

Running Head: QUALITY IMPROVEMENT COMPREHENSIVE PAPER: MEDICATION ERRORS

Type: BSN Capstone Project

Subject: Quality Improvement Project

Subject area: Nursing

Education Level: BSN

Length: 4 pages

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Title: Quality Improvement Comprehensive Paper Medication Errors

Instructions: your comprehensive paper provides the theoretical background to support your quality improvement practice problem and quality improvement project. medication errors and ways to decrease errors . in a 4- to 5-page paper, address the following: describe the data-driven quality improvement practice problem you identified. medication errors explain the importance of the quality improvement practice problem you identified for nursing practice. medication errors support your explanation by synthesizing evidence-based literature found through a literature search, using a minimum of five (5) scholarly sources. describe the quality improvement tools that will aid in the interpretation of the data that will support addressing the quality improvement practice problem you identified. pareto chart and run chart explain why these quality improvement tools are most useful in addressing your quality improvement practice problem. explain how you would apply the pdsa quality improvement process to your quality improvement practice problem. support your plan by synthesizing a minimum of five (5) pieces of scholarly evidence found through a literature search. be sure to integrate capstone-level writing guidelines in the completion of your comprehensive paper. this is an expectation of the completion of this program and is a requirement for future study in graduate school.

Quality Improvement Comprehensive Paper: Medication Errors

Student's Name

Module

Module Code

Data-driven quality improvement practice to improve medication errors

The issue of safety and quality of medication has raised concerns from stakeholders due to its impact on the global health system. This is because medication errors have been cited as a common cause of adverse health effects that significantly impact on the quality of care (Asensi-Vicente et al., 2018). According to FDA (2019), medication errors account for more than 75% of all medical errors in a healthcare setting (FDA, 2019). Reducing medication errors is among the major components of improving patient safety. The need to address

QUALITY IMPROVEMENT COMPREHENSIVE PAPER: MEDICATION ERRORS

medication errors is due to their impact on quality of life especially in the emergency departments where rising incidents have been reported.

The National Patient Safety Foundation indicates that about 1.5 million Americans lives have been negatively influenced by medication errors (Howell et al., 2017). These incidents arise from various factors including miscommunication, illegible handwriting, poor packaging, and improper labelling of medication or patients, errors in dosing units among others. Therefore, it is conceivable that mistakes can happen while prescribing and dispensing drugs. In this regard, it is fundamental for nurses to raise awareness regarding the problem and device mechanisms to mitigate harm and other comorbidities accompanying medication errors.

Medication errors are preventable events that may result to inappropriate medication use or patient harm while in control of a medical practitioner, patient or consumer (Howell et al., 2017). It can occur at any of the stages including prescribing, documenting, transcribing, documenting, administering or monitoring. Prescribing wrong medication, wrong administration route, wrong dose and wrong frequency have been cited as among the major sources of medication errors (Tong et al., 2017)). According to NMC, 30%-70% of medications ordering errors are identified by pharmacists and nurses during the medication therapy process. It therefore, clear that medication errors are among the major pervasive problems in a medical setup, hence preventing them is a necessity.

Importance

Quality improvements in addressing medication errors leads to attainment of high quality care in a healthcare setting. As noted by Fathi et al., (2017), addressing medication errors requires evidence based approach attained through data collection. According to Anderson and Abrahamson (2020), adopting verifiable data approaches in medical care is

QUALITY IMPROVEMENT COMPREHENSIVE PAPER: MEDICATION ERRORS

vital in impacting the effectiveness and positive changes in the health care system. It is fundamental for health care systems to adopt data driven approaches for attainment of a well-functioning healthcare system (Breuker et al., 2017). Data Driven Quality Improvement intervention in medical care is among the evidence based approaches that inform health care practices. Ferrah, Lovell and Ibrahim (2017) argue that medication errors are significant for healthcare delivery systems as they lead to negative health outcomes. The adoption of statistics to measure change in cases of medication errors allows for assessing areas of improvements. It aims at improving prescription safety through application of informatics tools. This approach significantly facilitates proactive management of therapy risks attributed to drugs prescription.

