Summary

Nanaimo Regional General Hospital is the first acute care site to utilize bar code scanning technology on the island. Bar-code scanning of patients and medications is an important component of a Closed Loop Medication System (CLMS) that aims to maximize patient safety by improving positive patient identification (PPID) and verifying medications at the point of medication administration. High bar-code scanning rates for patients and medications during bedside administration is linked to reduced medication errors. This technology was implemented in March of 2016 as part of the EHR activation. Three years after go live scanning rates were suboptimal so decision was made to launch a cross site initiative for two key purposes:

I. To understand why there is difference between scanning rates for patients and medications within specific units as well as for the site as a whole
   - To identify barriers to scanning patients and medications by unit and for the site as a whole (workflow, staffing, equipment, & others)
   - To identify, select, implement and evaluate options for bar-code scanning compliance
   - To outline on-going monitoring and compliance processes and tools to ensure sustainability of positive outcomes

II. To learn from NRGH experience to inform regional work and future site activities

Identifying Barriers to Scanning

Root cause analysis is an approach for identifying the underlying causes of an issue so that the most effective solutions can be identified. As a very first step our clinical leadership team got together to gather the current knowledge of the ‘why.’

16 inpatient areas

70% target for patient scanning

19.2% improvement

 Learning from DATA

Changes that result in improvement

PDSA Cycle 1: Site Engagement

Getting out the ‘why’ behind the work. Posting and discussing scanning rates

PDSA Cycle 2: Leveraging Corporate Support

Learning how to tap into our corporate resources and the value they bring:
- Pharmacy
- Clinical Informatics
- Patient Registration
- Medication Safety
- Professional Practice
- Device Management
- Decision Support
- Process Improvement

PDSA Cycle 3: Use of Individual Data

Understanding how data can be utilized to support learning and to create awareness of individual scanning rates and accountable practice

Key Achievements and Learnings

How do we use data in a supportive and non-punitive way?

- Site leadership now has access to individual scanning rates. As part of the validation process and to continue learning, unit leadership are having follow up conversations with individual nurses based on their individual scanning rates. Conversations are focused with nurses who are well above or well below the 70% site target and help validate the data, understand the barriers further and hear their experience with the medication administration process. If required, the CNES & CNLs provide education and support to frontline users.

How do we include other disciplines to improve care together?

- Clinical Informatics: eliminated free text area for bar code scanning to account for human factor.
- Device Management: reviewed all meds to ensure they are physically scanning; clarified perceived processes by clinical staff around scanning; conducted a cost-benefit analysis of best practice and provided recommendations for patient registration bands; perform regular checks of all scanning devices and WOWS.
- Patient Registration: send new bands to the inpatient units for those patients whose length of stay is greater than 30 days.
- Pharmacy: initiative to increase scanning by using pigtails; continue improving process to report meds that are not scanning; work with manufacturers for meds that don’t scan.
- Decision support provided weekly data reports by site and by unit.

How do we start the conversation and inform practice change?

- Team work: interdisciplinary working group was created to understand the context behind the results and to look at what we can do to improve. Weekly focused discussions at the site Quality meeting
- Cohesive operational leadership: clinical leaders discuss the results and importance of this work with staff
- Consistent communication: weekly progress updates around what needs to be done and next steps.
- Presentation and use of data: scanning data was distributed weekly to clinical leads and posted on Daily Visual Management boards.

Our Working Group:

Sponsors:
- Dr. Mary Lynne Fyle: Chief Medical Information Officer, Innovation, Analytics & Information
- Richard Jones: Director of Pharmacy Services, Pharmacy
- Dawn Nesdicksi: Chief Nursing Officer, Chief Nursing Office

Operational Leads:
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