



December 21, 2017

Always think kilograms for weight-based medications

What happened?

Situation:

The patient weight was inadvertently entered in pounds (lbs) rather than kilograms (kgs) at the time of pump set-up resulting in the patient receiving too much IV Propofol.

Background:

While the patient's weight was entered and displayed correctly in the EMR, the patient's weight was entered into the smart pump in pounds rather than kilograms. Pumps are set up to default to kilograms as a risk reduction strategy, so there is no need to choose lbs versus kgs when entering a weight.

What went well? The error was caught because the patient's nurse realized that she was changing the bottle of medication more frequently for this patient than for another patient on the same medication and with a similar weight. The **rates** were very different even though the **weights** were similar. This caused her to investigate the pump settings. She was situationally aware and acted on her internal red flag.

What went wrong?

Assessment:

Beyond the initial set-up error, some missed opportunities included, 1) while the medication was titrated, it was titrated well above the general practice cut-off of 100 $\mu\text{g}/\text{kg}/\text{min}$; 2) during the period where the nurse was trying to figure out what was "off" about the IV administration, she had asked others to look at the set-up and no other nurses found the weight error; and 3) the eMAR clearly stated in several places what the correct rate range should have been but was not noticed by Nursing. Smart pumps are not linked to Epic. Additionally, there are no weight related alerts programmed into the pumps.

What are we doing?

Recommendations:

1. Always weigh patients in kilograms (an ECRI evidence-based practice) to decrease the likelihood of accidentally entering a weight in pounds.
2. Never take for granted a pump has been correctly programmed (catching these types of errors for one another is a form of mutual support).
3. Verify weight is in the correct units when verifying medication drips in general.
4. A hard stop of 120 $\mu\text{g}/\text{kg}/\text{min}$ for Propofol was added in the pump library to eliminate the risk of inadvertently administering an excessively high dose.
5. Situational awareness component – since most drips do not require a double check upon initiation, one way to accomplish the double check is to make it a practice to cross check the pump rate with the eMAR.

Contact SafetyMatters@hshs.org with questions or feedback