

Optimizing Thymoglobulin Administration: A Care Bundle Approach



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Background

- Optimal dosage and timing of Thymoglobulin is imperative for the prophylaxis and treatment of acute rejection in renal transplant patients. Therefore, the intravenous (IV) infusion of Thymoglobulin via pump requires constant vigilance.
- While Smart pumps have enhanced nursing practice, staff over reliance on technology has contributed to infusion safety incidents, and near misses (Grissinger, 2019).
- Infusion safety intervention bundle has proven successful at reducing medication errors (Schnock et al, 2018)
- A care bundle addressing safety measures related to medication administration, documentation and clinical alarm management was developed to prevent Thymoglobulin infusion errors in the immediate postoperative period
- P – Kidney transplant recipients**
- I – Standardized care bundle**
- C – Individual interventions**
- O – Optimize Thymoglobulin Administration**

Methods

- This is a Quality Improvement Project
- Staff in-services, and one-on-one education was provided to Post-Anesthesia Care Unit (PACU) RNs on the importance of the interventions in the Thymoglobulin care bundle outlined below.
- Data on compliance with the care bundle was collected pre and post in-service from May-October through direct observation, patients' chart audits pre and post in-service, and staff surveys

Thymoglobulin Care Bundle

Use of a Standardized cell for Thymoglobulin & Pump asset tag number in the Input & Output (I&O) Flowsheet

Use of 'Bag Details' documentation indicating Bag number 1st, 2nd bag being infused, and bag volume in ml in the I&O Flowsheet

Use of Pump Drug Library selecting Thymoglobulin

Performing Infusion pump alarm checks on arrival to PACU, and during bedside shift report

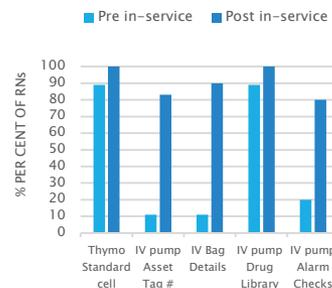
Results

Chart audits revealed that post in-service 91% of the charts demonstrated all the documentation elements of the care bundle, versus 11% pre in-service.

Post in-service survey results showed that 80% of RNs performed infusion pump alarm checks, versus 20% pre in-service survey results

Direct observations revealed post in-service 100% of RNs used infusion pump drug library selecting Thymoglobulin versus 88% pre in-service

Thymoglobulin Care Bundle Interventions



Discussion

The care bundle significantly improved documentation and clinical practice regarding Thymoglobulin administration, including management of infusion pump alarms

	30-Apr-2019 1400	30-Apr-2019 1500	30-Apr-2019 1600
Normal Saline (500ml)			
NS 500 ml	Bag info 1+ 40ml	1+ 40ml	1+ 30ml
Type Thymoglobulin	20	30	40
Infusion Pump Asset # 000000			

Infusion pump technology alone cannot fully prevent IV infusion errors. Infusion pumps carry a risk of not working correctly, and nurses must mitigate this risk by ensuring the safety and effective performance of these devices



References

- Schnock, K., Dykes, P., Albert, J., et al (2018). A Multi-hospital Before-After Observational Study Using a Point-Prevalence Approach with an Infusion Safety Intervention Bundle to Reduce Intravenous Medication Administration Errors. *Drug Safety* 41:591-602
- Grissinger, M. (2019). Understanding Human Over-Reliance on Technology. *Pharmacy and Therapeutics*, 44(6):320-321,375