

Implementation of Electronic Medication Reconciliation in a Community Hospital

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Introduction and Background

The Joint Commission views medication reconciliation as an integral component of safe patient care. Hospital admissions, transfers and discharges are complicated processes with multiple hand-offs. Challenges include multiple providers, modifications and changes to medications, patient adherence, and lack of patient knowledge of their medications. Historically, medication reconciliation was a paper process in our hospital. Even though auditing demonstrated greater than a 94% compliance rate, process reliability was dependent on practitioner expertise, available time and engagement. We believed there was an opportunity for improvement. The EMR medication reconciliation module in our hospital EHR allowed for the implementation of an electronic process. The software allowed all providers to collect, record, update, and review a patient's medication list. This had the potential to streamline the reconciliation process and to provide the interdisciplinary team with point of care access to an accurate medication list.

Methods

The project used Lean Six Sigma Project Management methodology. The interdisciplinary team was comprised of members from Nursing, Medicine, Clinical Support and Information Technology. A Lean Six Sigma Project Manager worked in collaboration with the IT Project Manager to run the project, and a vendor consultant was engaged to provide expertise on the software. We identified and planned for possible barriers to implementation. We recognized very early on the critical role of the pharmacist in the collection of an accurate and complete home medication list. This was especially important in the Emergency Department. Pharmacist hours in the ED were expanded from 20 hours a week to 40 hours a week to address this need.

Results

After go-live, we quickly realized that the new process, although working as designed, posed significant issues for users. We underestimated the impact to physician workflow, which resulted in increased admission time from the ED. However, we did note improvements in the number of medications reconciled on admission. We had to extend user support from the original 2 weeks to 4 weeks due to the complexity of the process, ongoing resolution of issues, and the need for continuing communication of the modifications. Not all staff fully accepted the process changes. The team re-grouped, performed an analysis of current issues, identified key areas for improvement and initiated targeted education.

Discussion/Conclusion

The imported medication list (SureScripts) did not add value to the process as expected. This software does not allow for "live" testing and this prevented us from determining end-user issues prior to Go Live. Although all members of the healthcare team contribute to reconciling the home medication list, it became primarily a physician task, impacting the admission process and in most cases extending the time to completion. In conclusion, a short pilot involving 2-3 physicians would have illuminated many of the issues that caused frustration to users during the first few days. To address the workload issue, ED staff will be engaged to initiate the home medication list for patients being admitted.

Reference:

Greenwald JL, Halasyamani LK, Greene J, et al. Making Inpatient Medication Reconciliation Patient Centered, Clinically Relevant and Implementable: A Consensus Statement on Key Principles and Necessary First Steps. *Journal of Hospital Medicine* 2010;5: 477-485.