions were provided for medications that are unavailable or unaffordable in the ambulatory setting."
- Coleman et al. (2004)[10] in a study on transitional care, found that 14% of patients 65 years or older experienced a medication discrepancy. Of the discrepancies, 50.8% were characterized as patient-associated (e.g., did not fill prescription, intentional non-adherence); the remaining 49.2% were characterized as system-associated (e.g., prescribed with known allergies, incorrect label). There is also an indication that inaccurate and incomplete discharge instructions constitute the majority of system related problems, while non-intentional non-adherence is the most common patient associated problem (Coleman in Setter, 2009).[11]
- Hsia et al (1997)[12] found that in a trial in which a pharmacist was utilized to provide an evaluation of medication in the home of 20 patients, a decrease in medication discrepancies and problems was noted three to four weeks post in-home pharmacist visit.

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7 *Advances in Patient Safety: From Research to Implementation*. Volumes 1-4, AHRQ Publication Nos. 050021. February 2005. Agency for Healthcare Research and Quality, Rockville, MD. Available at http://www.ahrq.gov/qual/advances/ Accessed June 20, 2008.

8 Ellenbecker CH, Samia L, Cushman MJ, Alster K. Patient safety and quality in home health care. In: Hughes RG, ed. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville, MD: Agency for Healthcare Research and Quality; 2008. http://www.ahrq.gov/qual/nurseshdbk/ Accessed June 10, 2008.

9 Bayley KB, Savitz LA, Rodriguez, et al. Barriers associated with medication information handoffs. In: Advances in patient safety: from research to implementation. Vol. 3. Rockville, MD: Agency for Healthcare Research and Quality; 2005.

10 Coleman, EA, Smith, JD, Frank, JC et al. Preparing patients and caregivers to participate in care delivered across settings: the Care Transitions Intervention. J Am Geriatr Soc 2004; 52:1817-25.

11 Setter, S., Corbett, C., Neumiller, J., Gates, B., Sclar, B., Sonnett, T. Effectiveness of a pharmacist – nurse intervention on resolving medication discrepancies for patients transitioning from hospital to home health care. Am J Health-Syst Pharm 2009, 66: 2027 – 2031.

12 Hsia, DE, Rubenstein, LZ., Choy, GS. 1997. The benefits of in- home pharmacy evaluation for older persons. J Am Geriatr Soc. 1997; 45: 211-4.

- In a trial by Triller et al in Setter (2009) the effectiveness of a clinical pharmacy service model, including explicit referral criteria, designed to resolve drug-related problems for home care patients at high risk for ADE's, was tested. Of the 80 patients who received the service, 100% had an identified drug-related problem (Setter et al., 2009)[13].
- Another randomized trial by Meredith et al (2002)[14] used a structured collaboration between a clinical pharmacist and home care nurses to improve medication management in two of the largest home care agencies in the United States, found significant improvements in unnecessary therapeutic duplication and in the use of cardiovascular medications in the intervention group (Setter et al, 2009).[15]
- Gray et al (1999)[16] reported on adverse drug events in elderly patients receiving home health services following hospital discharge. In this study, it was noted that the "risk of an event increased with the number of new medications at discharge, however, this risk was elevated primarily for participants with lowered cognition." These findings are of significance to the home care community as many elderly patients take more than five medications and upon discharge there can be up to 45% change at the time of discharge after admission to an acute care facility. (Gray et al, 1999)[16]. In this same study it was further noted that:
    - Patients continued to take medications that they had at home but which were actually discontinued during their time in hospital.
    - New medications were actually never started.
    - Patients were found to be taking the incorrect dose for a new or changed medication.
    - Patients often expressed lack of understanding of their new regimen.
- Similar findings were reported in the *Safer Healthcare Now!* Medication Reconciliation in Home Care pilot project. A total of 630 discrepancies were identified with 611 clients over a 7-month period. The top four categorizations of discrepancies were as follows:
    - Client no longer taking prescribed medication 30%
    - Client is taking medications not currently prescribed 23%
    - Different dose 17%
    - Different frequency 11%
- In a study titled "*The effectiveness of a pharmacist – nurse intervention on resolving medication discrepancies for patients transitioning from hospital to home health care"* by Setter et al (2009)[17], it was found that a pharmacist – nurse collaboration designed to identify and resolve medication-related discrepancies in patients transitioning from the

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13 Setter, S., Corbett, C., Neumiller, J., Gates, B., Sclar, B., Sonnett, T. Effectiveness of a pharmacist – nurse intervention on resolving medication discrepancies for patients transitioning from hospital to home health care. Am J Health-Syst Pharm 2009;66: 2027 – 2031.

14 Meredith, S., Feldman, P. Frey, D., et al. Improving medication use in newly admitted home healthcare patients: a randomized control trial. J Am Geriatr Soc. 2002; 50:1484-9.

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16 Gray SL, Mahoney JE, Blough DK. Adverse drug events in elderly patients receiving home health services following hospital discharge. Ann Pharmacother. 1999;33:1147-1153.

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hospital to home health care led to significant improvement in medication discrepancy resolution.

Medication Reconciliation in the Home Care Environment:

- Health care in Canada is increasingly being provided in the home environment. The demand for home care services is growing and there has been a 51% increase in the number of home care clients since 1997, with over 900,000 receiving services in 2007 (Canadian Home Care Association in Lang, Macdonald, Storch et al., 2009)[18]. As hospitals endeavour to shorten patients' length of stay in acute care settings, acutely ill patients are often discharged with instructions to follow complex inpatient-initiated therapeutic regimens at home. Many of these patients are frail elderly, disabled and complex patients diagnosed with chronic medical conditions with multiple co-morbidities. Specific services that were only previously provided in an institutional setting are now commonly provided within the home as a result of advances in medical knowledge and technology services. In an editorial outlining research, policy and practice considerations regarding safety in home care, Lang (2010) identified that "risks exist in all health care settings; however, private homes lack the uniformity that exists in institutional / hospital environments" Patients are extremely vulnerable during this transition from institutional care to home care due to illness severity, functional impairment, and medication changes occurring at the interface of acute and ambulatory care.[19,20]. As a result of this, home care clients have a high risk of experiencing medication-related problems and adverse outcomes (Triller et al cited in Setter et al. 2009)[21].
- A key challenge related to medication safety in home care is that when patients are transferred between care environments, accurate communication of their health and medication information does not always occur. In a review of the literature, Setter et al. (2009)[22] identified that limited existing data suggest that approximately 50% of the nearly 3 million American adults age 65 years or older who are transitioning from a hospital to home care annually experience a medication discrepancy. This is further supported by findings in the Canadian *Safer Healthcare Now!* Medication Reconciliation in Home Care Pilot Project[23] which found that of the 611 home care clients who underwent medication reconciliation, 45.2% had at least one discrepancy in their medication regimen that required clarification by a physician.[24]

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18 Lang, A., Macdonald, M., Storch, J., Elliott, K., Stevenson, L., Lacroix, H., Donaldson, S., Corsini-Munt, Serena, Farraminah, F., & Gerring Curry, C. Home Care Safety Perspectives from Clients, Family Members, Caregivers, and Paid Providers. Healthcare Quarterly 2009:12 (Special Issue) 97-101.

