The Home Care Knowledge Network

SAFETY at HOME
A Pan-Canadian HOME CARE SAFETY Study

Welcome

to the

Home Care Knowledge Network

Medication Management

Safely Managing Medications in the Home Care Setting

Thursday October 17th 2013

12:00pm – 1:00pm (EST)

Canadian Home Care Association
canadienne de soins et services à domicile

About the CHCA Home Care Knowledge Network

The goal of the Network is to encourage learning and information sharing.

The Knowledge Network engages policy makers, home care leaders and researchers from across the country and stimulates dialogue on the role and potential of home care within an integrated health care system.

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Features of this webinar:

- In order to hear the presentation please turn on your speakers
.
- Please ensure your microphone is turned off.

- To ensure you will have the best experience please close other programs on your computer.

- The presentations will be posted on the Canadian Home Care Association website early next week.

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SAFETY at HOME
A Pan-Canadian HOME CARE SAFETY Study

Pan Canadian Safety at Home Study: Implications for Medication Safety in Home Care

Dr. Diane Doran, PhD
Professor emerita
University of Toronto

Canadian Home Care Association
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Pan Canadian Safety at Home Study: Implications for Medication Safety in Home Care

October 2013

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A Pan-Canadian HOME CARE SAFETY Study

The Pan Canadian Safety at Home Study

Team Lead:
Dr. Diane Doran, RN, PhD, FCAHS
Nursing Health Services Research Unit
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto

Co-lead:
Dr. Régis Blais, PhD
Department of Health Administration
School of Public Health
Université de Montréal

21 Research Team Members:

Academia; Researchers; Policy Makers; Direct Patient Care Providers (e.g., MD, RN, PT)

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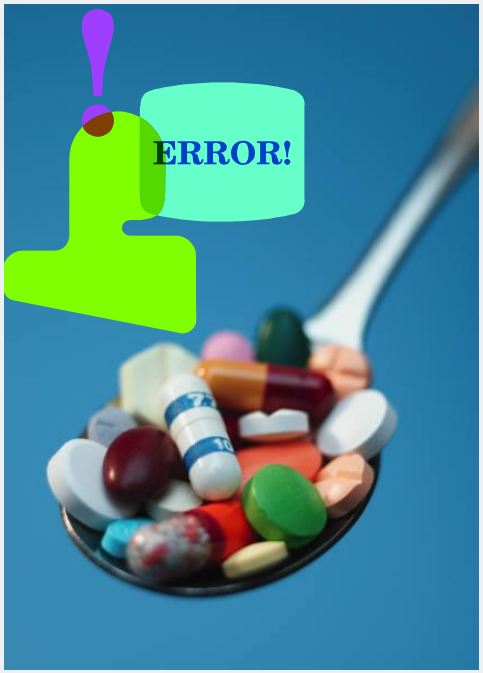
Study Objectives

- Determine the prevalence, incidence, magnitude & types of adverse events (AEs) in home care (HC) in Canada
- Determine risk factors, service utilization factors & other contribution conditions associated with AEs in the general population, and among the sub-populations of congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), diabetes & dementia
- Determine the burden of patient/ client safety concerns & risks from the perspectives of clients, unpaid caregivers, family members & paid providers
- Identify policies, practices & tools that could reduce avoidable AEs in HC
- Advance a definition of HC safety that reflects the complexity of the HC environment

Adverse Event Defined

- Defined by the WHO as an injury caused by medical management or complication rather than by the underlying disease itself, and one that results in either **prolonged healthcare**, or **disability at the time of discharge from care**, or **both**.



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Sub-Projects	Lead Investigator; Methods
1. Integrative Literature Review of the International literature	Dr. M. Harrison (Queens University) Joanna Briggs methodology for literature synthesis
2. Incidence, risk factors, and consequences of adverse events (general HC population and CHF, COPD, Diabetes, Dementia)	Dr. D.M. Doran (Univ. of Toronto); Dr. J. Hirdes (Univ. of Waterloo) Analysis of secondary databases (HCRS, DAD, NACRS, CCRS, OMHRS); YT, BC, WRHA, ON, NS
3. Incidence, risk factors, and consequences of adverse events among general HC population	Dr. R. Blais (Univ. of Montreal) Chart review; Charts screened for inclusion criteria by nurses; Criteria positive charts are reviewed by physicians NS, Quebec, WRHA
4. Incident analysis	Dr. G.R. Baker (Univ. of Toronto) Total 27 Cases (appr. 9 per jurisdiction); falls and medication incidents; interviews clients, family members, informal and formal caregivers AB, WRHA, ON
5. Care recipient and provider interviews	Drs. M. MacDonald (Dalhousie Univ) & A. Lang (VON) 6 households in each jurisdiction; 4-5 interviews per household; photo-narrated environmental assessment BC, WRHA, NB

