Program...Validate...Infuse: Developing an IV Infusion Validation Tool

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Background:
- Medication errors negatively affect patient outcomes
- A serious IV medication error occurred on the Burn Center—it was time to take action

Purpose:
- Recent research reveals that user programming errors, bypassing of safety features, and overriding or ignoring alarms can all lead to IV infusion errors with smart pumps
- Nursing leadership in the Burn Center began working with the network Medication Safety Officer to brainstorm solutions to prevent future IV infusion errors

The ‘IV Infusion Validation Tool’ was devised to create a simple and easily accessible method to verify correct programming of an IV pump

Methods:
- The tool consists of a spreadsheet with a drug library containing all of the IV medications and concentrations used throughout the network
- One-on-one education and validation was conducted to ensure proper usage and compliance by each RN
- By entering the patient’s weight and ordered medication dose, the tool will calculate the correct infusion rate, which can then be compared to the rate calculated by the smart pump, ensuring that the IV pump is programmed correctly before the start of an infusion

Implications:
- ZERO IV medication infusion errors have been reported in the Burn Center since implementation of this tool
- Staff report the tool is user friendly and offers a simple and effective method to decrease IV infusion rate errors

Future Plans:
- This tool will be implemented network wide as part of an action plan to prevent IV infusion rate errors

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