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22 Setter, S., Corbett, C., Neumiller, J., Gates, B., Sclar, B., Sonnett, T. 2009. Effectiveness of a pharmacist – nurse intervention on resolving medication discrepancies for patients transitioning from hospital to home health care. Am J Health-Syst Pharm 2009; 66: 2027 – 2031.

23 Safer Healthcare Now! Medication Reconciliation in Home Care Pilot Project 2008 – 2010. Co-lead by VON Canada and ISMP Canada

24 SHN Medication Reconciliation in Home Care Pilot Project Final Report, March 2010: Unpublished Report.

- Caring for clients in their homes encompasses complex challenges with regards to safety in general. As Lang (2010)[25] identifies, "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". Such challenges are exacerbated by communication break downs during transitions in care and system level issues that put home care clients at high risk for adverse drug events.

Drivers for Medication Reconciliation in Home Care: *The Evidence*

In addition to the complex environment in which home care services are delivered, the key drivers for the introduction of medication reconciliation in home care are being augmented by a number of key factors including:

- The growing body of evidence in the literature of the positive results that the implementation of medication reconciliation has had on the improvement of patient's medication management across the care continuum. (AHRQ 2005).[26]
- Changes in accreditation nationally in Canada and internationally by the work of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and the World Health Organization (WHO). Such changes are predicated on the body of evidence that validates the need for a reduction in health care issues related to medication management. Accreditation Canada Required Organizational Practices (ROPs) are in alignment internationally with similar standards of the JCAHO and the WHO. The JCAHO first added national patient safety goals to the requirements for accredited organizations in 2003 which included a goal addressing the need to improve communication between all providers involved in the patient's care. In 2005 two specific goals were added addressing medication reconciliation at admission, transfer and discharge for patients cared for in all care settings.[27]
- In the AHRQ Report "Patient Safety and Quality: An Evidence-Based Handbook for Nurses", Dorman et al., (2008) state that, "Medication reconciliation is the first step in assisting older adults in the medication management process." They listed the following results of key studies as evidence of the need for the health care system to consider using medication reconciliation: [28]
    - Discrepancies from 30% to 66% in what medications were 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.

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25 Lang, A. Editorial: There's no place like home: research, practice and policy perspectives regarding safety in homecare. International Journal for Quality in Healthcare 2010; 1-3.

26 *Advances in Patient Safety: From Research to Implementation*. Volumes 1-4, AHRQ Publication Nos. 050021. February 2005. Agency for Healthcare Research and Quality, Rockville, MD. Accessed June 20, 2008.

27 The Joint Commission on Accreditation of Healthcare Organizations. 2005 National Patient Safety Goals. http://www.jointcommission.org/PatientSafety/National_PatientSafetyGoals/05_npsg.htm Accessed June 10, 2008.

28 Ellenbecker CH, Samia L, Cushman MJ, Alster K. Patient safety and quality in home health care. In: Hughes RG, ed. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville, MD: Agency for Healthcare Research and Quality; 2008. http://www.ahrq.gov/qual/nurseshdbk/ Accessed June 10, 2008.

  - 64% of elderly patients were taking at least one medication that was not ordered two days after discharge from hospital.
  - 73% of patients failed to use at least one medication according to instructions.
  - 32% of patients were not taking all drugs as ordered at discharge.
  - 49% of community-based elderly clients kept multiple containers of old medications that were not a part of their current regimen. Records indicated that in some instances these medications had been discontinued by the prescribing provider for more than a year.
  - 6% of patients admitted they had self-prescribed medications on at least one occasion.
  - 32% to 86% of older adults used over-the-counter medications.
  - 86% of older adults with hypertension reported two or more self-medication practices using OTC drugs that could result in an adverse drug interaction.

- The lessons learned in the *Safer Healthcare Now!* Campaign from the implementation of medication reconciliation in the acute care and long term care environments, along with the home care teams who participated in the Western Node 2007 Medication Reconciliation Collaborative.[29]
- In the *Safer Healthcare Now!* campaign Getting Started Kit for Adverse Drug Events (Medication Reconciliation) released in May 2007,[30] the case for medication reconciliation is well-documented and has applicability to patients being serviced in the home care setting. The key learnings that were noted from this review of the evidence and the first phase of the campaign can be grouped under the following two categories:
  - The frequency of the occurrence of adverse drug events across all care settings.
  - The expanded scope of improving medication management in the home care environment which can be impacted by the lack of a medication reconciliation process in home care organizations along with a larger discussion of the safety of the transitions across the care continuum.
- The findings from the *Safer Healthcare Now!* Medication Reconciliation in Home Care Pilot Project co-led by VON Canada and ISMP Canada,[31] which indicate the potential risk for medication discrepancies in home care across Canada, and highlight the challenges and factors identified by the 15 national teams from various home care organizations across the country that need to be considered when undertaking medication reconciliation in the home environment.
- Anecdotal evidence from the above pilot project suggests that home care clinicians see improvements in their practice related to medication reconciliation. Clinicians reported that the pilot approach to medication management in home care is 'best practice' to them now and they will continue to apply these learnings in their daily practice.

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[29] Safer Healthcare Now! Medication reconciliation in long-term care: prevention of adverse drug events how-to-guide. ISMP Canada and CPSI-ICSP.

[30] Safer Healthcare Now! Medication reconciliation in acute care: prevention of adverse drug events how-to-guide. ISMP Canada and CPSI-ICSP.

[31] Safer Healthcare Now! Medication Reconciliation in Home Care Pilot Project 2008 – 2010. Co-lead by VON Canada and ISMP Canada.

Posters and Guides

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

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

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

Risk Points for Medication Reconciliation in Home Care


Acute Care

Admission


Home Care

Circle of Care


Physician/Clinic appointments

Discharge


Self Care


Long Term/Acute Care

Goal: To establish a complete, accurate medication list including prescribed and non-prescribed medications upon admission to home care.