Secondary Data Sources

- Provided by CIHI, linkable, de-identified
- 2006-2010
  - Home Care: HCRS
    - Home care episodes
    - RAI-HC assessments
  - Hospital inpatient: DAD
  - ED and ambulatory care: NACRS
  - Chronic care/residential care: CCRS (RAI 2.0)
  - Inpatient psychiatry: OMHRS (RAI-MH)

Methods

- Data included one or more CIHI components for:
  - Ontario
  - Winnipeg Regional Health Authority
  - BC
  - Yukon
  - Nova Scotia
- Ontario had all datasets represented

►Only Ontario results are presented for overall incident rate determine from secondary databases

Chart Reviews
3 Criteria for an Adverse Event

1. Patient suffered an **injury**

2. There was a **consequence** (disability, increased use of health care resources or death)

3. This was **caused by health care** (healthcare personnel, unpaid caregiver, patient)

Chart Review Methods

Two-step chart review process

1. **Nurses** look for “triggers” or signs of adverse event (AE) up to 1 year before discharge from index admission and 6 months after discharge

2. **Physicians** assess trigger-positive charts to judge if there was an AE

Number of Chart Reviews

- **QC**: 602 charts distributed in 10 agencies (CSSS)
- **NS**: 296 charts (151 in Halifax, 145 in Sydney)
- **MB**: 302 charts in Winnipeg region

Total: 1200 charts

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Overall Incidence Rate of Adverse Events Among Home Care Clients

	Proportion of Clients Who Experience an AE	AE incidence rate per client-year (Annual Incident Rate)
Chart Review	4.2%	10.1%
Secondary databases		13.19% (2008) 13.79% (2009)

56% Judged to be Preventable

Rates of Most Common Adverse Events identified from Secondary Databases

- Injurious Falls (5%)
- Injurious other than falls (4%)
- Catheter associated UTI (8%)*
- **Medication adverse events (3%)**
- Peripheral IV infection (3%)*
- Sepsis/bacteraemia (1.3%)

* Among at-risk population

Medication AEs Among Chronic Disease Groups

General HC Population % (n)	Diabetes % (n)	CHF % (n)	COPD % (n)	Dementia % (n)
3.13 (387,885)	4.86 (95,973)	6.47 (56,513)	5.34 (62,424)	3.45 (48,856)

Examples of Medication Adverse Events

- Accidental poisoning
- Skin allergic reaction
- Non-skin related allergic reaction
- Adverse effect at therapeutic dose
- Overdose
- Haemorrhagic disorder due to circulating anticoagulants

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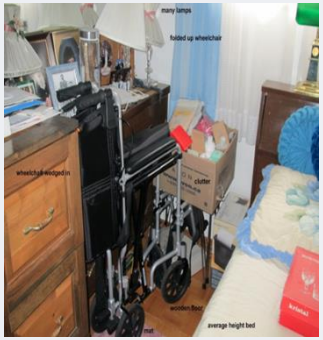
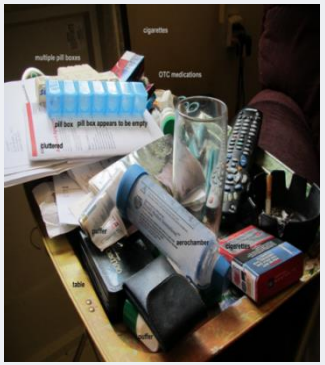
What Increased Risk of Adverse Event

Underlying condition	Increased odds
• Number of chronic illnesses	23%
• Unstable disease	20%
• Impairment in activities of daily living	13%
• Parkinson, Renal Failure, Peripheral vascular disease	up to 26%
Care Factors	
• Polypharmacy	20%
• Increased home care days	32%
• Nursing service intensity in last seven days	53%
• Discharge from hospital within 30 days of the baseline RAI-HC assessment	60%
• Caregiver distress	5%

Results – Incident Analysis

- Care inconsistently planned and delivered
- Teamwork: gaps in care due to absence of an integrated, interdisciplinary healthcare team
- Poor standardization of care processes, packaging, and equipment
- Inconsistent standards for medication packaging by community pharmacies
- Trade-offs resulting from clients and families as independent decision-makers





Conclusion and Recommendations

- Medication adverse events are one of the most frequently occurring AEs in HC
- Need improved medication management in HC
- Develop tools related to safe medication management for informal caregivers and clients
- Standardize medication packaging

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References

- Doran, D.M., Regis, B., Hirdes, J.P., Baker, G.R., Poss, J.W., Li, X., Dill, D., Gruneir, A., Heckman, G., Lacroix, H., Mitchell, L., O'Beirne, M., White, N., Droppo, L., Foebel, A.D., Qian, G., Nahm, S.M., Yim, O., McIsaac, C., & Jantzi, M. (2013) Adverse Outcomes among Home Care Clients Associated with Emergency Room Visit or Pre-Hospitalization: A Descriptive Study of Secondary Health Databases. *BMC Health Services Research*, *13*(1), 227. (PMID: 23800280).

