



Errors made in the administration of intravenous medication can lead to catastrophic harm. The frequency of hospital settings in which medication pumps are being used are increasing. We sought to improve medication safety by implementing a 2-person verification system before medication administration”

Subramanyam et al (2016).

Abstract:

**OBJECTIVE:** Errors made in the administration of intravenous medication can lead to catastrophic harm. The frequency of hospital settings in which medication pumps are being used are increasing. We sought to improve medication safety by implementing a 2-person verification system before medication administration.

**METHODS:** Our quality improvement initiative took place in an anesthesia radiology imaging service at a tertiary pediatric hospital. Key drivers included frequent educational meetings with clinicians, written reminders, display of visual reminders, constant feedback in the clinical areas that carried out the processes, and sharing of knowledge on displayed run charts. A multidisciplinary team conducted a series of tests of changes to address the interventions. Data were collected and entered into a database by an independent and impartial data collector. Data were analyzed via run charts and statistical process control methods.

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**RESULTS:** The team ran 24 plan-do-study-act ramps. The rate of 2-person verification of infusion pump programming increased from 0% to 90% and was sustained. Overall, 4 errors were rectified before the medication was administered to the patient. There was no delay in case starts (>90% before and during the project). This project played a key role, as part of a larger initiative within the department of anesthesia, in reducing medication errors.

**CONCLUSIONS:** A brief 2-person verification approach can reduce medication errors due to inaccurate infusion pump programming. This improvement was achieved with the use of plan-do-study-act cycles. The impact can be significant and will promote a hospital safety culture.

Reference:

Subramanyam, R., Mahmoud, M., Buck, D. and Varughese, A. (2016) Infusion Medication Error Reduction by Two-Person Verification: A Quality Improvement Initiative. *Pediatrics*. 138(6).

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