Quality improvement tools

Six sigma tools

These tools are vital to address the problem of medication errors by using qualitative and quantitative approaches to drive improvement process. According to Antony et al., (2018), six sigma tools enable for evidence based improvement process whereby, use of graphical tools enables for understanding the quality improvement process. Zhu, Johnson and Sarkis (2018) also cite that the use of Six Sigma creates a platform for addressing inadequacies in clinical perspectives that lead to improvement in patient's satisfaction. The importance of Six Sigma arises from the ability to address medication errors such as inappropriate prescription, and treatment that may lead to fatalities in healthcare. Honda et al., (2018) also argue that the application of the tool allows for elimination of identifiable deficiencies by determining the root cause. Essentially, this approach is imperative as it enables for collection of evidence-based data needed for process improvement. Kresch et al., (2017) indicate that application of Sigma tools create an environment for problem analysis and to determine the root causes vital for addressing the deficiency. This process allows for

advocating of a data-driven process that needs an overhaul or improvement to minimise the medication errors.

Secondly, the PDSA is another important tool that will enable healthcare administrators to identify the underlying challenges leading to medication errors. According to Assiri et al., (2018), this tool is critical in quality improvement considering that it follows definite steps of plan-do-study-act to facilitate quality improvement in the Healthcare setting. One of the fundamental aspects of the tool is its ability to plan for quality improvement and, therefore, consider all critical steps vital in this perspective. It will also enable for examination of loops in the healthcare sector that need to be addressed to minimise medication errors such as improper patient labelling or improper diagnosis.

Total quality management (TQM) is another imperative patient centred tool that allows service providers to engage in continuous improvement. Ferrah, Lovell and Ibrahim (2017) indicate that quality improvement is a critical part of managing medication errors. Therefore, undertaking total quality management approaches enable stakeholders in the healthcare sector to undertake frequent monitoring by adoption of effective communication to address medication errors. A study conducted by Johnson et al., (2017) found out that TQM enables for quality improvement based on collected data. These tools will be vital to enable for interpretation of data to support managing medication errors.

The use of Pareto chart and run chart in addressing medication errors

These tools in are vital in managing of medication error due to their ability to present data in an easy and interpretable way (Montella et al., 2017). For example, Pareto charts present data in a line and bar graph that enables identification of potential factors leading to medication errors. Rostami et al., (2017) indicate that the importance of Pareto chart is

evident in ability to seamlessly present factors leading to medication errors. For example, it is easy to quantify the significance of each factor in contributing to medication errors.

Run chart on the other hand is most useful in addressing medication errors as it enables for tracking the proposed changes leading to quality improvement. The fundamental importance of medication errors is to reduce the number of fatalities or comorbidities in a healthcare setting. Therefore, Use of a run chart can be vital to track the changes and determine the weak areas that require improvement to effectively manage medication errors.

Application of PDSA in managing medication errors

The application of this tool begins with planning on different approaches for managing medication errors. According to Ghani et al., (2017), planning incorporates setting priorities that must be achieved to attain quality improvement in a defined process. These priorities will incorporate educating the healthcare professionals on the need to follow proper medication reconciliation processes, proper patient identification and labelling, proper documentation, and following the five rights of medication administration. The second part of the cycle will include implementing the plan at a pilot scale in one department in a healthcare setting to evaluate its effectiveness. According to Christoff (2018), this enables for collection of data that will enable improvement of the proposed quality improvement during scaling up. The next step of PDCA cycle incorporates checking to see whether the proposed quality improvement is in tandem with the set objectives. It is during this stage that assessments of steps that may lead to failure of changing are done. Johnson et al., (2017) cite that this step is crucial and determines the overall success of the quality improvement process following a definite strategy. The next step incorporates acting by implementing the proposed changes in the entire health care facility. The healthcare professionals will be scheduled for a training session whereby they will be enlightened on the need to take evidence-based interventions in

managing medication errors. The use of PSDA cycle will therefore be imperative in addressing medication errors in the healthcare entity.

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QUALITY IMPROVEMENT COMPREHENSIVE PAPER: MEDICATION ERRORS

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QUALITY IMPROVEMENT COMPREHENSIVE PAPER: MEDICATION ERRORS

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