

Medication Reconciliation—In the Hospital and Beyond

What is medication reconciliation?

Medication reconciliation is a process intended to prevent medication errors at transition points in patient care. The process entails¹:

1. Creating the most complete and accurate list possible of all medications a patient is currently taking.
2. Using this list when writing medication orders.
3. Comparing the list and the medication orders; identifying any discrepancies and bringing them to the attention of the prescriber and, if appropriate, making changes to the orders.
4. Communicating the current list of medications to the patient (and/or patient's family), and appropriate caregivers.

Errors can be the result of a failure in communication about medications, especially at vulnerable transition points, such as admission and/or discharge from hospital or transfer between care settings. The following “near miss” report received by ISMP Canada illustrates the need for medication reconciliation:

A 79-year-old patient was discharged from hospital with a prescription for two new medications: atenolol 100 mg po daily and furosemide 20 mg po daily. The patient had the prescriptions filled at his usual community pharmacy. After the patient arrived home, he realized that he also had digoxin tablets that he had been taking before his hospital stay but did not know whether he should continue this medication. He contacted the community pharmacist, who in turn contacted the hospital physician. The patient was instructed to NOT continue the digoxin. If medication reconciliation had been conducted prior to discharging this patient from hospital, the confusion with the digoxin could have been avoided; the patient and community caregivers would have received clear communication that digoxin had been stopped in hospital and was not to be resumed at home.

Medication reconciliation to reduce the risk of preventable adverse drug events is an important patient safety initiative in Canada and the United States.

Why is medication reconciliation important?

Studies have shown that approximately 50% of patients have at least one unintentional medication discrepancy in their hospital admission orders.^{2,3} A high incidence of medication error has been documented when patients are transferred from intensive care to a ward setting.⁴ Adverse events due to medication error have also been reported when patients are transferred between long-term care and acute care facilities.⁵

Discharge from hospital is equally problematic, with a recent study identifying unexplained discrepancies between preadmission

medication regimens and discharge orders for 49% of patients.⁶ Post-hospital medication discrepancies have been shown to increase the risk of readmission within 30 days.⁷ The vulnerability of patients after hospital discharge is further illustrated by data indicating that 12% to 16% of patients experience an adverse drug event within a few weeks after discharge.^{8,9}

At present, processes for medication reconciliation are not standardized in many health care settings; in addition, these processes require coordination among many individuals. Medication discrepancies that exist at admission but remain unresolved can create confusion and “rework” at transfer and/or discharge. A successful medication reconciliation program can significantly reduce the time that physicians, nurses and pharmacists spend sorting out medication problems at the transitions of care.¹⁰

How are organizations supporting medication reconciliation initiatives in Canada?

- The Canadian Society of Hospital Pharmacists and the Canadian Pharmacists Association began a “Seamless Care” initiative in 1998 to address problems during transfers between hospitals and community settings.¹¹ Medication reconciliation can be considered a component of seamless care.
- “Preventing adverse drug events through medication reconciliation” is one of the six targeted interventions in Safer Healthcare Now! (SHN),¹² a voluntary campaign led and supported by the Canadian Patient Safety Institute. ISMP Canada developed the Medication Reconciliation Getting Started Kit¹ for SHN and continues to co-lead this intervention. At present, 118 teams from various facilities are collecting and reporting data on discrepancies and implementing medication reconciliation as part of the SHN campaign. The campaign is patterned after the 100,000 Lives Campaign of the Institute for Healthcare Improvement (IHI) in the United States. Data emerging from the SHN campaign are confirming the regular occurrence of unintentional discrepancies.
- In 2005, the Canadian Council on Health Services Accreditation included medication reconciliation as a required organizational practice in the patient safety goals for health care facilities.
- Professional colleges and various health service organizations are also identifying medication reconciliation as a strategic priority.

What is required for successful medication reconciliation within the health care system?

Implementing medication reconciliation can be challenging because of the multifaceted and complex nature of healthcare, a lack of formal standardized processes, diffuse ownership of

the medication reconciliation process, and limitations of current health care information technology. Medication reconciliation needs to occur across the continuum involving institutional and community-based health care providers, as well as patients and/or their families.

