

Medication Errors within the Clinical Setting: A Quality Improvement Project

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BACKGROUND

During a clinical rotation at a large urban teaching hospital, the occurrence of medication errors noted resulted in negative impacts on patient wellness. Research studies indicate that the U.S. spends more than \$40 billion each year as a result of medication errors. A large portion of these medication errors are preventable. A thorough literature review of 40 research studies was conducted to identify issues associated with medication errors. This quality improvement project aims to identify the prevalence of medication errors, their effect on patient wellness, its monetary effects in healthcare, and what preventative interventions can be implemented to prevent such errors.

ETIOLOGY

Nurse-Patient Ratios

Improper safety/lab level monitoring

Incorrect Patient Identification Methods

Errors occur in 10-20% of all order

Lack of Recognition of Drug-Drug Interactions

Poor Drug Administration Practices

Dosage Miscalculations

MEDICATION RECONCILIATION

Significance:

The lack of a medication reconciliation in the continuum scheme of patient care account for many medication errors in a hospital setting. According to Alemayehu B. Mekonnen in the article "impact of electronic medication reconciliation interventions on medication discrepancies at hospital transitions: a systematic review and meta-analysis" (2019) "Medication discrepancies often occur at transitions in care when patients are admitted to and discharged from a hospital and are responsible for more than half of the medication errors". Likewise, a further examination of the importance of medication

What is Medication Reconciliation?

According to the Joint Commission a medication reconciliation is "Medication reconciliation is a formal process for creating the most complete and accurate list possible of a patient's current medications and comparing the list to those in the patient record or medication orders."

Key Statistic:

More than 40 percent of medication errors are believed to result from inadequate reconciliation in handoffs during admission, transfer, and discharge of patients.

COMMUNICATION BASED INTERVENTIONS

- When presenting a briefing, be clear and concise, and use each element of SBAR to communicate the relevant information.
- Organize information first, so it's clear before communication begins. Only communicate relevant information.
- To safeguard against medication errors, nurses must implement the proper procedures for medication administration, including at least these five rights: right patient, drug, dose, route, and time.
- Published evidence shows that SBAR provides effective and efficient communication, thereby promoting better patient outcomes.



THE EFFECTS OF MEDICATION ERRORS

COST EFFECTS

- Medication errors don't only impact patient lives, they impact the cost of the healthcare system in a major way.
- These errors cause longer hospital stays, additional medical interventions for correction, and waste of medications.
- The cost is approximately \$16 billion U.S. dollars a year.

PATIENT EFFECTS

- Recent studies of medical errors have estimated errors may account for as many as 251,000 deaths annually in the United States
- The proportion of adverse events attributable to preventable medication errors is around 58%
- 1 in 30 hospital admissions are due to adverse events due to medication errors

Annual Adverse Drug Events

Adverse drug events prolong hospital stays by **1.7 - 4.6 days** and cost the healthcare system more than

\$16 billion USD annually.



Source: The U.S. Food and Drug Administration