Once all discrepancies have been identified and resolved using medication reconciliation, the result is the active and reconciled medication list.

Goal: To communicate an up-to-date, complete and accurate medication list when visiting or consulting with a health care practitioner within the clients' circle of care.

Risk points requiring medication reconciliation may include: health care or clinic appointments, change in client health status, standards set by organization, care transferred to an alternate level of care within the organization.

The home care clinician updates the medication list after each clinician consultation or client visit to a health care practitioner within the clients' circle of care.

Goal: To communicate an up-to-date, complete and accurate medication list to the next provider of care after discharge from home care.

If the client is being discharged to acute or long -term care, the clinician updates and communicates the client's current reconciled medication list to the next provider of care.

If the client is being discharged into self care, the clinician verifies that the client/family understands any changes to their medication regimen.

At all interfaces of care, the home care clinician should verify that the client/family understands all changes to their medication regimen.

Created by ISMP Canada and VON Canada for the *Safer Healthcare Now!* campaign.

The Medication Reconciliation Process in Home Care

1 IDENTIFY CLIENT

Identify and target high risk clients using a medication risk assessment tool (MedRAT), if necessary.

The target criteria is set by the organization.

Goal: All clients are to have Medication Reconciliation.

2 CREATE THE BPMH AND IDENTIFY DISCREPANCIES

Interview the client using a systematic process to establish what medications the client is actually taking.

Compare information from client interview with information gathered from other sources, including:

- Referrals/physicians orders
- Discharge/transfer information
- Medication calendars
- Medication labels, vials, and bottles
- Pharmacy lists
- Current reconciled medication list
- Prescriptions: new and existing
- Electronic client database

Identify discrepancies among the sources of information.

Document any discrepancies on the Best Possible Medication History (BPMH) tool.

3 RESOLVE AND COMMUNICATE DISCREPANCIES

Resolve appropriate discrepancies (with the client/family) based on information gathered.

Identify discrepancies requiring resolution by:

- Physician/Nurse Practitioner
- Pharmacist
- Other

Communicate the BPMH and discrepancies requiring resolution (depending on urgency and resources available), via:

- Phone
- Fax
- Hand delivered by clinician
- Hand delivered by client/family
- Other

Document actions taken in the client record for follow up on the next visit if necessary.

4 CLOSE THE MEDICATION RECONCILIATION LOOP

Confirm resolution of discrepancies by physician/nurse practitioner or pharmacist.

Communicate reconciled medication list to client/family. This may be done directly by physician/nurse practitioner, or pharmacist to the client or through the home care clinician for delivery to the client.

Verify the client/family understands any changes to the medication regimen and the importance of keeping this medication list up-to-date.

Created by ISMP Canada and VON Canada for the Safer Healthcare Now! campaign. Graphic adapted from St. Mary's Hospital & Regional Medical Center, Grand Junction, Colorado, USA.

Sample Tools and Forms

safer healthcare now!

MEDICATION RISK ASSESSMENT TOOL (MedRAT)

Date:_____ **Time**: _____

TO: _____ **FAX:** _____

FROM: _____ **FAX:** _____

NUMBER OF PAGES INCLUDING THIS PAGE:

CLIENT NAME: **ID NUMBER:**

1. **IS THE CLIENT'S MEDICATION REGIMEN:**
   - ☐ **Simple**
   - ☐ **Complex (please see reverse for more information)**

2. **IS THE CLIENT'S MEDICATION ADHERENCE BEST DESCRIBED AS:**
   - ☐ **Taking as prescribed**
   - ☐ **Chaotic (Tick off possible reasons below)**
     - ☐ **Impaired cognition**
     - ☐ **Impaired vision, hearing, swallowing**
     - ☐ **Lacks necessary support**
     - ☐ **Lower literacy or ESL issues**
     - ☐ **Side effects**
     - ☐ **Cost**
     - ☐ **Client's beliefs/expectations**
     - ☐ **Lacks basic understanding of medications**
     - ☐ **Other (describe)**

3. **IS THE CLIENT ON ANY HIGH RISK MEDICATIONS?**
   - ☐ **YES**
   - ☐ **NO**

4. **BASED ON THE INFORMATION ABOVE: IS THE CLIENT HIGH RISK?**
   - ☐ **YES (POSITIVE: IDENTIFIED AS TARGET POPULATION)**
   - ☐ **NO**

Adapted from Vancouver Island Health Authority (VIHA)

MEDICATION RISK ASSESSMENT TOOL

1. **Examples of factors which increase complexity in a medication regimen:**
    - Greater than 5 medications (include prescription, OTCs, herbals, etc)
    - Greater than 3 times a day dosing frequency
    - More than 2 methods of medication administration – e.g.: oral, drops, patches, nebulizers, etc
    - More than 2 prescribers
    - More than 2 pharmacies (include online pharmacy, if clients are using that)
    - Many OTC/herbal/alternative products
    - Multiple caregivers involved in medication administration (consider family, neighbours, friends, personal care workers, etc)
    - Medications or doses changing frequently
    - Client is taking medications intended for someone else

2. **Examples of chaotic medication adherence: *Occasional* missed doses are considered "normal"**
    - No evidence of organized approach to medication administration
    - Blister packs that appear to be randomly punched out
    - Medications left out of containers and lying around the house
    - Client stating they're not sure when they last took medications or that they know they are forgetting some doses (more than occasionally), or that they're "mixed up" about their medications

3. **High-risk medications.**
   These medications are especially problematic for people in the **over 65 years** of age group, but also carry some risk for those under 65:
    - Narcotics
    - NSAIDs – e.g.: Advil, Ibuprofen
    - Anxiolytics – e.g.: Ativan, Buspirone
    - Antipsychotics
    - Digoxin
    - Anticoagulants – e.g.: Warfarin
    - Dilantin
    - Antihistamines
    - Tricyclic antidepressants – e.g.: Amitriptyline
    - Beta-blockers
    - Insulin

4. Clients are considered High Risk if there is identified:
    - Complexity to Medication Routine
    - High Risk Medications
    - Chaotic medication adherence

Adapted from Vancouver Island Health Authority (VIHA)

safer healthcare now! SAMPLE

MEDICATION RISK ASSESSMENT TOOL (MedRAT)

DATE: October 22, 2008 **TIME**: 1200hrs

TO: Jane Smith (office designate) **FAX:** 1-xxx-xxx-xxxx

FROM: Wilma Flintstone (clinician name) **FAX:** 1--xxx- xxx-xxxx

NUMBER OF PAGES INCLUDING THIS PAGE:

