Optimizing Thymoglobulin Administration: A Care Bundle Approach

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Introduction: Smart infusion pumps, and information systems have enhanced nursing practice, but awareness of our overreliance on technology must be considered to prevent adverse events. Infusion pumps are required to achieve optimal dosage and timing of Thymoglobulin infusion. This project addressed safety measures in daily nursing practice, including medication administration, documentation, and clinical alarm management.

Identification of the problem: IV Infusion pump assigned to administer Thymoglobulin to a kidney transplant recipient did not function appropriately, failing to deliver any medication, and failing to alarm, leading to subsequent adverse reactions. Nursing documentation reflected Thymoglobulin had been actively infusing on that failed pump. Inability to trace the infusion pump was also present in the event.

Purpose of the study: Our aim is to optimize care processes related to the administration of Thymoglobulin in kidney transplant recipients by using a care bundle approach.

Methods: Nursing staff in-services were provided on the Thymoglobulin care bundle interventions. Staff compliance with care bundle was reviewed through direct observation, surveys and patient chart audits: (1) Standard cell documenting Thymoglobulin and pump asset tag number, (2) 'Bag details' on the I&O Flowsheet, (3) 'Thymoglobulin Administration Note' when infusing a new IV bag, (4) Pump drug library selecting Thymoglobulin, and (5) Infusion pump alarm checks.

Outcomes/Results: Patients' charts were reviewed prior to in-service (n=20), and post in-service (n=32), for the presence of documentation elements of the care bundle. Prior to in-service, 80% of the charts demonstrated some elements of the care bundle. Post in-service, 91% demonstrated all the documentation elements of the care bundle. Post in-service Survey results revealed 80% of RNs were performing infusion pump alarm checks, versus 20% pre in-service survey results. Direct observations revealed 90% of staff used infusion pump drug library.

Discussion: Infusion pumps carry certain degree of risk of not working correctly, and nurses must mitigate this risk by ensuring the safety and effective performance of these devices.

Conclusion: The care bundle significantly improved documentation on Thymoglobulin administration, including management of Infusion pump alarms.

Implications for perianesthesia nurses and future research: RNs must rely on their expert monitoring of the patient and his/her environment to ensure patient safety. Continuous assessment of infusion practices is required to enable us to identify opportunities for process improvements.