

**These findings support our assumption that potential serious harm can happen when IV infusions are administered with outdated drug limit settings due to delays in drug library updates on the pump” Hsu et al (2019).**

Reference:

**Objective:** Our previous study showed that the issue of drug library update delays on wireless intravenous (IV) infusion pumps of one major vendor was widespread and significant. However, the impact of such a delay was unclear. The objective of this study was to quantify the impact of pump library update delays on patient safety in terms of missed and false infusion programming alerts.

**Methods:** The study data sets included infusion logs and drug libraries from three hospitals of one health system from January 2015 to December 2016. We identified limit setting changes of any two consecutive drug library versions. We quantified the impact of using outdated drug limit settings by missed and false infusion programming alerts.

**Results:** Twenty-five updates of the drug library were released within the health system during the 2-year period with an average interval of 28.8 days. After a new library version was issued, it took at least 6 days for 50% of all pumps to become up-to-date and 15 days or more to reach 80%. All three hospitals had at least 16% of all IV infusions programmed with outdated libraries. This resulted in 18%, 24.4%, and 27% of false alerts in the three hospitals, respectively. We identified two cases of missed alert infusions of high-risk medications, propofol, and potassium chloride, which could have negatively impacted patient safety.

**Conclusions:** These findings support our assumption that potential serious harm can happen when IV infusions are administered with outdated drug limit settings due to delays in drug library updates on the pump.

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Reference:

Hsu, K-Y., DeLaurentis, P., Bitan, Y., Degnan, D.D. and Yih, Y. (2019) Unintended Patient Safety Risks Due to Wireless Smart Infusion Pump Library Update Delays. *Journal of Patient Safety*. 15(1), p.e8-e14.

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