



# Safer Home Health Care

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Poor medication management has been identified as one of the most frequent risk factors that lead to unplanned re-hospitalizations and emergency department visits. Patients are particularly vulnerable when transitioning from one care setting to another.

The following whitepaper has been developed to highlight an innovative solution that brings additional resources to the fingertips of nurses and homecare professionals at the frontline to support their clinical decision-making and contribute to improved client outcomes. With day to day changing patient needs, there is increasing evidence that this new mobile technology and application will transform the industry and facilitate faster and better communications and access to information. This new solution significantly improves reconciliation methods and reduces the potential for medication discrepancies enabling safer home health care.

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## Background

Home health care agencies typically receive their client admissions from community referrals and patients discharging from hospitals. This transition from hospital to home provides an opportunity for medication errors and discrepancies to occur.

Medication discrepancies can lead to adverse drug events, which at Brigham and Women's Hospital in Boston, researchers found occurred with 12% of patients, however 42% of the adverse drug events were preventable.

In homecare, a key challenge related to medication safety is that when patients are transferred between care environments, accurate communication of their medication information does not always occur.

Patients are vulnerable during this transition from institutional care to home care due to illness severity, functional impairment, and medication changes occurring as they move from hospitals settings to home. As a result of this, home care clients have a high risk of experiencing medication-related problems and adverse outcomes.

***Medication reconciliation is a cost-effective method to reduce the potential for medication discrepancies such as omissions***

*(Karnon, Campbell, & Czoski-Murray, 2009).*

Accreditation Canada recognizes the risk of medication discrepancies in home healthcare. In September 2010, medication reconciliation, a required organizational practice, was conducted in 47% of admission and 36% of transfers which make this the lowest compliance of all required practices. In September 2011, Accreditation Canada released enhancements to the medication reconciliation for organizations providing home care services, home support services and case management services.

How can home care agencies implement and improve medication reconciliation?

An excellent industry led resource released in 2010 is “The Medication Reconciliation in Home Care Getting Started Kit” developed for Safer Healthcare Now! by the Institute for Safe Medication Practices Canada. The Guide provides a framework for medication reconciliation in home care and can be downloaded at [www.saferhealthcarenow.ca](http://www.saferhealthcarenow.ca)

Medication reconciliation is defined as a formal process in which home health care professionals partner with clients and families to ensure accurate and complete medication information. It involves a systematic process for obtaining a medication history, and using that information to compare to medication orders to identify and resolve discrepancies.

***“In Canadian hospitals, 40% of patients at discharge will experience unintentional medication discrepancies or potential errors that may cause adverse health effects.”***

*Canadian Patient Safety Institute, Institute for Safe Medication Practices Canada, Canada Health Infoway, & Safer Healthcare Now, 2011.*

The process involves gathering information from all available sources including referrals, physician orders, discharge information, medication labels and the client and family. A best possible medication history (BPMH) is developed that will include prescription drugs, over the counter drugs, supplements and naturopathic remedies. Capturing the BPMH is best done during the initial home care visit or when a significant change in conditions occurs.



Best practices call for documenting the BPMH with a tool developed or adapted for home care organizations. The BPMH should become a permanent record on the client chart and be kept in a central location for all health care professionals to access. The optimal time to complete the BPMH is during the initial visit.

As the BPMH is being completed, the clinician will identify discrepancies that need to be resolved by the physician/nurse practitioner, pharmacist or other members of the client’s circle of care. The most relevant health care professional is contacted to assist in resolving the known discrepancies. It is at this point that the reconciled BPMH becomes the Reconciled Medication List.

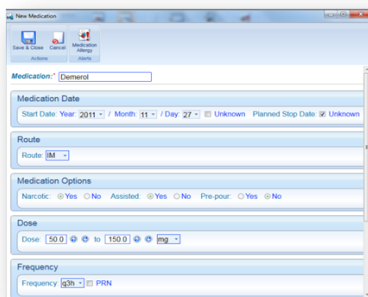
The final stage in the process is to communicate the reconciled medication list via face to face discussion with the client/family.

## Electronic Medication Reconciliation with MedShare

MedShare’s platform for secure sharing of electronic medical records has leveraged the principles of medication reconciliation in a Windows-based mobile application. Visiting nurses equipped with an application device, tablet or laptop computers are able to capture, document and reconcile



medications using convenient on screen forms.



All clients receiving homecare and meeting a medication risk threshold will have their medication inventory recorded using MedShare. The process of collecting data has been standardized and driven by rules to ensure accurate capture of essential information.

