

HLT-362V Week 4 Quality Improvement Proposal

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COURSE XXX: Title of Course

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Month XX, 2024

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Quality Improvement Proposal

Nurses and other healthcare providers' roles also include continuously evaluating healthcare services and interventions against their objectives. They identify gaps in care provision and utilize their knowledge and skills to develop effective interventions to ensure patient safety and to provide patients with a safe environment. Problems differ based on the settings, and interventions should target the root causes of these problems. Nurses are the professionals with the most contact with the patients and can use the opportunity to identify gaps and implement interventions for their management. This essay analyzes a current healthcare problem and a quality improvement proposal that can help solve the problem.

Problem Overview and Setting

Medication administration errors are a common problem in inpatient care settings. The errors vary with the department, and critical care areas (especially the emergency department) report the highest number of medication administration errors). Medication errors occur between prescription and administration and can be committed by any healthcare professional. Nurses are professionals close to the patient and administer most medications in healthcare institutions. The problem causes consequences ranging from near misses and mild overdosages to severe injuries such as organ system failure and death. Medication errors occur more in healthcare settings where many patients require attention, and most have many medications that have a small therapeutic index. Thus, medication administration error is a major problem in inpatient settings at the care facility.

Need For the Quality Improvement Initiative and The Expected Outcome

Medication administration errors are the most common in a healthcare setting and medication errors are the most common medical errors, making medication administration errors significant.

Medication errors cause between 7000000-1000000 deaths yearly, making them a leading cause of unintentional injury and death (Tariq et al., 2020). In addition, medication error injuries and related costs are above \$40 billion annually in the US. A recent study shows that intravenous medication errors have the highest prevalence, and the IV route is the most common in inpatient settings (Härkänen et al., 2019).

In addition, medication administration errors are linked with costly lawsuits against the institution and

professionals. Tariq et al. (2022) also note that some professionals lose their jobs and end up behind bars, and institutions have suffered hefty fines and indefinite closures. These technologies prevent errors from occurring during the writing and translating orders and help ensure that care providers prescribe the proper medications, doses, and frequencies for the right patient. More confirmation is also necessary when administering these medications because it is the last and most crucial stage in the medication administration process. The technology will help increase efficiency and thus promote better patient outcomes.

Literature Support for the QI and the Expected Outcomes

Barcode medication administration is a technology that allows nurses and other care providers to scan medication before administering it. The technologies are vital because they are implemented at the point of care. The nurses use a scanner to scan the patient's wristbands and the medication barcode to ensure it is on the list of medications. Scanning wristbands produces all patient medications on the monitor (in improved device forms), allowing the nurses to reconfirm patient and medication information such as duration, route, and duration (Lin et al., 2018). The technology also helps detect errors and alert the nurses. The quality improvement project uses barcode medication administration to promote safety and prevent medication errors. The technology will allow nurses to confirm all patient medication rights before administration, thus preventing medication errors (Mulac et al., 2021). According to Mulac et al. (2021), barcode medication administration reduces medication errors and eliminates the severe effects of medication errors. Darawad et al. (2019) show that nursing professionals widely accept the technology because it eliminates errors and allows nurses to detect and prevent medication errors in the previous steps in the medication administration process.

The technology improves care by determining errors performed by other professionals, such as pharmacists in dispatch and packing. Thompson et al. (2018) note that barcode medication interventions help professionals ensure flawless care provision, reducing medication administration errors by more than 50%. These errors cease being the most common in medication administration. Owen et al. (2019) show that barcode medication administration in the emergency department reduces errors and enhances nurses'

job satisfaction. Current technologies have come in handy in preventing errors such as prescription and transcription errors such as Computerized Provider Order Entry (CPOE) and clinical decision support system (CDSS), which help clinicians diagnose and safely prescribe medications to patients (Khalil et al., 2018). Khalil et al. (2018) note that healthcare technologies help improve medication error prevention efforts and their reporting for better action. Accurate records of these medication errors can help institutions implement survey interventions to help manage them.

Steps Necessary to Implement the Quality Improvement Initiative

Various steps will be involved in implementing the initiative. The steps will be based on the DMAIC Lean Six Sigma quality improvement theory. The theory asserts that quality improvement is a complex and continuous process that entails evaluating and reevaluating healthcare services for their involvement (Ahmed, 2019). The first step will define the problem and the proposed quality improvement process. The information helps create urgency and promote the uptake and acceptance of the quality improvement initiative. The second step will be to quantify the existence of the problem. It will entail collecting data from research and the healthcare dashboard embedded in the healthcare information system. The third step will be analyzing the results to determine the major causes of the problem. These causes include the hasty nature of the hospital environment and knowledge gaps. The fourth step is improvement; it will entail preparing resources and other necessary processes for the implementation and success of the intervention (Ahmed, 2019). The project executives will prepare the process map and budget, contact the stakeholders and include their feedback, and complete all the necessary authorization before implementing the interventions mentioned.

The Quality Improvement Initiative's Evaluation

The evaluation of the intervention will be based on the effectiveness of preventing medication administration errors and sentinel events related to medication errors. According to Mulac et al. (2019), barcode medication administration helps reduce administration errors and their negative consequences, such as death and morbidity. These specific consequences, such as high healthcare costs, injuries, and deaths, will be the basis for the QI evaluation. The QI will utilize data from the healthcare dashboard and

electronic health records. Standardized terminologies used to record medication errors and near-misses will be used to collect data on medication errors and their significance to nursing and healthcare. The data will then be analyzed and evaluated against data from a similar period. The project will be implemented for three months before its post-implementation evaluation. However, the results will be analyzed for three months to determine progress or clinical significance.

The hypothesis is that barcode medication administration technology will reduce medication administration errors and medication error costs, injuries, and deaths. The test is a quasi-experimental study involving a controlled trial investigating the effects of introducing barcode medication administration in a unit. The results will be evaluated against similar results of a similar previous period (six months). ANOVA tests, t-tests, and linear regression analysis will help evaluate relationships between these variables. These tests will help determine the relationship between the dependent variable and any similarities or differences between them. These tests will help determine any changes in these variables.

Conclusion

Medication administration errors are significant problems in healthcare and the nursing profession. These are expensive, costing over \$40 million and about a million lives annually. Currently implemented technologies in the facility reduce other types of errors, but none help improve the administration process. Barcode medication administration increases the efficiency of the administration process and minimizes medication errors. Existing literature supports the use of technology and other current technologies for better outcomes. Barcode medication administration can benefit from the DMAIC model for its implementation. The process will ensure it is the best intervention to manage medication errors and will help gather support and resources while containing any resistance against the intervention. The intervention will improve care outcomes and reduce medication administration errors and their associated consequences.

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