- Blais R, Sears N, Doran D, Baker GR, Macdonald M, Mitchell L, et al. (2013). Assessing adverse events among home care clients in three Canadian provinces using chart review. *BMJ Quality & Safety.* **0**:1-9. doi:10.1136/bmjqs-2013-002039. (PMID:23828878).

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Medication Reconciliation in Home Care – The Right Thing To Do

Marg Colquhoun, BScPhm, RPh, FCSHP
Project Leader
Institute for Safe Medication Practices Canada

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ISMP Canada

ISMP Canada is an independent not-for-profit organization dedicated to reducing preventable harm from medications.

Our aim is to heighten awareness of system vulnerabilities and facilitate system improvements.

www.ismp-canada.org

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Overview

Medication Reconciliation:

- Why MedRec in Home Care?
- Safer Healthcare Now!
- SHN Home Care Pilot
- Available resources and tools

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Transitions

- 23% of patients had an adverse event after discharge, most commonly drug related

  » Forster and others *Adverse events among medical patients after discharge from hospita*l CMAJ 2004 170(3)

Medication Lists in Primary Health Team

- Queen's Family Health Team reviewed 86 patients in the practice: only 1 out of the 86 had a complete and accurate medication list on the clinic chart

  » Hall Barber K and others *Presentation: Making a case for medication reconciliation in primary care ISMP Canada/SaferHealthCareNow!* 2013

Transitions

- 59% of patients discharged from a specialized supportive geriatric unit had an adverse event. One third of patients had an error in the medication regimen.
- “Despite a seemingly well organised system for transition of patients incidents occurred in most patients”

» Mesteig and others *Unwanted incidents during transition of geriatric patients from hospital to home: a prospective observational study* MC Health Services Research 2010 10(1)

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The starting point of medication management is medication reconciliation

Medication Reconciliation: What it is Intended to do in the home…

Resolves Potential Errors such as:

- Missed or duplicated doses resulting from inaccurate/multiple medication records
- Lack of clarity about which home medications should be resumed and after hospital discharge
- Lack of clarity about which home medications should be discontinued after discharge
- Clarify understanding of what patient is to take – and ensure that circle of care and patient have same understanding

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Medication Reconciliation in Home Care Pilot Project

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Pilot Project Objectives

- Develop and **validate a framework to aid homecare providers** in the implementation of medication reconciliation into their care delivery processes.
  - *This framework is to take into consideration the unique challenges of the homecare delivery setting in Canada.*

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National Home Care Pilot

What did we learn??

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Measures Pilot Average

86%	Percentage of eligible clients with a BPMH
40 min	Time to complete the BPMH
45.2%	Percentage of eligible clients with at least one discrepancy that requires clarification
2.3 per client	Type & frequency of discrepancies

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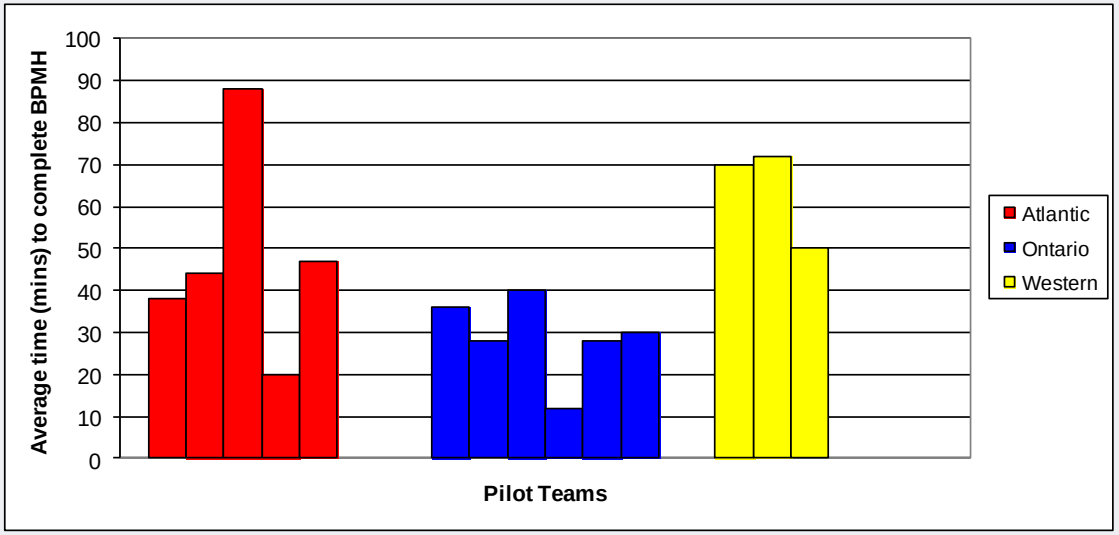
Time to Complete the BPMH

