

## **CSHP 2015 Success Story Contest – CSHP Ontario Branch**

### **Medication Reconciliation Performed by Dispensary Assistants for Paediatric Patients Admitted to Cardiology and Cardiac Critical Care Unit**

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**BACKGROUND:** Physicians and nurses are primarily responsible for completing medication reconciliation at our institution, with clinical pharmacists available on a consultation basis. Sustainability of this practice model has been an ongoing challenge. Since there are a limited number of clinical pharmacists available within our institution to complete medication reconciliation for all admitted patients, it became evident to the pharmacy team that alternative human resources should be considered to facilitate medication reconciliation. Although medication reconciliation performed by pharmacists is most ideal given their specialized knowledge in medications and patient interviewing skills, dispensary assistants are in a unique position to partake in medication reconciliation given their familiarity with medication regimens and formulations. There is currently no published literature describing the role of dispensary assistants in admission and transfer medication reconciliation for paediatric patients.

**OBJECTIVES:** To assess the completeness and accuracy of best possible medication histories (BPMHs) and reconciliation conducted by a trained dispensary assistant (pilot) compared to nurses and pharmacists (baseline – current practice). The severity of unintentional discrepancies was also determined.

**METHODS:** This was a prospective cohort comparison study which included patients 18 years of age and under, admitted to and/or transferred between Cardiology and the Cardiac Critical Care Unit (CCCU). During baseline, a 3-week audit was performed by a pharmacy resident to assess for completeness and accuracy of BPMHs and reconciliation conducted by nurses and pharmacists. A 3-week audit was repeated by the pharmacy resident to assess medication reconciliation performed by the trained dispensary assistant (pilot). The dispensary assistant was trained for 5 days by the pharmacy resident and Cardiology/CCCU clinical pharmacists to perform medication reconciliation. Various readings, reconciliation exercises, mock interviews, and patient interviews under the supervision of the pharmacy resident and clinical pharmacist were completed during this training.

Completeness of BPMHs and reconciliation on admission and transfer were assessed by signatures completed within 24 hours of admission or transfer on the relevant medication reconciliation forms (Appendix 1 and 2). Accuracy of BPMHs was measured by comparing it against the pharmacy resident's BPMH for the number of omissions or discrepancies in drug name, dosage, route, frequency, or formulation. Accuracy of reconciliation was measured by comparing against the pharmacy resident's reconciliation for number and types of discrepancies (no discrepancy, intentional discrepancy, undocumented intentional discrepancy, unintentional discrepancy).

To determine the clinical significance of unintentional discrepancies in causing patient harm or clinical deterioration, two CCCU staff physicians and one Cardiology staff physician from the study independently rated the severity of discrepancies using a published 3-point scale by Cornish et al (1).

**RESULTS:** Completion of BPMH was not statistically different between nurses and pharmacists (n=38) and the dispensary assistant (n=46) (82.4% vs. 77.8%, p=0.8). No significant difference was found in the proportion of patients with at least one BPMH discrepancy between baseline and pilot (38.2% vs. 22.2%, p=0.3). There was no significant difference between baseline and pilot in completeness of admission reconciliation (69.7% vs. 75.0%, p=0.8). Completeness of transfer reconciliation was significantly higher during pilot compared to baseline (91.2% vs. 61.1%, p=0.02). No significant difference in the proportion of patients with at least one unintentional discrepancy was found between baseline and pilot for admission (21.2% vs. 10.0%, p=0.5) and transfer (5.6% vs. 2.9%, p=0.6) interfaces. No unintentional discrepancies (n=16) were rated to result in severe patient discomfort or clinical deterioration.

**CONCLUSION:** A trained dispensary assistant can perform admission and transfer medication reconciliation for paediatric patients with comparable completeness and accuracy as nurses and pharmacists. Future studies should explore the sustainability and cost-effectiveness of this practice model, along with its expansion to include more than one trained dispensary assistant available at extended hours and days for medication reconciliation, in other areas of the hospital.

**Alignment with CSHP 2015 Objective:**

Objective 1.1: In 100% of hospitals and related healthcare settings, pharmacists will ensure that medication reconciliation occurs during transitions across the continuum of care (admission, transfer and discharge).

This pilot highlights the success of training a dispensary assistant to perform medication reconciliation for paediatric Cardiology and CCCU patients with comparable completeness and accuracy as nurses and pharmacists (current standard of care). Our pilot findings are in line with the CSHP 2015 objective 1.1 to ensure that medication reconciliation occurs at all interfaces of care. Due to heavy patient care workload, clinical pharmacists are available only on a consultation basis to facilitate with medication reconciliation. The aim of this pilot was to introduce a novel practice model, which utilizes dispensary assistants to optimize compliance with medication reconciliation and to enhance patient safety. At the time this pilot was conducted, only admission and transfer medication reconciliation were implemented in the hospital. Based on the positive findings from this pilot, data will be used to help build a business case to support potential expansion of this practice model to other areas of the hospital. Dispensary assistants may have a role in the discharge interface as our institution works towards implementing discharge medication reconciliation.

**Authors' involvement:** This pilot was Renee Woo's hospital pharmacy residency project at the time of her pharmacy residency at SickKids®, 2010-2011. Carol Chan is the Primary Project Supervisor.

**Reference:**

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