CLIENT NAME: Rita Rider **ID NUMBER:** 0120334567

5. **IS THE CLIENT'S MEDICATION REGIMEN:**
   - ☒ **Simple**
   - ☒ **Complex (please see reverse for more information)**

6. **IS THE CLIENT'S MEDICATION ADHERENCE BEST DESCRIBED AS:**
   - ☐ **Taking as prescribed**
   - ☒ **Chaotic (Tick off possible reasons below)**
     - ☐ **Impaired cognition**
     - ☒ **Impaired vision, hearing, swallowing**
     - ☐ **Lacks necessary support**
     - ☐ **Lower literacy or ESL issues**
     - ☐ **`Side effects**
     - ☐ **Cost**
     - ☐ **Client's beliefs/expectations**
     - ☐ **Lacks basic understanding of medications**
     - ☐ **Other (describe)**

7. **IS THE CLIENT ON ANY HIGH RISK MEDICATIONS?**
   - ☒ **YES Warfarin**
   - ☐ **NO**

8. **BASED ON THE INFORMATION ABOVE: IS THE CLIENT HIGH RISK?**
   - ☒ **YES (POSITIVE: IDENTIFIED AS TARGET POPULATION)**
   - ☐ **NO**

October 2008: Draft One – adapted from VIHA

VON Perth-Huron

BEST POSSIBLE MEDICATION HISTORY & RECONCILIATION

NAME: _____
HEALTH CARD №: _____
PHARMACY: **#1** _____ **Ph:** _____
#2 _____ **Ph:** _____

Allergy/Intolerance to Medication
☐ No known allergies
☐ Allergies, as follows: _____
_____
☐ Reaction:

Weight: _____
☐ Estimate ☐ Actual

Height: _____
☐ Estimate ☐ Actual

Information Source List:
☐ Client ☐ Family/Caregiver ☐ Rx Vials ☐ Blister Packs ☐ Physician Rx ☐ Physician Samples ☐ Other

Type of Discrepancies (enter applicable # in the "Code" column below):
A1 = Med'n is not currently prescribed
A2 = Client no longer taking med'n
A3 = OTC not taken as prescribed
A4 = Allergy to prescribed Med'n
A5 = Duplication of Med'n
A6 = Drug Interaction
A& = Formulation incorrect or omitted
B1 = Dose different
C1 = Route Different
D1 = Frequency different
E1 = Other (illegible orders)

	PROFESSIONAL COMPLETES	Signature	Date
Home Medications on admission to CCAC service **{prescriptions, over-the-counter (OTC), herbals, patches, inhalers, eye drops, supplements, ointments, injectables, physician samples, chelation, nutriceuticals} - scheduled and PRN included**	**CCAC Case Manager:** Medication, Dose, Route, Frequency, Ordering Physician		
	VON Nurse: Discrepancies / Time to complete: _____		
	Pharmacist: Doctor Alert (see attachment)		
	Physician: Reconciliation / Physician Orders		

SECTION 1: PRESCRIPTION MEDICATIONS ONLY

Medication	Dose (i.e. mg)	Route	Frequency	Ordering Physician (if known)	Discrepancies identified between home medication list and additional services (see codes above)		Dr. Alert (Pharm. Initials)	RECONCILIATION / PHYSICIAN ORDERS (Physician Use Only)		
					Code	Explanation		Continue	Stop	Comments/Change to (specify):

December, 2008

PLEASE FAX COMPLETED FORM TO: _____

VON Perth-Huron

BEST POSSIBLE MEDICATION HISTORY & RECONCILIATION

NAME: _____

HEALTH CARD №: _____

SECTION 1 (Continued): PRESCRIPTION MEDICATIONS ONLY

Medication	Dose (i.e. mg)	Route	Frequency	Ordering Physician (if known)	Discrepancies identified between home medication list and additional services (see codes on page 1)		Dr. Alert (Pharm. Initials)	RECONCILIATION / PHYSICIAN ORDERS (Physician Use Only)		
					Code	Explanation		Continue	Stop	Comments/Change to (specify):

December, 2008

PLEASE FAX COMPLETED FORM TO: _____

VON Perth-Huron

BEST POSSIBLE MEDICATION HISTORY & RECONCILIATION

NAME: _____

HEALTH CARD №: _____

SECTION 2: HERBAL, OTC, NUTRICEUTICALS, CHELATION THERAPY & OTHER ALTERNATIVE (e.g. colonics, magnesium foot soaks, etc.)

Medication	Dose (i.e. mg)	Route	Frequency	Ordering Physician (if known)	Discrepancies identified between home medication list and additional services (see codes on page 1)		Dr. Alert (Pharm. Initials)	RECONCILIATION / PHYSICIAN ORDERS (Physician Use Only)		
					Code	Explanation		Continue	Stop	Comments/Change to (specify):

December, 2008
08/23/2010

PLEASE FAX COMPLETED FORM TO: _____

VON Perth-Huron

BEST POSSIBLE MEDICATION HISTORY & RECONCILIATION

NAME: _____

HEALTH CARD №: _____

SECTION 2 (Continued): HERBAL, OTC, NUTRICEUTICALS, CHELATION THERAPY & OTHER ALTERNATIVE (e.g. colonics, magnesium foot soaks, etc.)

Medication	Dose (i.e. mg)	Route	Frequency	Ordering Physician (if known)	Discrepancies identified between home medication list and additional services (see codes on page 1)		Dr. Alert (Pharm. Initials)	RECONCILIATION / PHYSICIAN ORDERS (Physician Use Only)		
					Code	Explanation		Continue	Stop	Comments/Change to (specify):

December, 2008
08/23/2010

PLEASE FAX COMPLETED FORM TO: _____

Tips for Performing a Medication History

- Balance open-ended questions with yes or no questions
- Ask non-biased questions
- Don't ask leading questions
- Vague responses may indicate non-adherence
- Avoid medical jargon
- Encourage questions from client
- Client to bring medications to hospital
- Client to carry a list of current medications
- Ensure the vial contains the medications specified on the label
- Prompt client regarding PRN medications

Other Questions for Medication History Interviews

1. Did a doctor change the dose, or stop any of your medications recently?
2. Have you changed the dose or stopped any of your medications recently?
3. Have any of the medications been causing side effects?
4. Your profile indicates that you may have run out of some medications. Are you still taking any of these?
5. Have you spent any days in the hospital in the past year?
6. When you feel better, do you sometimes stop taking your medicine?
7. Sometimes if you feel worse when you take your medicine, do you stop taking it?
8. Are the pills in the bottle, the same as what is on the label?
9. Have you changed your daily routine to accommodate your medication schedule?

