Use of Telemetry in the Inpatient Setting: Quality Improvement

Toni Andres

Lakeview College of Nursing

Dr. Ariel Wright

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The use of telemetry to monitor patients in the inpatient setting is a common practice. As healthcare costs in the United States continue to grow, unnecessary medical services represent the largest source of estimated excess healthcare costs. A nurse-driven protocol to discontinue continuous telemetry monitoring without contacting the provider could prevent unnecessary costs (Clapp, 2022). By understanding the QSEN competency of patient-centered care, a provider must recognize that emphasizing patient preferences, values, and needs is essential to providing proper care. Providers can integrate multiple dimensions of patient-centered care by providing coordination and integration of care. Providers communicate to other members of the healthcare team patient values and preferences, as well as examine the safety, quality, and cost-effectiveness of healthcare. This study recognizes the QSEN competency of evidence-based practice by explaining the role of evidence in determining the best clinical practice for each patient. Providers can structure the patient care settings to integrate new evidence into the standards of practice. Providers value the need for continuous improvement based on new knowledge (QSEN Institute, 2020). Providers and nurses advocate for patients, strive to provide high-quality care and be cognizant of the cost of associated care. The evaluation also leads to other aspects, not patient-driven, addressing the nursing-specific issues such as alarm fatigue and reducing unnecessary telemetry tasks and monitoring, delays in departmental inpatient transfers due to lack of telemetry monitors, and financial burdens of the facility (Clapp, 2022). The significance of this protocol helps to identify gaps between local and best practices (QSEN Institute, 2020).

Article Summary

Introduction

The article's primary purpose, *Nurse-Driven Protocol to Reduce Unnecessary Telemetry Use* (Clapp, 2022), is to provide information about reducing the use of continuous telemetry monitoring by having a nurse-driven protocol to discontinue the use of continuous telemetry monitoring without consultation with the ordering provider. By having a nurse-driven protocol to discontinue unnecessary telemetry monitoring, patient costs decrease, and there is reduced alarm fatigue for nurses and unnecessary telemetry tasks giving nurses more time to focus on other nursing tasks. The project of a nurse-driven protocol to discontinue unnecessary telemetry use was used in a medical-surgical inpatient unit.

Overview

During the pre-implementation stage, the project was approved by the Institutional Review Board. Before the project, baseline data were collected for four months, and unlicensed personnel trained as monitor technicians tracked the daily patient census. The monitor technicians tracked data by recording the date and time each monitor was initiated and discontinued. Existing staff and resources were used, and no additional cost or purchases was required. Personalized education on the American Heart Association practice standards was developed for the nurse-driven protocol (Clapp, 2022).

During the intra-implementation stage, a telemetry discontinuation protocol was developed by an intra-professional team comprised of three physicians, an advanced practice registered nurse, and three registered nurses. The protocol included only medical diagnosis derived from the community-based hospital site; it also included criteria for discontinuation and a quick reference guide for unit charge nurses to consult. The first step in implementing this project was familiarity with the nurse-driven protocol. Monday through Friday, three charge

nurses were educated on the protocol and were provided a quick reference guide and a telemetry discontinuation decision tree to see if the criteria were met for monitoring discontinuation without consultation with the ordering provider. During the 92-day project, the project developer and interprofessional team analyzed data to determine the effectiveness of the project. Out of 92 days, the protocol was applied on 73 days. The protocol was not used if one of the charge nurses was unavailable (Clapp, 2022).

Upon review and discussion of the post-implementation stage, by using the nurse-driven protocol, data collected by unit charge nurses on the number of monitors that were discontinued using the protocol, 45 telemetry monitors were discontinued without consultation of the ordering provider. There are some limitations of the project. Only three charge nurses participated and worked Monday through Friday, so the protocol could only be applied to a partial number of the possible 92 days of the project. Other considerations were time constraints, patient volume or patient acuity demands, preventing them from using the protocol on certain days, other responsibilities preventing protocol use, and other charge nurses unfamiliar with the project and protocol (Clapp, 2022).

Quality Improvement

An estimate of the daily cost of telemetry and an average estimate of dedicated nurse time for telemetry monitoring tasks amounted to a net saving for the facility of $3709.80 and an average of 30 hours of nurse time during this 92-day project period (Clapp, 2022). The areas of focus in the inpatient setting are reducing patient health care costs and continuously improving the quality and safety of a health care system. The QSEN quality improvement competency was met by assessing the quality of care using variation and measurement. This study identified gaps between local and best practices and measured their value in the role of quality patient care.

