

Benchmarking Bar-Code Med Administration

Diane Menasco RNC, BSN, Kenneth Stewart RPh

North Shore Medical Center, Salem MA, Partners Healthcare System

Introduction and Background

When first implementing a barcode medication administration system there are many critical decisions; equipment, vendor selection, and workflow changes for nursing and pharmacy. Data analysis, customized reports, and metrics demonstrating outcomes are furthest from most peoples' minds. However, once systems are in place and data starts to flow, the obvious question is "how are we doing?" In the fall of 2010 a group of five hospitals from the New England region agreed to start a benchmarking project, across hospital systems, focusing on "Wrong Patient" events averted. Using the same proprietary BCMA product and the same SQL query provided a valid benchmarking methodology.

Methods

Legal guidelines were agreed upon to permit data sharing without patient-specific PHI. A common language was established to refer to data elements and report criteria. Data collection began in February 2011 with the original five hospitals. Currently nine hospitals are participating anonymously.

- All hospitals are using the same proprietary BCMA system: Siemens Med Administration Check (MAK). The system provides a basic SQL query to confirm "Wrong Patients" scanned each month/unit.
- An SQL query was provided by NSMC for the group to use as a reference to confirm "Total Patients" scanned each month/unit
- Participants were also asked to run the provided report from Siemens tallying number of Charted Medications/month/unit
- Each hospital was provided with a data entry workbook in the form of an Excel sheet which they returned to NSMC monthly
- Data is graphed and trended by type of patient care unit (Medical, Surgical, ICU, OB, & Telemetry).

Results

After initial data analysis, in August 2011, from the initial five hospitals, it was evident more time and more participants would be needed for a significant BCMA benchmarking work. The group was announced on the Siemens MAK listserv. This yielded interest from many hospitals, four of which joined the group by January of 2012. Data trends emerged as like units were graphed; however the sample size was too small to reach any firm conclusions. The group was very interested in continuing to work together and encourage other Siemens MAK sites to join the study.

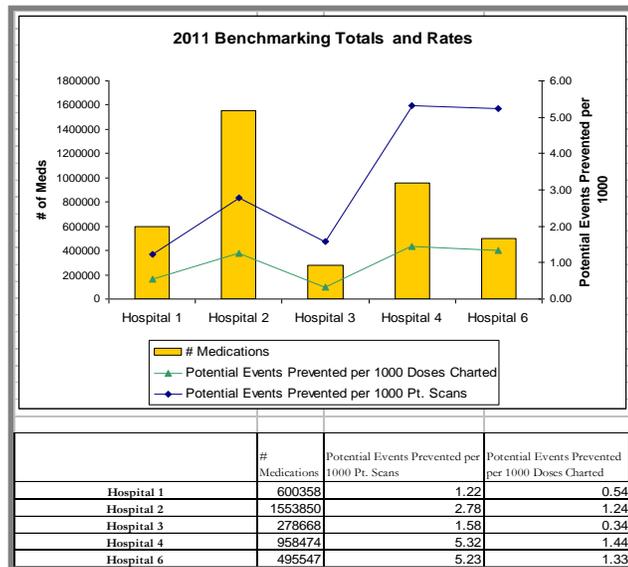


Table 1: 2011 Overview Graph of Like Units for:
Meds Administered/Potential Events Prevented per 1000 Doses Charted/Events Prevented per 1000 Patients Scanned

Discussion

Our work generated the following questions for us to consider as we move forward with this evaluation:

- Are the graphing trends due to workflow issues? What role does Nursing Policy play?
- How is Aging equipment versus superior equipment a factor?
- Are hospitals that trend at the top of the graphs simply deriving more benefit from the BCMA system?
- As the group moves forward comparing data we have hopes of establishing best practice guidelines for BCMA.