Factors Impacting Data:

- Chronic diseases
- Client health literacy
- Clinician knowledge/training
- Process – duplication of documentation
- Interpretation at of measure parameters.

Pilot Range = 12 to 88 min
Median = 40 minutes



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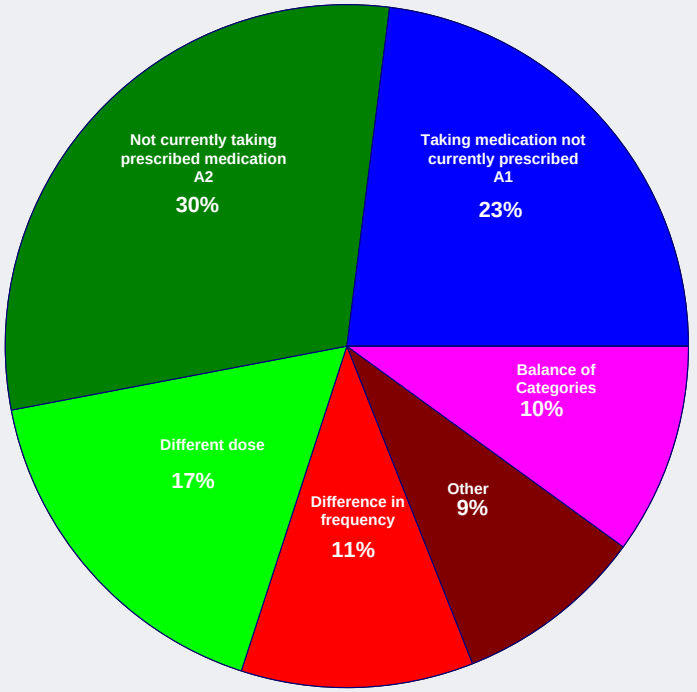
Types of Discrepancies Identified

Top Three:

1. Client no longer taking medication as prescribed
2. Medication not currently prescribed
3. Difference in dose

Factors Impacting Data:

- Interpretation of categories
- Use of a default category
- Client financial status