ISMP Canada shares the following successful strategies identified through the SHN medication reconciliation initiative:

1. **Involve patients and/or family members.** The patient and/or patient's family is the constant at every interface of care in the medication system. Patients' involvement in maintaining and updating medication lists is critical. A variety of tools to facilitate this process are available online.^{13,14}
2. **Secure leadership and staff commitment to make medication reconciliation a priority.** Share this bulletin and current research with professional colleagues. Use examples where medication reconciliation would have helped your patients to highlight the importance of a medication reconciliation process.
3. **Prioritize and start small.** Test a medication reconciliation process on a small number of patients to identify the tools and processes that work in your organization. For example, start with one patient care group and focus on patients who are taking more than five medications or any high-alert medications. Modify the process as required, and once it is working on a small scale, test it in other areas.

4. **Involve a multidisciplinary team** to collaboratively develop, test, and implement a process that is effectively integrated with current workflow.
5. **Provide a documentation tool** (electronic or paper-based) to consolidate patient medication regimens and to track the reconciliation process. Highly visible, easily accessible forms that lead to more complete orders can increase success. (Examples are available from SHN.¹)
6. **Require features that facilitate medication reconciliation** when purchasing or updating computer software systems.
7. **Create structured communication** to educate practitioners and patients about medication reconciliation.

Support exists across Canada to develop effective strategies and medication reconciliation programs that can reduce rework at transfer points, as well as decrease the potential for serious adverse drug events.

Useful information on strategies for medication reconciliation can be found at the following Web sites:

- Safer Healthcare Now! – <http://www.saferhealthcarenow.ca>
- ISMP – <http://www.ismp.org/Newsletters/acutecare/articles/20050421.asp>
- Massachusetts Coalition for the Prevention of Medical Errors – <http://www.macoalition.org>

References:

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Announcements:

CCHSA and ISMP Canada Collaboration

The Canadian Council on Health Services Accreditation (CCHSA) and ISMP Canada have signed a Memorandum of Understanding to formally recognize their close working relationship as organizations that both have a mission to improve the safety of health care. ISMP Canada will continue to participate with CCHSA in the development of a national set of standards and in revision of the accreditation process for medication management and pharmaceutical services. This collaboration facilitates the translation of valuable learning from medication incident data, provided to ISMP Canada by professionals in the Canadian health care community, into standards for enhanced safety in health care systems. CCHSA and ISMP Canada will be collaborating in a number of ways to continue to foster a culture of shared learning and accountability for patient safety.

ISMP Nurse Advise-ERR® Newsletter Free to Canadian Nurses

The ISMP Nurse Advise-ERR® is a medication safety newsletter designed specifically to meet the needs of nurses. This monthly newsletter is offered **free to nurses during 2006** and will be distributed by ISMP Canada, by email, complimentary of ISMP (US). Regular features include anonymous accounts of reported medication errors, their underlying causes, and the preferred practices for error reduction strategies, including quick tips regarding safe medication practices. It is our goal to reach as many nurses as possible. We encourage designated nursing representatives from each hospital or health care facility to subscribe and widely distribute the newsletter within their organization (e.g. posting on an internal intranet, email distribution, reproducing and circulation of hard copies). Individuals are also encouraged and welcome to subscribe. **If you would like to receive this newsletter, please complete the subscription form at <http://www.ismp-canada.org/advise-err.htm>.** We thank you for your interest in promoting medication safety!

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ISMP Canada is a national voluntary medication incident and 'near miss' reporting program founded for the purpose of sharing the learning experiences from medication errors. Implementation of preventative strategies and system safeguards to decrease the risk for error-induced injury and thereby promote medication safety in healthcare is our collaborative goal.

To report a medication error to ISMP Canada: (i) visit our website www.ismp-canada.org, or (ii) e-mail us at info@ismp-canada.org, or (iii) phone us at 416-480-4099. ISMP Canada guarantees confidentiality and security of information received. ISMP Canada respects the wishes of the reporter as to the level of detail to be included in our publications.

A Key Partner in the Canadian Medication Incident Reporting and Prevention System