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The SHN-CAPHC Paediatric Medication Reconciliation Collaborative

**A national child and youth health quality
improvement initiative**

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ASSOCIATION CANADIENNE DES CENTRES DE SANTÉ PÉDIATRIQUES
WWW.CAPHC.ORG



The Canadian Association of Paediatric Health Centres (CAPHC)

- Established in 1968 as the Canadian Association of Paediatric Hospitals (CAPH)
- CAPHC members are inter-disciplinary health professionals who provide health services for children, youth and families within acute care health centres (*including all children's hospitals nationwide*), regional & community health care facilities, rehabilitation centres, and home care organizations.
- CAPHC is affiliated with all sixteen academic health sciences centres in Canada, providing linkages to education, research, human resources and sub-speciality training in paediatrics.

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- **Safer Healthcare Now! is a grassroots patient safety campaign aimed at reducing preventable complications and deaths in Canadian hospitals.**
- **It is patterned after the 100K Lives campaign which is being led by the Institute for Healthcare Improvement in the US**
- **The campaign initially builds on patient safety initiatives in acute care settings across Canada**
- **The campaign consists of six targeted, evidence-based strategies to improve patient care.**
- **For more info, www.saferhealthcarenow.ca**

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CAPHC's Commitment to the Campaign

- Among the six Campaign interventions, CAPHC's Patient Safety Collaborative identified **Prevention of Adverse Drug Events: Prevent adverse drug events (ADEs) by implementing medication reconciliation** as their national priority.
- Research and clinical experience has shown that ADE's occur with disturbing frequency
- Communication problems between settings of care are a significant factor in the occurrence of ADE's with over half of all medication errors occurring at the transitions of care
- In the paediatric population, we must recognize, understand and address factors that may add additional challenges to obtaining a complete and accurate understanding of the child's current medications.
- Preventing ADE's at patient transition points in the impetus behind medication reconciliation

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CAPHC's Commitment to the Campaign

- The ultimate goal of the CAPHC and the Safer Healthcare Now! Campaign is to prevent ADE's by providing support for hospitals across Canada to implement medication reconciliation

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The Epidemiology of Error and Harm in Paediatrics.



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In Canada

- 2004 study, Forster et.al., found “23% incidence of adverse events in patients discharged from internal medicine service, of which 72% were ADEs”
- “53.6% of 151 patients (>4 meds) had at least one unintended discrepancy. 38.6% had potential to cause moderate to severe discomfort or clinical deterioration”
- There is little published data on the incidence of medication discrepancies in Canadian paediatric hospitals

Forster AJ, Clark HD, Menard A, Dupuis N, Chernish R, et. al., Adverse events among medical patients after discharge from hospital. *Can Med Assoc J.* 2004;170(3):345-349.

Cornish PL, Knowles SR, Marcheso R, Tam V, Shadowitz S, Juurlink DN, Etchells EE. Unintended medication discrepancies at the time of hospital admission. *Arch Intern Med.* 2005;165:424-429.

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What do we know?

- 70,000 children harmed each year in US health care (1%)
- Neonates and adolescents are highest risk
- Medication use is highest cause

“A 5 year old with ALL in remission, but on maintenance therapy. She was supposed to take Bactrim as prophylaxis to prevent opportunistic disease. In the absence of effective discharge reconciliation, the child's parent was unaware of the need to fill or take the prescription. The child presented to the ED with Pneumocystis pneumonia”

Julie Morath, CEO of the Children's Hospitals and Clinics in Minneapolis/St. Paul

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Focus on Children, Youth and Families

Challenges that are unique and/or compounded within the paediatric population

- Younger children cannot represent themselves
- There are issues around adolescent self-representation
- In some instances, the parent is the child's advocate, but often “substitute decision makers” are involved, at different times and at different transitions points

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Focus on Children, Youth and Families

Challenges that are unique and/or compounded within the paediatric population

- **Cultural Diversity** - poses an additional challenges for all ages, however, this is recognized as a significant problem within the paediatric population - Children are often utilized as the “communicator” between the parent and health care professional
- **Family Centered Care** has become an integral part of many paediatric settings (across the continuum of care) and presents another layer of complexity for medication reconciliation - as this encourages family participation in the care of the child.

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“The greatest gains in improving patient safety will come from modifying the work environment of health care professionals, creating better defences for averting adverse events and mitigating their circumstances”

Baker GR, Norton PG, et al.. The Canadian Adverse Events Study: the incidence of adverse events among hospitalized patients in Canada. *Can Med Assoc J.* 2004;170(11):1678-1686.

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What is Medication Reconciliation?

- The primary goal of medication reconciliation is to eliminate medication discrepancies at all interfaces of care
- The Massachusetts Coalition defines Medication Reconciliation as “a process designed to prevent medication errors at patient transition points. It is a three-step process entailing
 - 1) Creating the most complete and accurate list possible of all home medication for each patient,
 - 2) Using that list when writing medication orders, and
 - 3) Comparing the list against the physician’s admission, transfer, and/or discharge orders, identifying and bringing any discrepancies to the attention of the physician and, if appropriate, making changes to the orders. Any resulting changes in orders are documented.

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Focus On Transfers and Transitions of Care



eg: Transfer between facilities

e.g. Transfer between facilities, trip to the OR



eg: Trip to the OR, shift change, physician sign-outs

e.g. Shift change, physician sign-outs

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Close The Gaps

?

past

!

future

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The Potential Impact of Medication Reconciliation

- A series of interventions, including medication reconciliation, decreased the rate of medication errors by 70% and reduced adverse drug events by over 15%.¹
- Initiating reconciling process by obtaining medication histories for the scheduled surgical population reduced potential adverse drug events by 80% within three months of implementation.²
- Successful medication reconciling process reduces work and re-works associated with the management of medication orders. After implementation, nursing time at admission was reduced by over 20 minutes per patient. The amount of time pharmacists were involved in discharge was reduced by over 40 minutes.³

1 Whittington J, Cohen H. OSF Healthcare's journey in patient safety. *Qual Manag Health Care*. 2004;13(1):53-59.

2 Michels RD, Meisel S. Program using pharmacy technicians to obtain medication histories. *Am J Health-Sys Pharm*. 2003;60:1982-1986.