Categories of Identified Discrepancies

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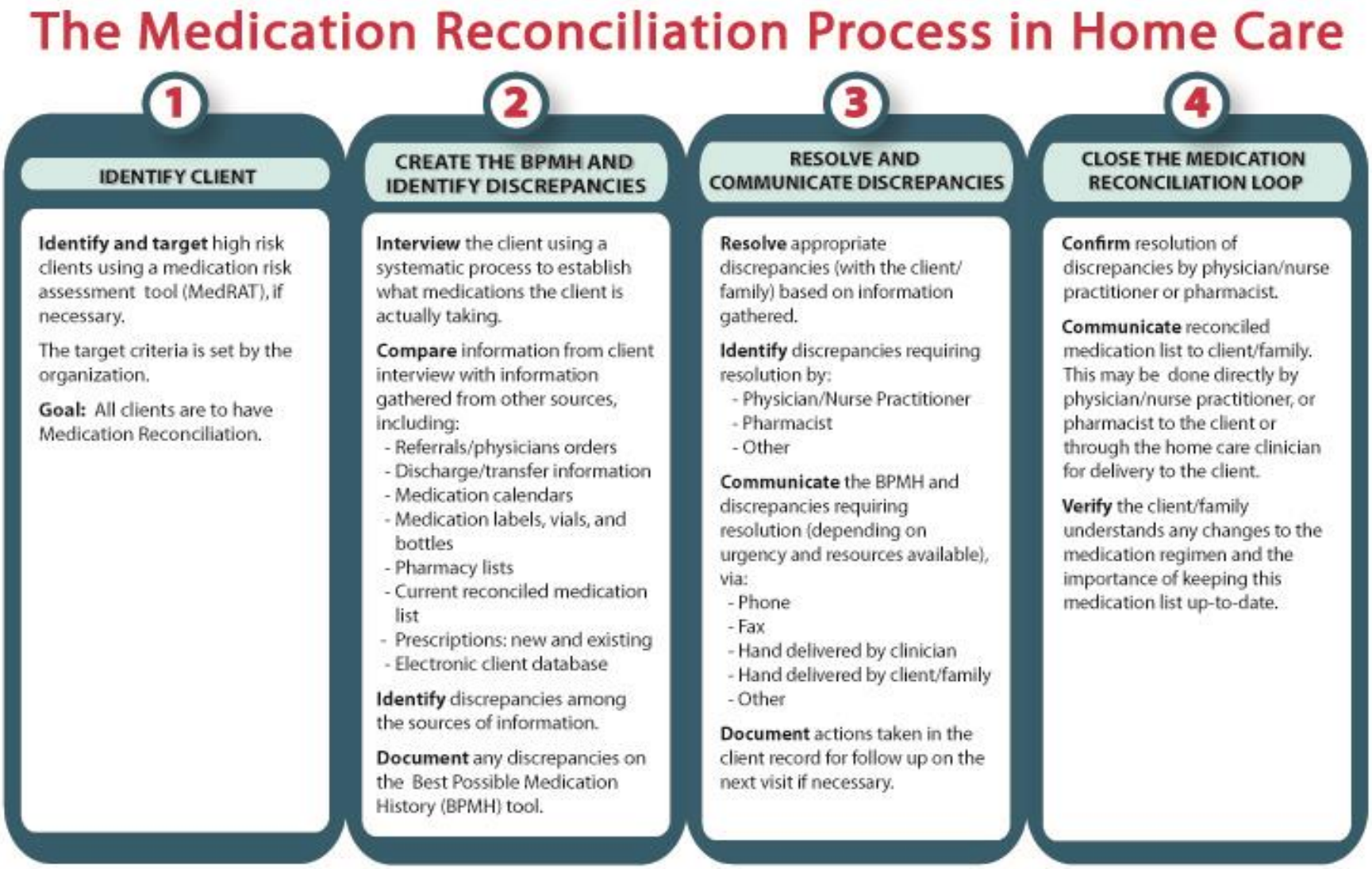
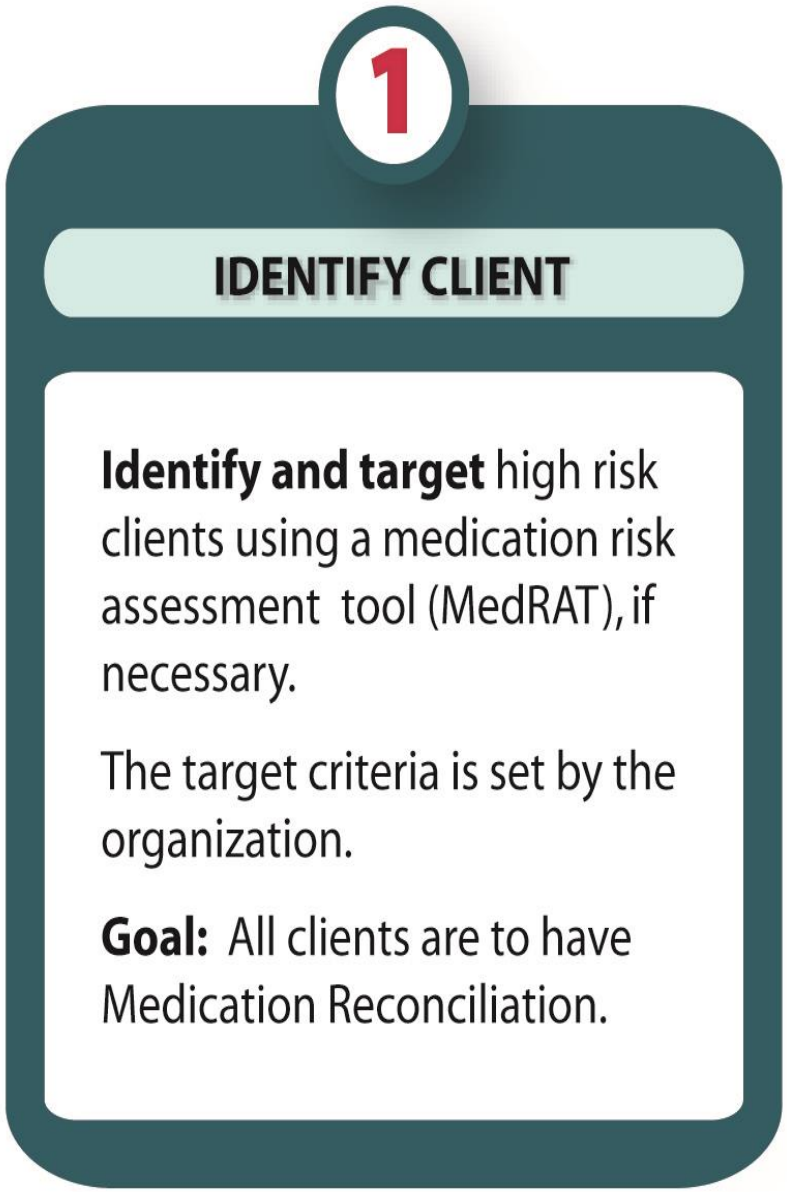
The Framework for the MedRec Process