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DRAFT

Label

EMP - Team Communication
Home Medication Reconciliation
Section 1 (RX Meds pg 1 of ____)

To:	Date:	Diagnosis

Drug Plan/Coverage

Govt plan: ☐ *EMS-PDP* ☐ *Senior BL Cx* ☐ *HRD*

Private Ins (Company & #):

No drug coverage: ☐

Allergies/Intolerances	Reactions

Pharmacy Name Code: Phone #		Physician Code
1.		A) Attending:
2.		B)
3.		C)
4.		D)

SECTION 1 – PRESCRIBED MEDICATIONS ONLY

Physician Code	Pharmacy Code	Medication and Strength/Unit	Route	Directions		Reconciliation: MD Orders as below				
				Directions on Rx Vial	Directions stated by Pt	Continue as per pt stated	D/C	Hold	Restart	Change

Completed by (Print): Designation: Date(D/M/Y)

☐ **MD Sign each page & return to EMP** _____ Date: _____

MD Signature D/M/Y

S/ :EMP/S/SHN/PJMHome Med Recon Section 1 of 3

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DRAFT PJM

Label

EMP - Team Communication
Home Medication Reconciliation
Section 2 (OTC Meds)

SECTION 2 – OVER THE COUNTER AND HERBAL MEDICATIONS ONLY

Physician Code	Pharmacy Code	Medication and Strength/Unit	Route	Directions		Reconciliation: MD Orders as below				
				Directions on Rx Vial	Directions stated by Pt	Continue as per pt stated	D/C	Hold	Restart	Change

Completed by (Print): Designation: Date(D/M/Y)

☐ **MD Sign each page & return to EMP** _____ Date: _____
MD Signature D/M/Y

S :EMP/SHN/PJM Home Med recon SECTION 2

Regional Health Authority / Régie régionale de la santé

Label

EMP Medication Reconciliation
Section 3 (Changes after Reconciliation))

Drug Plan/Coverage	Allergies/Intolerances	Reaction type
Govt plan: ☐ *EMS-PDP* ☐ *HRD* ☐ *Senior BL Cx*		
Private Ins (Company & #):		
No drug coverage: ☐		

Pharmacy Name Code:	**Phone #**	**Physician Code**
1.		A) Attending:
2.		B)
3.		C)
4.		D)

SECTION 3- MEDICATIONS CHANGES AND ORDERS AFTER ORIGINAL RECONCILIATION (TC REQ'D)

Med Start Date	TC Date	Initials	Medication and Strength Unit	Route	Directions	D/C	Hold	Restart	Change	Explanation

Comments

Q 4 Months PLANNED MED REVIEW ALL MEDS REQUIRE QYEAR REORDER	DATE D/M/Y			
	Signature & initials			
	Date D/M/Y			
	Signature & initials			

S:EMP/SHN /PJM Med Recon Section 3 Sept 2009

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MEDICATION RECONCILIATION IN HOME CARE
CLIENT DATA COLLECTION TOOL

Date:_____ **Time**: _____

TO: _____ **FAX:** _____

FROM: _____ **FAX:** _____

NUMBER OF PAGES INCLUDING THIS PAGE:_____

Sample Client Name:_____

Health Card Number:_____

1. **Is the client newly discharged from an acute care setting?** ❑ **NO** ❑ **YES**
2. **Positive Medication Risk Assessment?** ❑ **NO** ❑ **YES (identified as Target Population)**
3. **Was a BPMH carried out?** ❑ **NO** ❑ **YES (if yes, was selected as Sample)**
4. **Does the client have at least one discrepancy that requires clarification?** ❑ **NO** ❑ **YES**
   a. **If Yes, Total number of discrepancies:**_____ **(if yes to number 4)**

   List the code for each discrepancy identified that require clarification

5. **Time to completion of BPMH (In minutes):**_____

   Start Date & Time:_____

   Completion Date & Time:_____

Confidentiality Warning: This message and any attachments are intended only for the use of the intended recipient(s), are confidential and may be privileged. If you are not the intended recipient, you are hereby notified that any review, retransmission, conversion to hard copy, copying, circulation or other use of this message and any attachments is strictly prohibited. If you are not the intended recipient, please notify the sender immediately by return email and delete this message and any attachments from your system.

Thank you

MEDICATION RECONCILIATION IN HOME CARE
CLIENT DATA COLLECTION TOOL

SAMPLE

Date: October 22, 2009 **Time**: 1200hrs

TO: Wilma Flintstone **FAX:** 1-777-777-7777

FROM: Fred Flintstone **FAX:** 1-888-888-8888

NUMBER OF PAGES INCLUDING THIS PAGE: 1

Sample Client Name: Barney Rubble

Health Card Number: 444-333-255

1. **Is the client newly discharged from an acute care setting? ❑ NO ☒ YES**
2. **Positive Medication Risk Assessment? ❑ NO ☒ YES (identified as Target Population)**
3. **Was a BPMH carried out? ❑ NO ☒ YES (if yes, was selected as Sample)**
4. **Does the client have at least one discrepancy that requires clarification? ❑ NO ☒ YES**
   a. **If Yes, Total number of discrepancies: 7 (if yes to number 4)**

   List the code for each discrepancy identified that require clarification

A1	A1	A4	C	C	C	E			

5. **Time to completion of BPMH (In minutes):83 minutes**

Start Date & Time: October 22, 2009 0922hrs

Completion Date & Time: October 22, 2009 1045hrs

MONTHLY MASTER DATA COLLECTION TOOL

AGENCY:_____ **CONTACT PERSON:**_____

MONTH/YEAR:_____ **PHONE:**_____

Identified Target Population with Positive Med RAT	BPMH Completed		Discrepancies Identified												
	Initial if completed	Total Time (Minutes)	At least One Discrepancy? Y/N	Total	List one code for each discrepancy identified (number of codes listed=total indicated)										
					A1	A2	A3	A4	A5	A6	A7	B1	C1	D1	E1
Name: **HCN:**															
Name: **HCN:**															
Name: **HCN:**															
Name: **HCN:**															
Name: **HCN:**															
Name: **HCN:**															
Name: **HCN:**															
Name: **HCN:**															
Name: **HCN:**															
TOTALS															

COLUMN DISCRIPTIONS:

