

Improving Pharmacist-Led Electronic Medication Reconciliation

Abstract

The American Society of Health-System Pharmacists (ASHP) and the American Pharmacist Association (APhA) define medication reconciliation as “the comprehensive evaluation of a patient’s medication regimen anytime there is a change in therapy in an effort to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions, as well as to observe compliance and adherence problems. Medication reconciliation is a complex and time consuming process. Yet, its role in identifying unintentional medication discrepancies and preventing potential harm cannot be underestimated. Over a quarter of hospitals prescribing errors are attributable to incomplete medication histories at the time of hospital admission. Clinical pharmacists are adept at obtaining patients’ medication histories but this process poses a large burden on pharmacist resources. Recent advances in information technology can facilitate the process of taking medication histories by providing access to integrated networks of retail pharmacies, pharmacy benefit managers (PBMs) and health plans. In this study, we will evaluate both the process of reconciling medications.

What we propose to do: This study will assess how we can make the process of obtaining accurate and complete medication histories less time consuming. We will measure the potential value of providing external electronic medication history information to a pharmacist in two ways:

- Determine discrepancies between medication history sources.
- Identify patients who are not adherent to their medication regimen.

Additionally, we will develop a user interface to display the medication history and adherence information effectively to the pharmacist. To do this our goal will be:

- To evaluate pharmacists’ perceptions on the user interface design and usability of a prototypical user interface.

Why this work is important: The study is both timely and important in understanding the pharmacist’s perspective on improving inpatient medication reconciliation. Considerable effort has been devoted to the assessment of nationwide pharmacy and claims networks for e-prescribing in the outpatient setting. However, there is a paucity of literature supporting the value of obtaining this information in the acute care setting. The recently published Meaningful Use Criteria by the Office of the National Coordinator (ONC) requires medication reconciliation “at relevant encounters and transitions of care.” Nearly all healthcare organizations find themselves facing the dilemma of wanting to ease the burden of medication reconciliation while being able to meet these criteria. Utilizing electronic data sources may enhance the process of taking medication histories, providing value to pharmacist by enabling their participation in improving patient care. Both these aspects will be evaluated in our study; in addition, we will assess how this information can be presented effectively using a prototypical graphical user interface (GUI) for implementation in any pharmacy information system.

Impact on pharmacy practice: Medication reconciliation impacts a pharmacist's workflow and creates a burden on limited pharmacy resources. By enabling the pharmacist to take a more complete and accurate medication history, and identifying medication non-adherence we can provide opportunities for pharmacist intervention in direct patient care. Further, understanding the pharmacist's perspective on how this information can be presented most effectively in a user interface will facilitate adoption. Enhancing electronic medication reconciliation has the potential to improve both patient safety and pharmacy practice.