BAR Reeves to the Use of Guardrails on IV Smart Pumps
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ABSTRACT

Medication errors involving hospitalized patients have been an evolving challenge for decades. Moreover, errors related to intravenous (IV) medication administration continue to rise in hospitals despite implemented policies governing the use of Guardrails™ for safe IV medication infusion via smart pump technology. An organizational investigation was performed to identify barriers to the use of Guardrails™ among nursing staff. From 2015 through 2017, multiple interventions that aimed to identify barriers and increase nurses’ use of the safety features on IV smart pumps were implemented in the hopes of reaching a compliance goal of 90-100%. This quality improvement project assesses Guardrails™ compliance with smart pumps since its initial integration in 2010 and through 2017. A systematic organizational assessment was conducted at a Magnet®-recognized facility in South Carolina to identify the factors that influence the use of Guardrails™ by nurses, implement changes based on the assessment, measure outcomes, and make recommendations for future change to foster continued progress towards the 90-100% benchmark. Participants included all nurses who utilized the smart pumps with Guardrails™ (N=2,500). The results provided insights into the factors that either succeeded or not through collaboration with numerous stakeholders, metrics on Guardrails™ utilization, IV medication error rates per month, and a pre- and post-project survey. The project offered valuable information that was used to implement changes that eventually resulted in an increase in nurses' compliance with Guardrails™ use, provided recommendations for sustaining compliance, and proposed updates to the facility's IV medication administration policy. The data results from the Guardrails™ compliance report and IV medication error rate between 2015 and 2017 provide enough evidence to suggest that a structured continuous education plan is essential to increase nurses’ awareness and adherence to policies and procedures governing the use of Guardrails™ on IV smart pumps.