Step One

- Identify and target clients to receive MedRec

Target High-risk Clients

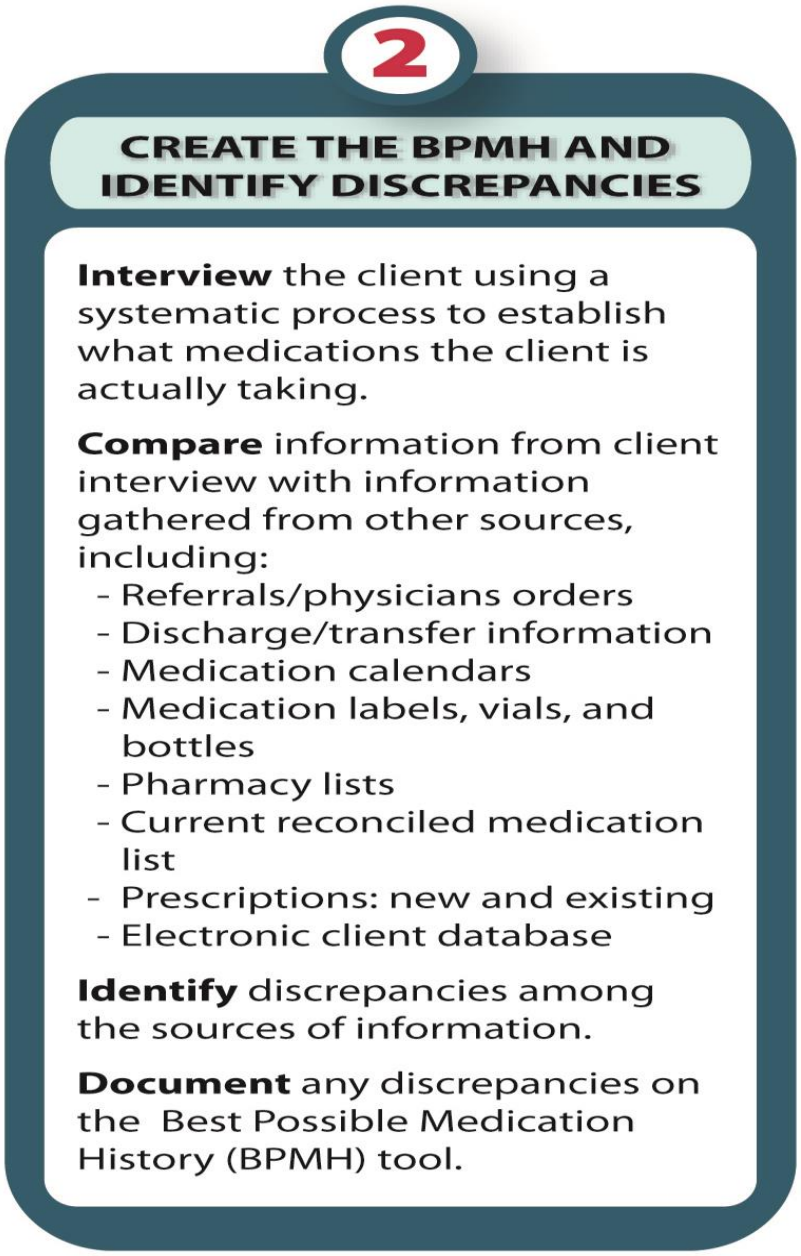
CLIENT NAME: ID NUMBER:

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



Step Two

- Interview
- Compare
- Identify
- Document

Best Possible Medication History

- An up-to-date and accurate medication list is essential to ensure safe prescribing in any setting

  Safer Healthcare Now! Getting Started Kit: Medication Reconciliation Prevention of Adverse Drug Events
- Goal is to determine how a patients is actually using their medications (*versus* how they were prescribed)
- Three steps:
  - Preparation
  - Conversation
  - Documentation
- Tools available on Communities of Practice website

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Collecting a BPMH in the home may be complicated!!

