

Abstract

Introduction:

The data surrounding smart pumps operating on outdated drug libraries is limited. When the infusion process becomes abnormal, it can cause smart pumps to fire alerts. Overwhelming amounts of alerts can cause a decrease in responsiveness, commonly known as alert fatigue. When alerts are overlooked, it can lead to harm in patient care.

Methods:

This study is a retrospective descriptive analysis. All nine facilities in the Illinois Region of the Hospital Sisters Health Systems (HSBS) were included. These nine facilities contained 1548 smart pumps combined. The study contained three objectives. 1. To assess the alert impact caused by smart pumps operating on outdated drug libraries versus updated drug libraries. 2. To update 50% of the outdated smart pumps located at St. Elizabeth's Hospital. 3. To educate the pharmacy department of the alert risk associated with outdated drug libraries. The primary measure was to calculate the number of alerts fired by outdated drug libraries versus updated drug libraries. The secondary measure was to calculate the number of alerts reduced after updating the outdated drug libraries.

Results:

Outdated drug libraries can cause smart pumps to fire 20 more alerts than a pump running on an updated drug library. The risk for firing 600 alerts per month was reduced after updating 30 outdated drug libraries.

Conclusions:

Utilizing smart pumps operating on outdated drug libraries creates a higher risk for firing alerts. This increases the risk for medication errors to occur. Keeping smart pump drug libraries updated is essential for minimizing alert fatigue.