Capturing the BPMH is completed by the RN or RPN on admission or re-admission to service. Once recorded in the MedShare system, other clinicians on the care team and clinical leaders will have access to the client’s medication record. Medications from all sources are recorded and tracked dynamically using the tool. The electronic nature allows Meds to be added and discontinued over time.

Once the best possible medication history is captured it is reviewed with the family and others in the care team for discrepancies.

Date	Medication	Route	Options	Dose	Frequency
Date Med Started: Y: 2011 M: 11 D: 25 Planned Stop Date: Unknown	Benadryl	PO	Narcotic: No Assisted: No Pre-pour: No	50 mg	q6h
Date Med Started: Y: 2011 M: 10 D: 15 Planned Stop Date: Unknown	Coumadin	PO	Narcotic: No Assisted: No Pre-pour: No	5 mg	od
Date Med Started: Unknown Planned Stop Date: Unknown	Crestor	PO	Narcotic: No Assisted: No Pre-pour: No	25 mg	od
Date Med Started: Y: 2011 M: 11 D: 25 Planned Stop Date: Unknown	Echinacea	PO	Narcotic: No Assisted: No Pre-pour: No	2 tablets	q12h

When discrepancies are found, the visiting nurse can request reconciliation from the pharmacist or physician. The MedShare application will generate a PDF report to be securely emailed or emailed to fax to the most appropriate clinical resource.

The medication reconciliation process promotes pharmacist – nurse collaboration to identify and resolve medication-related discrepancies in patients transitioning from the hospital to home health. A completed Med Reconciliation will be received from the pharmacists.

Acclaim Health located in Oakville Ontario, is using MedShare for their clinical nurse documentation including medication reconciliation, medication management and medication administration for IV clients. Acclaim has improved the medication reconciliation rate of their at-risk clients, by using MedShare.

Dates	Medication	Route	Dose	Frequency	Concentration	Reconciliation Data/Initials
<b>Group: Non-Narcotic (4 Items)</b>						
Date Med Started: Y: 2011 M: 11 D: 25 Planned Stop Date: Unknown	Benadryl	PO	50 mg	q6h	N/A	
Date Med Started: Y: 2011 M: 10 D: 15 Planned Stop Date: Unknown	Coumadin	PO	5 mg	od	N/A	
Date Med Started: Unknown Planned Stop Date: Unknown	Crestor	PO	25 mg	od	N/A	
Date Med Started: Y: 2011 M: 11 D: 25 Planned Stop Date: Unknown	Echinacea	PO	2 tablets	q12h	N/A	

Nurses are completing the BPMH during the first visit more often and are able to reconcile differences faster through the structured pharmacy referral process. Acclaim is now able to measure the impact of a systematic process to collect and resolve medication discrepancies.

According to Joanne Baxby, Director of Nursing, *“medication reconciliation is improving care delivered to the clients and reducing the risk of adverse drug events. We implemented MedShare at Acclaim to provide electronic clinical documentation for our visiting nurses. When Accreditation Canada increased focus on reconciliation in home health care, MedShare provided the BPMH tool to implement into our standard clinical practice.”*

## Summary

Medication errors and discrepancies can occur in any health care setting. By using medication reconciliation during the transition from hospital or community to homecare, health care workers can reduce the risk of adverse medical events. By using an electronic tool like MedShare, the medication history will become a permanent part of the client chart and shared amongst the client care team to improve communication and collaboration.

### **About the Author:**

Barry Billings is the Founder of MedShare, a division of CellTrak Canada located in Cambridge, Ontario. Barry is a recognized leader in healthcare IT providing Innovative Health IT solutions for many areas of health care including US Military hospitals, civilian hospitals, pharmaceutical companies, CCACs, professional organizations and for home healthcare organizations. Barry is passionate about empowering health care workers at the point of care, using leading edge mobile technology to provide efficient access to client health information, decision support and care documentation tools. MedShare has been a leader in mobile solutions for nurses and therapists in the home health care sector since 2005.

### **CellTrak Canada:**

Founded in 2006, CellTrak Technologies, Inc. is the leading provider of integrated mobile solutions for the home healthcare, hospice, and private duty markets. Our patented software-as-a-service solutions run on GPS-enabled mobile devices via a homecare technology platform which automates workflow and reduces cost. Data is transmitted wirelessly to an internet site making the data available real time and secure instantaneous integration is provided to the back-end clinical systems and the payer networks. Healthcare professionals have delivered millions of successful visits via CellTrak. For more information please visit: [www.celltrak.com](http://www.celltrak.com)

On September 15, 2011 CellTrak acquired Cambridge, ON based MedShare a leading provider of mobile clinical solutions.

For more information please visit: [www.medshare.com](http://www.medshare.com) or [www.celltrak.com](http://www.celltrak.com)