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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

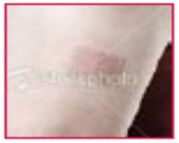
These include non-prescription items that can be purchased at a pharmacy without an order from the doctor such as aspirin, acetaminophen, laxatives, other bowel care products, **herbs** like garlic and Echinacea or **vitamins** and **minerals** like calcium, B12 or iron.

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.

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ismp CANADA

Adapted from Vancouver Island Health Authority

Best Possible Medication History Interview Guide

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ismp CANADA

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

Conversation

- Introduction
- Review each medication with the client/family
- Ask patient to describe how they are taking each medication ***regardless of what is printed on the label or listed community pharmacy profile*** (if available)

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We open the vial with the patient and say "tell me how you use/take these"

- Sharon Sobol, Pharmacist, Cape Breton

BPMH Training

- Critical
- Should NOT be person specific!
- Offered by the Institute for Safe Medication Practices Canada

IF YOU RECEIVED THIS FACSIMILE IN ERROR, PLEASE CALL: IMMEDIATELY

Vancouver CoastalHealth
Promoting wellness. Ensuring care.

COMMUNITY HEALTH
MEDICATION RECONCILIATION RECORD

Page 1 of _____

Name:
Birthdate:
PHN:
PARIS ID:
Program:

Allergies/Adverse Reactions: _____

List all medications the client is currently taking, including nonprescription drugs, herbals, samples, trial drugs and medications obtained out of the Province or over the Internet.

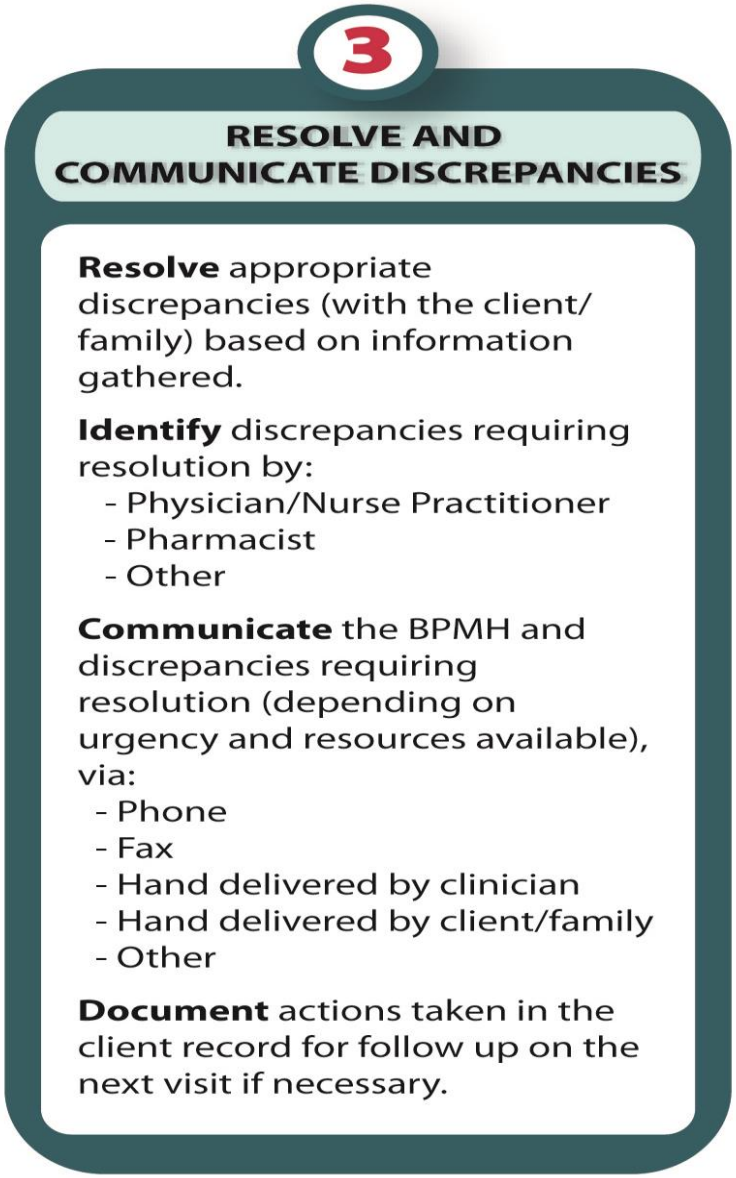
Faxed to: _____ _____ _____

_____ _____ _____

_____ _____ _____

(Date) (Name) (Fax)

