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Descriptive Report

Title: Scavenger Hunt Towards Smart-Pump Standardization Across New York Presbyterian Healthcare System.

Purpose:
Development and implementation of a standardized smart-pump drug library across 7 campuses within the New York Presbyterian Health Care System.

According to the national survey by the American Society of Healthcare System Pharmacists in 2012, about 77% of United States' hospitals have embraced intravenous infusion pump technology (smart pump technology) as an innovative method to decrease medication errors and ensure patient safety. The utilization of smart pumps in the administration of intravenous medications helps improve patient outcomes. However, without proper regulations and standardization of these smart pumps' drug libraries, these pumps can become a major source of medication related errors.

Methods: Pharmacy Administration, Biomedical Departments, and Nursing Staff were surveyed along with a physical search of all smart pump devices across 7 hospitals within the New York-Presbyterian Health System regarding the utilization and regulation of Smart Pump Technology. The compiled data included which manufacturers supplied the respective hospitals with their Smart Pump technology, how many of each unit were present, the locations of the units throughout the hospital, how the specific pumps were being utilized for patient care, whether or not the Smart Pump had a drug library present, what software exists to create or edit the Smart Pump drug library, who can maintain or edit the drug library, if discrepancies exist between the drug library and the hospitals EMR (patient electronic medical record), and if discrepancies exist between the drug library and the standard NYP Formulary.

Results: A total number of 9,817 smart pumps, among which 6809 infusion pumps,1031 syringe pumps, and 1069 patient- controlled analgesia pumps, are in use in all 7 surveyed hospitals. During initial exploration many discrepancies were identified across the collection of pumps among each hospital. Such variations include pump version/manufacturer, utilization of same model pumps, presence/contents of drug library, and capability of containing a medical drug library. Also, some discrepancies or ambiguity were found between the drug libraries, individual hospital's EMR and the NYP Formulary.

Conclusion:
Completion of a standardized single drug library for all infusion pumps across the hospitals within the NYP healthcare system may take several months due to the current library version variation, and implementation strategy of actively used pumps. A thorough survey and validation of each device helped to identify an opportunity to standardize across all campuses in a much more efficient manner. A scavenger hunt concept was conducted within one week of all campuses to obtain the data required towards standardization.

References

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