

## Editorial

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# Medication Reconciliation in the Pediatric Emergency Room

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According to The Joint Commission, an accrediting organization certifying healthcare institutions in the United States, medication reconciliation is defined as the comparison between a patient's medication orders to those the patient was receiving prior to the hospital visit. Its purpose is to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions. Medication reconciliation should be completed at every transition of care in which new medications are ordered or existing orders are rewritten when there are changes in setting, service, practitioner, or level of care.<sup>1</sup> In a pediatric emergency department setting, medication reconciliation is often challenging, owing to potential medication errors and discrepancies during handoffs at admission, transfer, and discharge of patients.<sup>2,3</sup> As a result, an Adverse Drug Event (ADE) defined as any preventable event that results in inappropriate medication use or harm to the patient while the medication is being handled by the health care professional, patient, or consumer can occur. The mean ADE rate in pediatrics is 2.3 to 11.2 per 100 pediatric admissions.<sup>1</sup> Therefore, the medication reconciliation process must be observed for safety, quality, and productiveness. This process encompasses five steps: (1) make a list of current home medications; (2) develop a list of medications that will be prescribed; (3) the two lists should then be compared; (4) clinical decisions should be made based on the comparison; and (5) this new list should be conveyed to health professional and patient.<sup>4</sup> A recent study conducted in outpatient pediatrics evaluated the implementation of an organized process to improve medication reconciliation. This trial reviewed over 2.7 million visits over a five year period and showed an improvement in documentation of medication reconciliation, satisfying the goal of patient safety.<sup>5</sup> The researchers defined patient safety as a means to reduce adverse drug events (ADE) and eliminate preventable harm. This trial used performance of MedRec measured over time from 2005 to 2010 to show that documentation improved consistently from a nadir of 0% in 2005 to 71% in 2010.<sup>5</sup> Some research has also been completed on quantifying discrepancies in admission medication history and reconciliation process at a pediatric institution. This prospective study identified a total of 309 discrepancies in 100 charts by pharmacists providing a potential to prevent significant ADEs.<sup>6</sup> Similarly, a larger scale review explored the occurrence of medication errors in multiple studies in pediatrics. Many studies consistently identified high rates of discrepancies ranging from 22 to 72.3% that occurred at all transitions of care.<sup>7</sup>

Few studies exist on the medication reconciliation in pediatric emergency departments. Further research is needed to confirm how implementing medication reconciliation may reduce medication errors and improve patient safety in the pediatric emergency department.<sup>8</sup> Guidelines establishing a standardized approach and model for medication reconciliation in the pediatric emergency department are necessary.

**DISCLOSURE**

There are no conflicts of interest, or financial interest, in any product or service mentioned in the editorial, including grants, employment, gifts, patents, royalties, stocks, and honoraria to report.

**REFERENCES**

1. Children's Specialized Hospital Boosts Medication Reconciliation Rates. The Source: Joint Commission Compliance Strategies. 2013: 11(3).
2. Soler-Giner E, Izuel-Rami M, Villar-Fenandez I, Real Campana JM, Carrera Lasfuentes P, Rabanaque Hernandez MJ. Quality of home medication collection the Emergency Department: Reconciliation Discrepancies. *Farm Hosp*. 2010; 35(4): 165-171. doi: [10.1016/j.farma.2010.06.007](https://doi.org/10.1016/j.farma.2010.06.007)
3. Witting MD, Hayes BD, Schenkel SM, et al. Emergency department medication history taking: current inefficiency and potential for self-administered form. *J Emerg Med*. 2013; 45(1): 105-110. doi: [10.1016/j.jemermed.2013.01.019](https://doi.org/10.1016/j.jemermed.2013.01.019)
4. Takata GS, Mason W, Taketomo C, Logsdon T, Sharek PJ. Development, testing, and findings of a pediatric-focused trigger tool to identify medication-related harm in US children's hospitals. *Pediatrics*. 2008; 121(4): 927-935. doi: [10.1542/peds.2007-1779](https://doi.org/10.1542/peds.2007-1779)
5. Rappaport D, Collins B, Koster A, et al. Implementing Medication Reconciliation in Outpatient Pediatrics. *Pediatrics*. 2011; 128(6): 1600-1607. doi: [10.1542/peds.2011-0993](https://doi.org/10.1542/peds.2011-0993)
6. Provine A, Simmons E, Bhagat P. Establishment and Evaluation of Pharmacist-Managed Admission Medication History and Reconciliation Process for Pediatric Patients. *J Pediatr Pharmacol Ther*. 2014; 19(2): 98-102. doi: [10.5863/1551-6776-19.2.98](https://doi.org/10.5863/1551-6776-19.2.98)
7. Huynh C, Wong I, Tomlin S, et al. Medication Discrepancies at Transitions in Pediatrics: A Review of the Literature. *Pediatric Drugs*. 2013; 15(3): 203-215. doi: [10.1007/s40272-013-0030-8](https://doi.org/10.1007/s40272-013-0030-8)
8. Chandlish K, Young G, Warholak T. Challenges in obtaining accurate home medication lists in emergency triage at an academic medical center: perceptions from nurses. *Adv Emerg Nurs J*. 2012; 34(3): 333-340. doi: [10.1097/TME.0b013e31826ed37c](https://doi.org/10.1097/TME.0b013e31826ed37c)