Source of Information:	**Current Medications:** Date: _____ Designation: _____ Recorded by:	**Medication History:** Date: _____ Designation: _____ Verified by:	**Medication Reconciliation:** Date: _____ Designation: _____ Reconciled by:
☐ PharmaNet ☐ Client ☐ Med Profile from: Other:		☐ As listed ☐ Taking differently (specify): ☐ No longer taking; last taken at (date): ☐ unable to verify	☐ Continue as per Medication History ☐ New directions: ☐ Discontinue ☐ To be managed by other prescriber (name): ☐ At client's discretion
☐ PharmaNet ☐ Client ☐ Med Profile from: Other:		☐ As listed ☐ Taking differently (specify): ☐ No longer taking; last taken at (date): ☐ unable to verify	☐ Continue as per Medication History ☐ New directions: ☐ Discontinue ☐ To be managed by other prescriber (name): ☐ At client's discretion



Step Three

- Resolve
- Identify
- Communicate with other providers and patient
- Document

Partnering with Community Pharmacists

- Multiple provinces community pharmacists reimbursed for medication reviews

- BC Medication Management Project
  - collaboration between MoH (Pharmaceutical Services Division) and BC Pharmacy Association

- MedsCheck –Ontario

Step Four

- Confirm
- Communicate
- Verify

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Does the process work?

"As a nurse who is always aghast when the client hands me a shoebox full of pill bottles, with no recourse but to just put them on the medication list, I am so thrilled to have a formal method to deal with these medications. Very often this shoebox contains every medication the client has taken for the past 10 years, many of them mixed together or missing labels.

Recently, a client was discharged on parenteral anticoagulant therapy. Without medication reconciliation, he would have continued to take the oral anticoagulant he had been on before his hospital stay. The nurse discovered this issue through the application of medication reconciliation and a potentially dangerous situation was avoided."

Cheryl Prest RN
Can Care Health Services
Pilot Team Leader

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Safer Healthcare Now! Home Care Resources

- Falls in homecare
- http://www.saferhealthcarenow.ca/EN/Interventions/Falls/Pages/resources.aspx

- MedRec In Homecare
- http://www.saferhealthcarenow.ca/EN/Interventions/medrec/Pages/resources.aspx
- Home Care Kit (ismp-canada.org)

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Customization of SHN Tools and Resources

- Collaboration between CPSI and VON Canada
- Designed to align with release of the Safety in Home Care report
- Intended to build on the work of SHN and broaden reach into home care setting

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Customization of SHN Tools and Resources

- Guided by a Pan Canadian Advisory Group consisting of providers, researchers, and consumers (PFPS Canada rep)

- Consultation process included focus groups of providers, consumers, families, and unregulated care providers.

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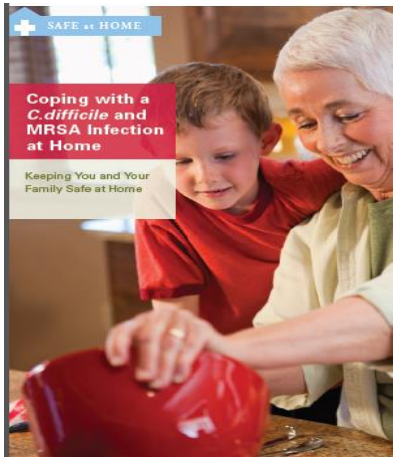
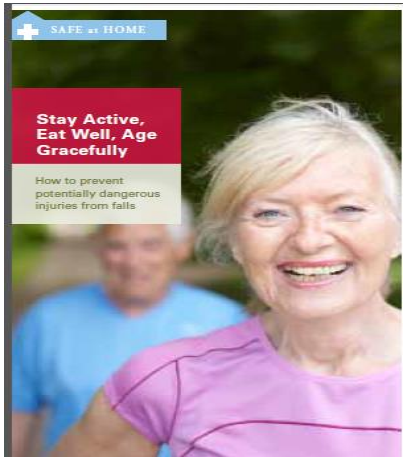
Home Care tools based on SHN interventions

Medication Safety

Infection Prevention



Falls



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The **Question and Answer POD** will be used to facilitate any presentation questions

Dr. Diane Doran

Marg Colquhoun

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Thank you for joining the Canadian Home Care Association Knowledge Network Webinar Series

Special thanks to our presenters

Dr. Diane Doran – University of Toronto

Marg Colquhoun – ISMP Canada

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