Within 100 Days: Boston Children's Hospital Rapid Cycle Improvement of High Value Medical Equipment and Availability

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Introduction

Executive Sponsors within Boston Children's Hospital (BCH) asked a group of individuals throughout various within the organization to improve the tracking and availability of all parts of the Infusion Pump System. After a successful go live in July 2014, there were several instances where modules could not be located throughout BCH and were thought to be "stolen." The RCI team was then asked to improve the distribution and tracking of all high value equipment- starting with Infusion Pumps- to be completed within 100 days.

Method

A multi-disciplinary team was formed with BioMed, Pharmacy, Nursing, Information Systems Department and Supply Chain to 1) evaluate potential options for distribution and tracking of high value medical equipment; 2) benchmark case experiences at other hospitals and 3) explore implementation options for an automated tracking system. While keeping cost savings, efficiency, productivity and regulatory compliance as key guiding principles, the team was asked to improve the availability and tracking of the complete pump system. The goal was to have pumps consistently available for patients and clinical staff when needed. Success required a measurable result that included metrics such as: (a) time it takes for pumps to be found and delivered- within 5 minutes, (b) stable par levels in the central equipment pool and/or (c) proactively addressing clinical need to ensure equipment is always available. The team met weekly for 12 weeks during which design, build, implementation, support and education of a new application to staff was completed.

Results

The Rapid Cycle Improvement team had two goals to be completed: 1) By 1/1/14, ensure pumps are available within 5 minutes from request to patient for 1 model month. This was reached successfully, based on baseline time of 16 minutes. Goal 2, by 1/1/14, to ensure pumps on 10 South are 100% trackable for the model month - was also met successfully, if the pump was manually scanned.

Discussion

While Nursing loved specific tools that were introduced with this pilot (Wireless Scanners, Tap/Go Solution, Par Level Standards); the request for all nursing to manually scan all pumps all the time was too great. Inconsistent scanning created inaccurate inventory levels resulting in frequent need for reconciliation. The roles and responsibilities of who/when would be cleaning the pumps needs to be implemented. Alerts and Notifications to Supply Chain on when Par was hitting a specific level were instrumental in keeping levels at a satisfactory level. The RCI Team believed that the work that was required with this project was fun and mad cross department relationships stronger, while building trust and confidence within these teams and with the end users.

Next Steps

The RCI team recommended piloting an automatic RFID solution to the executive sponsors. While also, engaging institutional ownership of equipment tracking, cleaning of equipment and maintaining satellite equipment location area.

References:

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