INDENTIFEID TARGET POPULATION WITH POSITIVE MED RAT SCORE

- First and last name of clients with positive Med RAT scores submitted by service providers (field staff)
- Health Card Number (HCN) or identifying number used by the agency
- This column is going to give you your "total number of people in your target population or eligible clients" which you will record at the bottom of the column
- TOTAL: Sum of all listed clients in this column

COMPLETED BPMH

- Insert the initials of the service provider (person) who completed the BPMH
- The total of this column will give you the "total number of persons in your sample population or total number of eligible clients with a completed BPMH"
- Listing the person who completes the BPMH will give you further information on process improvement. For example, why is one service provider carrying out more BPMH than the next? You may need to review your assignment process; perhaps most of the admissions are directed to this service provider as her/his district is more densely populated.
- Listing the person will also give you a contact person if you need to follow up for some reason regarding a specific BPMH
- TOTAL: Sum of all completed BPMH

Total Time In Minutes

- Insert the total time in minutes to complete the BPMH (time elapsed from start to finish)
- TOTAL: Sum of all the minutes listed

DISCREPENCIES IDENTIFIED

At least One Discrepancy

- Insert "Y" for yes or "N" for no. Does the client have at least one discrepancy that requires clarification?
- This column will give you "the number of eligible clients with a completed BPMH who have at least one discrepancy that requires clarification."
- TOTAL: Sum of clients with at least one discrepancy that requires clarification

Total

- Insert the total number of discrepancies identified by the service provider that requires clarification on all clients who have had a BPMH completed
- This column will give you the "total number of discrepancies from all of the clients on the work sheet that requires clarification"
- TOTAL: Sum of all discrepancies listed

List one code for each discrepancy identified

- Enter the number of codes identified for each client. The total number of codes should equal the total number of discrepancies entered under the "Total" column to the left.
- These columns will give you a sense or identify a trend in common types of discrepancies
- It is possible to enter a code twice if there are two discrepancies of the same type**.**
- TOTAL: Sum of all discrepancies listed under each classification.

MONTHLY MASTER DATA COLLECTION TOOL

AGENCY:_____ **CONTACT PERSON:**_____

MONTH/YEAR:_____ **PHONE:**_____

Identified Target Population with Positive Med RAT	BPMH Completed		Discrepancies Identified												
	Initial if completed	Total Time (Minutes)	At least One Discrepancy? Y/N	Total	List one code for each discrepancy identified (number of codes listed=total indicated)										
					A1	A2	A3	A4	A5	A6	A7	B1	C1	D1	E1
Name: John Smith **HCN:** 1234 567 890	**DC**	**45**	**Y**	**4**	**1**		**1**	**1**				**1**			
Name: Mary Jones **HCN:** 0000 233 304	**DC**	**55**	**Y**	**2**								**2**			
Name: Paul MacDonald **HCN:** 3456 789 123	**No**														
Name: Jane Comeau **HCN:** 7890 234 567	**MJ**	**22**	**N**	**0**											
Name: Rita Rider **HCN:** 0120 334 567	**DC**	**83**	**Y**	**7**	**2**			**1**					**3**		**1**
Name: John Deer **HCN:** 0000 987 654	**No**														
Name: Jack Williams **HCN:** 8900 764 321	**MJ**	**65**	**Y**	**5**			**1**		**1**				**2**		**1**
Name: **HCN:**															
Name: **HCN:**															
TOTALS 7	5	**270**	**4**	**18**	**3**	**0**	**2**	**2**	**1**	**0**	**0**	**3**	**5**	**0**	**2**

Quality Improvement and Medication Reconciliation in Home Care*

*This example uses the Model for Improvement

1. Secure Senior Leadership Commitment

Implementing a successful medication reconciliation 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 medication reconciliation.

Actively engage senior leadership by building a business case for medication reconciliation 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 medication reconciliation process; identify resources needed to be successful. Sharing qualitative stories is important especially for teams with small numbers and less reliable quantitative data.

For more information see:

- The Case for Medication Reconciliation in Home Care
- Barnard, Debbie, The Case for Medication Reconciliation in Home Care Background Paper, August 2008.
- Safer Healthcare Now! Scrapbook of Testimonials: Medication Reconciliation in Home Care Pilot Project

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 medication reconciliation is completed successfully. To lead the initiative, we recommend the organization identify a multidisciplinary team to organize implementation of medication reconciliation 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
- Champions from various partners (physician/nurse practitioner, community pharmacist)
- Front-line clinicians from key programs in the organizations
- Clerical support
- Quality, Risk and Client Safety
- Educator: for training of clinicians
- Optional: client, family, caregiver

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. This model has been used very successfully by hundreds of healthcare organizations in many countries to improve many different healthcare processes and outcomes.

The model has two parts:

- Three fundamental questions, which can be addressed in any order.
  1. What are we trying to accomplish?
  2. How will we know that a change is an improvement?
  3. What changes can we make that will result in improvement?
- The Plan-Do-Study-Act (PDSA)[1] cycle to test and implement changes in real work settings. The PDSA cycle guides the test of a change to determine if the change is an improvement.

Set Aims
Improvement requires setting aims. The aim should be time-specific and measurable; it should also define the specific population of patients that will be affected.

Establish Measures
Teams use quantitative measures to determine if a specific change actually leads to an improvement.

Select Changes
All improvement requires making changes, but not all changes result in improvement. Therefore, organizations must identify the changes that are most likely to result in improvement.

Test Changes
The Plan-Do-Study-Act (PDSA) cycle represents the testing of a change in the real work setting — by planning it, trying it, observing the results, and acting on what is learned. This is the scientific method used for action-oriented learning.

---

[1] Langley G; Nolan KM, Nolan TW, Norman CL, Provost LP. The Improvement Guide: A Practical Approach to Enhancing Organizational Performance.

A. Set Aims (Goals and Objectives)

Improvement requires setting aims. An organization will not improve without a clear and firm intention to do so. 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 medication reconciliation. 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 2010;
- Develop and implement a Medication Risk Assessment tool starting January 13, 2011;
- Implement the medication reconciliation process by December 15, 2010;
- Team comes together on a monthly basis to identify areas for improvement starting January 13, 2011;
- 100% of eligible clients will have a BPMH completed at the first face to face visit by March 1, 2011; and
- Reduce the time to complete the BPMH from the baseline data by 50% by April 2011.

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

B. Establish Measures

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 medication reconciliation starts with collecting baseline data to determine the seriousness of the problem to help motivate stakeholders. Then, collect data regularly to track the effectiveness of change over time.