3 Rozich JD, Howard RJ, Justeson JM, Macken PD, Lindsay ME, Resar RK. Standardization as a mechanism to improve safety in health care: impact of sliding scale insulin protocol and reconciliation of medications initiatives. *Jt Comm J Qual Saf*. 2004;30(1):5-14.

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The Requirement for Medication Reconciliation

- **Voluntary participation in the campaign complements the work health service organizations will need to undertake to address some of the new CCHSA requirements.**
- **In January 2005, the Canadian Council on Health Services Accreditation (CCHSA) released a set of patient safety goals and required organizational practices (ROP's) in five key areas: culture, communication, medication use, workforce/work life, and infection control. - www.cchsa.org Organizations will be required to comply with these goals and practices for the purposes of accreditation beginning in January 2006.**
- **While compliance with the CCHSA goals and ROP's is necessary, CCHSA encourages its members to consider becoming involved in the Safer Healthcare Now! Campaign, where appropriate.**

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Medication Safety



- Medication safety is a property of system performance
- It requires culture, people, technology

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How Do We Do This?

The SHN Getting Started Kit: Medication Reconciliation provides the framework for the process of instituting medication reconciliation and outlines the following steps:

- 1. Secure Leadership Commitment**
- 2. Form a team**
- 3. Collect Baseline Data**
- 4. Set Aims (Goals and Objectives)**
- 5. Start with a Pilot Project & Begin to Learn How to Reconcile Medications**
- 6. Continue to Implement Medication Reconciliation, Test Results and Spread**
- 7. Evaluate**

Timelines

The interdisciplinary national paediatric team at the August workshop came to consensus on the following timelines, strategies and procedures:

1. **September to October 2005: Getting started and launching a successful campaign within your site; developing teams and engaging key stakeholders.**
2. **November to December 2005: Collecting baseline data; establishing the groundwork for monitoring and evaluating outcome.**
3. **January to March 2006: Implementing the pilot phase; understanding how processes can be changed to ensure successful implementation and integration.**
4. **April to October 2006: Implementing medication reconciliation as a regular quality improvement practice and evaluating the results.**
5. **October to December 2006: Evaluating data and preparing the final report**

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Getting started: Secure Leadership Commitments

- **The contribution of senior management to the success of the implementation of medication reconciliation is recognized as essential**
- **Potential barriers need to be identified and removed**
- **Adequate resources for the initiation and implementation of the project need to be identified and dedicated**
- **Constant and continuous communication with front line staff regarding progress and successes at critical stages of the project is very important**
- **Incentives or special recognition for teams and individuals who contribute significantly to the success of the project should be considered**

Getting Started: Create The Team

- **Teams should include all stakeholders including front line staff and senior management**
- **Families should be involved from the beginning, e.g. family-centered care committees**
- **Continuity in team makeup over the course of the initiation and implementation is important**
- **Clinical leaders are vital: physicians, nursing and pharmacy staff**
- **Front line caregivers from key settings of care, and from all shifts should be involved**
- **Representatives from Patient Safety Officer, Quality Improvement/Risk Management, Decision Support, Community Relations and Pharmacy and Therapeutics will have valuable input to this process**
- **Each participating centre will form their team based on these criteria and their own internal process**

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Collecting Baseline Data

Collecting baseline data is critical to demonstrating the need to implement medication reconciliation and for establishing a basis to demonstrate improvement. The basic process is as follows:

- The team will identify the patient population/admission point where it is expected that a problem exists and where there is sufficient volume for data collection
- Determine the number of cases/charts to review
- The concurrent method of data collection is to be used, e.g. identify patients at 'hazard' while at 'hazard' and take immediate actions for improvement
- The basic procedure is as follows;
 - ✓ Let the normal process of taking a medication history (*primary medication history* (PMH)) occur.
 - ✓ Get a *best possible medication history* (BPMH).
 - ✓ Compare the *admission medication orders* (AMO) with the *best possible medication history* (BPMH) to identify any discrepancies.
 - ✓ Clarify discrepancies with the ordering or most responsible physician
 - ✓ Identify Unintentional Discrepancies (the potential for patient harm) and Undocumented Intentional Discrepancies with the physician

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Implementing the pilot phase

- The pilot is to be conducted on the unit/at the same admission point where the baseline data was collected
- The pilot is a way of identifying areas that need improvement, training staff in best practices and imbedding processes and forms into your daily practices
- The purpose of the pilot is to be fine-tuning; to get the process right, to understand the forms and make changes
- The preferred method is to start small, e.g. PDSA cycles
- This process is to make sure everyone is comfortable with the process and using the forms as well as to institute behaviour change
- Improvement is monitored by doing a maximum of 20 chart audits monthly until the chosen goal is reached, e.g. as 75% reduction in medication discrepancies

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Implementing medication reconciliation

- **As experience develops, the process is implemented for more patients in more areas**
- **The process should be spread gradually**
- **Organization-wide implementation is a continuous quality improvement process to which all CAPHC partners are committed**
- **Success should be celebrated!**

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The SHN-CAPHC Paediatric Medication Reconciliation Collaborative



- This is your work
- This is your time
- You can make health care safer

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Supporters of this project

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