This project improved part of the health care professionals' daily work. It had value in measuring the role of exemplary patient care and cost-cutting measures for patient health care costs (QSEN Institute, 2020). The project also derived a protocol for telemetry discontinuation without providers' consultation with the ordering provider. This project allows nurses to advocate for patients and limited resources independently. The project reduced institutional financial encumbrance and reduced nurse-related telemetry tasks. The protocol has been implemented at the project site in all medical-surgical units (Clapp, 2022).

Application to Nursing

Practice

Health care costs are increasing at an unsustainable rate, and evaluating efforts to control costs is necessary. A growing concern for patients and clinicians is to determine whether it is possible to control costs while maintaining or improving the quality of care and how that can be obtained. Determining the difference between cost and value is important. Assessing an intervention's benefit, harm, and the cost is essential to determine if it provides good value. The assessment of the cost of the intervention should include not only the cost but any further costs that could occur as a result of the intervention. The cost-effectiveness ratio, which determines how much actual cost is required to obtain the intervention, determines the measure of the value of that health care intervention (Owens, 2018). As a result of the nurse-driven protocol, 45 telemetry monitors were discontinued without consulting the ordering provider. The estimated daily cost to provide telemetry to a patient was $82.44 per day. The average nurse time per shift to provide telemetry services to a patient was 20 minutes per patient per shift. The determined value of net savings was $3709.80 in 30 hours of nurse time (Clapp, 2022).

Education

One of the first steps in this project implementation was to guarantee that nurses were comfortable and familiar with the nurse-driven protocol. All nurses who participated in this project received personalized education on the American Heart Association practice standards and the nurse-driven protocol developed for this project. They were provided a quick reference guide and a decision tree to determine if a patient met the criteria for discontinuation of telemetry without consulting the provider. Nurses on the unit who were unfamiliar with the American Heart Association practice standards verbalized concern about discontinuing telemetry monitoring or the use of the discontinuation protocol during the project evaluation. A missed opportunity to provide targeted education to all unit members was identified (Clapp, 2022).

Research

Continuing the result of this study gained learning opportunities. Using this nurse-driven protocol is an opportunity to engage nurses as stewards of limited health care resources. Opportunities during the project were identified and should be addressed before implementation within the facility. One opportunity missed was recognizing that of 92 project days, the protocol was only used for 73 days. The limitation was due to charge nurse participation and other possible explanations that were evaluated regarding missed opportunities to use the protocol. A second opportunity to be addressed would be the clinical nurses' lack of understanding of the American Heart Association practice standards and the nurse-driven protocol developed for this project (Clapp, 2022). Providing more nurse availability, proper education, guidance, and familiarity with the nurse-driven protocol would provide more opportunities for better nurse time management for patient-centered care instead of nurse-related telemetry tasks and reduce the

need for consultation with an ordering provider. Providing continuous telemetry discontinuation would also effectively reduce institutional financial burdens and patient costs.

Conclusion

The QSEN competency of quality improvement utilized this data to monitor outcomes. It used improvement methods to improve the quality and safety of health care systems. This project evaluates the importance of variation by measuring and assessing the quality of care by estimating dedicated nurse time used for telemetry monitoring tasks and by estimating the daily cost of continuous telemetry. This study identified gaps between local and best practices, determined their value and exemplary patient care role, and determined further learning opportunities for changing processes and implementing the nurse-driven protocol. The project measured the effective change and acknowledged what can be done to improve nurse time management satisfaction, improvement, and cost of care (QSEN, 2020).

This study recognized a nursing-specific impact of a nurse-driven protocol to discontinue telemetry without consulting the ordering provider. This study was able to address a growing concern for patients and clinicians to be able to control costs while improving the quality of care. By evaluating the impact of the nurse-driven protocol's nursing practice, the study could determine the cost-effectiveness ratio and the value of the nurse intervention. As a result of the protocol, there was a net monetary savings of $3709.80 and a reduction of 30 hours of nurse time dealing with telemetry-related tasks during the study's timeframe.

The significance of this study was to determine if the use of continuous telemetry to monitor patients in the inpatient setting was cost-effective. As a concern of growing health care costs, evaluating the financial burden on the institution and the patient is essential. The study concluded that the cost-effectiveness of using a nurse-driven protocol to discontinue telemetry

without consulting the ordering provider was cost-effective. The study also addressed nursing-specific issues such as alarm fatigue and the reduction of unnecessary telemetry tasks, as well as delays and inpatient transfers due to the lack of telemetry monitors (Clapp, 2022). Another significance of this nurse-driven protocol is that it identifies local and best practices gaps.

References

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