C. Select Changes

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.

D. Test Changes

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.

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

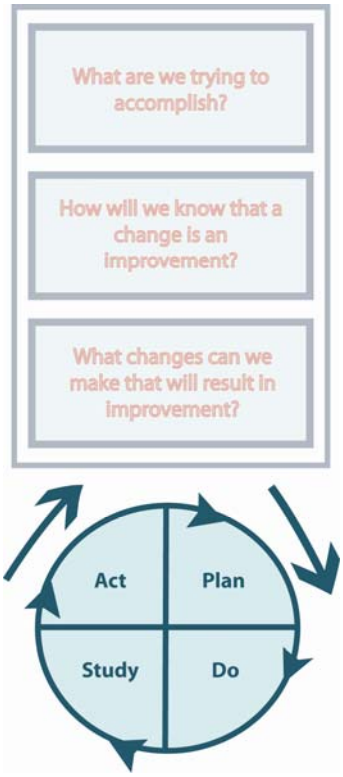
Set aside time to analyze the data and study the results.

- 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 medication reconciliation 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 medication reconciliation 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 medication reconciliation and order form.

Example of Implementing a Medication Reconciliation Process on a Select Site

a. Initially implement a medication reconciliation 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 medication reconciliation 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 medication reconciliation would 'fit-in'.
c. Adapt and test a medication reconciliation 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 medication reconciliation 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 health care 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[2] 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'** for further information on sustaining and spreading improvements.

Example: If 1 to 5 clinicians at a pilot site successfully implement a new medication reconciliation 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.

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[2] Massoud MR, Nielsen GA, Nolan K, Schall MW, Sevin C. *A Framework for Spread: From Local Improvements to System-Wide Change.* IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2006. (Available on www.IHI.org)

Factors in the Home Care Environment

There are unique and variable factors to consider when caring for clients in their home. Listed below are common factors that may impact the implementation of medication reconciliation and some possible strategies to manage them.

Factor	Explanation	Possible Strategies
Client Level of Self Care	• The client's ability to care for themselves and to satisfy their individual needs related to their medication regimen.	• Clients who are independent with their own care may opt to complete the medication reconciliation process with the physician / nurse practitioner or the pharmacist directly. • Clients who depend on the clinician or family/caregiver may need the clinician to support the process from start to finish.
Client Circle of Care	• Multiple agencies, pharmacists, physicians, formal & informal caregivers can be involved in client care. • Frequent changes in the client circle of care.	• Identification of the members before initiation of MedRec process; for example - who is the most responsible physician / nurse practitioner? • Refer the client directly to physician / nurse practitioner, pharmacist or available community resources for short-stay clients. • Redirect the process when the organization is no longer within the circle of care. • Know when to hand off / transition the process to a circle of care member to facilitate the continuation of the process. • Use a standard facsimile cover sheet when transferring information via facsimile providing clear concise directions on completion of the process.
Multiple Service Delivery Settings & Environments	• Service is being delivered /where the client is physically located. • Clinicians are guests in the client home and have limited control of the service delivery environment. • Resources available are not consistent from one client to another. • Client charts may be kept in the client home.	• Identify resources available before initiation of process. For example - availability of telephone service or internet capabilities. • Use a standard process set by the organization to ensure minimum standards of care are maintained. This is to support client safety when transferring information along the process. • Implement processes and use tools to facilitate accessibility of information by the clinician especially when charts are located in the home. For example, communication of the BPMH to the physician/nurse practitioner while maintaining accessibility of the BPMH for the clinician.

Factor	Explanation	Possible Strategies
Health Literacy	• The ability to understand and follow basic health care information	• Use a BPMH Interview Guide which includes visual cues to support the clinician during the interview. • Use terminology and language the client can understand. • Verify the client understands by asking them to explain their medication regimen in their own words.
High Population of Chronic Diseases	• Clients with chronic disease often have a complex medication regimen which will impact the: o time to create the BPMH o risk for discrepancies	• Use a Medication Risk Assessment Tool (e.g. MedRAT) to identify and target those clients at highest risk. • Use a systematic process to interview the client (e.g., BPMH Interview Guide). • Ask the client to bring all medications to the interview site including those located at the bedside and in the bathroom.

Challenges and Strategies

Challenges

Challenges identified during the *Safer Healthcare Now!* Medication Reconciliation in Home Care Pilot Project fell into categories related to human resources, communication, the health care system and client-centered care.

Participants of the pilot cited the following challenges as having the biggest impact on the implementation of medication reconciliation by home care agencies:

1. Work load issues and change fatigue;
2. Closing the medication reconciliation process loop;
3. Multiple providers, specialists, physicians, pharmacists involved in the client's care; the most responsible physician / nurse practitioner is not always easily identified;
4. Clinician engagement; and
5. Communication from one care setting to the next.

Strategies

1. Workload, Change Fatigue & Clinician Engagement Challenges

In the pilot project, home care clinicians repeatedly cited workload issues and change fatigue as the top challenge in their work life during the duration of the pilot project. Chronic human resource shortages coupled with this challenge may impact clinician and client well being on a daily basis.

It is not surprising that clinicians may view the implementation of medication reconciliation by their organization to be an addition to an already overwhelming workload resulting in a barrier to clinician engagement.

In light of this major challenge, organizations need to investigate accessible community resources to support clinicians in the implementation of medication reconciliation in home care. Education of staff on these resources as well as medication reconciliation itself will increase efficiency of the process and increase the success of implementation.

Client-centered care is defined by the Registered Nurses Association of Ontario as follows; "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."[1]

Clinicians do indicate that it is increasingly difficult to maintain a client-centered approach when some of the identified challenges become overwhelming in their everyday work. Therefore, management of these challenges will support the clinician in maintaining a client-centered approach to their daily work. Possible strategies might include:

- Developing effective, efficient (user-friendly), client-centered processes and tools.
- Ensuring adequate clinician education/training so they have all the tools needed and a clear understanding of the medication reconciliation process.
- Demonstrating the benefits of medication reconciliation for the clinician and client.
- Identifying a clinical champion as strong, accessible leadership and clinical support is essential.

[1] Registered Nurses' Association of Ontario (March 2009) Nursing Best Practice Guidelines Shaping the future of Nursing: Client Centered Care Supplemental, Toronto Canada.

- Effective sharing of responsibility of medication reconciliation within the circle of care.
- Accessing community or professional resources, where available, to share the workload within the circle of care.

2. Closing the Medication Reconciliation Process Loop

Ensuring the client receives an up-to-date reconciled medication list in a language they understand can be challenging in home care. For example, the primary prescriber, pharmacist, clinician and client can be in different locations. Buy-in and commitment from the primary physician / nurse practitioner is required to ensure the success of the process. Strategies must be identified to ensure clear communication within the circle of care and reconciliation of identified discrepancies. Possible strategies might include:

- Identify who is in the client's circle of care at that moment in time.
- Develop approaches in decision-making on who and when to hand off the process.
- A standard letter to be used in the hand off / transition to various members of the client's circle of care (physician, pharmacist, client).
- Education of clinicians on the scope of practice for pharmacists and services they offer.
- Standard way of communicating: Utilization of standard user-friendly tools and processes. Keep all communication tools as simple and to the point as possible.
- Investigate payment codes in local provinces for physician communication. Add this to standard cover letters. Identify a billing code for physicians, if applicable.
- Educate the client in the need for an accurate reconciled medication record to ensure their health and well being. Develop information sheets to give to clients when the process is handed off to them to manage directly with their primary prescriber. Ensure it is in a language that facilitates understanding at the client level.[2]

3. Multiple Service Providers

This challenge is considered *unique* to the home care sector. The most responsible physician / nurse practitioner is not always easily identified when a client is transferred from a health care facility to the home care setting. At times, no one physician wants to take responsibility for the client's overall care. In addition to this, the client may be dealing with multiple pharmacies and caregivers in the home. Access to databases or a client electronic record is not standard. This may be one of the toughest challenges for the home care clinician to deal with. Physician buy-in and commitment may be impacted by this as prescribers are not always willing to sign off on medications other prescribers have ordered. However, this is also the single most important reason for medication reconciliation to occur at certain points along the client's care. A number of strategies that may support the clinician in managing this challenge are listed below:

- Identify the client's circle of care on admission.
- Consider a standard approach to communicating with each individual within the client's circle of care.
- Develop a framework and standard approach to managing hand offs / transitions between individuals within the client's circle of care to ensure the safety of the client.
- Take a proactive approach in working with referring institutions on the information needed on discharge to the community setting.

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[2] SHN Medication Reconciliation in Home Care Pilot Project Final Report, March 2010: Unpublished Report.

- Educate client, family, and clinicians on the key role community pharmacies can play within the client's circle of care.
- Encourage and seek standardization of BPMH tools and processes with local partners and stakeholders (acute care organizations, long term care facilities).
- Collate and test physician / nurse practitioner engagement strategies.
- Explore and test potential strategies to engage community pharmacists. Look for local retail solutions.[3]

4. Communication between Service Delivery Settings

Referrals on occasion do not provide the information needed by the clinician in the home to accurately identify and initiate reconciliation of discrepancies. In order to manage the process successfully, the clinician may need to identify the client circle of care and take the time to obtain the information needed from other members. This can be frustrating and very time consuming for the clinician. On occasion, it may be appropriate to push these referrals back to the source and ask for more information. However a proactive approach may be a better solution. Listed below are possible strategies in addressing this challenge:

- Identify and educate the clinician on community resources available for support.
- Identify the client circle of care for hand off / transition of the process for completion.
- Proactive approach: tell sources what you need. Develop a standard referral form to include key questions regarding the client's medication regimen
- Address the issue at formal linkage points.
- Ask the referring source what their standard is.
- Push back when appropriate![3]

[3] Safer Healthcare Now! Medication Reconciliation in Home Care Pilot Project 2008 – 2010. Co-lead by VON Canada and ISMP Canada

Considerations for Implementation of Medication Reconciliation in Home Care

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 medication reconciliation 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 medication reconciliation.**
    - Identify programs related to medication reconciliation 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:**
    - Medication reconciliation process as a client safety initiative.
    - Clinician's role within the medication reconciliation 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 medication reconciliation 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 medication reconciliation 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 medication reconciliation 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 medication reconciliation 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 medication reconciliation 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 medication reconciliation in home care. Initiating this client safety

initiative as a pilot project may be an appropriate approach to keep the target population manageable.

The use of a medication risk assessment tool can be used to identify your target population and focus on those clients at highest risk, keeping in mind that the ultimate goal is to do medication reconciliation on all clients within your target population. The medication risk assessment tool is also effective in identification of further actions such as medication preload, or blister packing as an approach to client care.

7. **Consider an ultimate goal of "All clients admitted to the home care organization will have medication reconciliation."** *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 medication reconciliation 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. Visit the *Safer Healthcare Now!* SHN Shop to purchase the BPMH Interview Guide to support the implementation of the BPMH.

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 medication reconciliation 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. A theme from both the Western Node Medication Reconciliation Collaborative and the Medication Reconciliation in Home Care pilot project was to "keep it as simple as possible". The most effective BPMH form to date is one that incorporates the history and physician order on the same form. Development of standard tools, guides and processes within the organization will support predictable outcomes.

   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 medication reconciliation in home care.

The Medication Reconciliation Process and the Client Circle of Care

To minimize change, an organization may implement medication reconciliation 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 medication reconciliation 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 medication reconciliation 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 informal support/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 medication reconciliation 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. These risk points are identified in red in the schematic below.

A Day in the Life of a Home Care Clinician Doing 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, 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:

1. **Identify Client**
   - The clinician assesses and identifies the client as being eligible for the application of the medication reconciliation process as determined by the organization. This may be done before the initial visit or determined once on site using a medication risk assessment tool.

2. **Create the BPMH and Identify Discrepancies**
   - The clinician initiates the creation of the BPMH through the client interview.
   - The clinician gathers information from various sources to complete the BPMH.
   - The clinician identifies discrepancies between the client interview and other sources.

3. Resolve and Communicate Discrepancies

- The clinician does not have enough information 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.

4. Close the Medication Reconciliation Loop

- The physician/nurse practitioner reviews the BPMH and resolves identified discrepancies.
- 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.

The clinician may not always be the appropriate member to create the BPMH once the client has been identified as high risk for medication adverse events. In some situations, it may be appropriate for the clinician to refer the client/family to the community pharmacist or the physician/nurse practitioner for identification and resolution of discrepancies. This most often depends on the client status and resources available to the clinician.

At times, the clinician/organization may no longer be within the client circle of care when it is time to close the medication reconciliation loop. In these situations, the physician/nurse practitioner or pharmacist may communicate and verify the reconciled medication list directly with the client/family.

Additional Links

This section contains links to websites that will assist you with implementing Medication Reconciliation in Home Care.