



Implementation of the Epic Rover App[®] to improve barcode-assisted medication administration compliance among nurses in the Adult Emergency Department



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Introduction

Barcode-assisted medication administration (BCMA) systems are integrated in hospital's electronic health record (EHR) systems to promote safe and accurate medication administration. Previous studies have shown that BCMA systems can reduce medication errors by 40% to 70% in hospitalized patients.

Objectives

The purpose of this quality improvement project was to achieve the desired benchmark of 95% or greater compliance with using the BCMA system for administering medications in the emergency department.

Methods

A quality improvement project was conducted in two phases over an eight-month period. ED nurses lead BCMA education sessions, provided individual monthly compliance report cards, and one-to-one sessions with nurses who demonstrated challenges with using BCMA. The ED leadership team used a multidisciplinary approach to resolve any issues with BCMA which involved meeting with pharmacists, providers, and members of the Comprehensive Unit-based Safety Program (CUSP) committee. In this before-and-after study, we evaluated nurses' compliance with using BCMA during Phase I, then piloting the Epic Rover App[®] in Phase II. The documented total use of the BCMA system among nurses for medication administration in the ED was compared to the total overall hospital-wide use of BCMA.

Results

The initial BCMA compliance among nurses in the ED was at 77%, well below the overall hospital average of 90% (Figure 1) and had not met the 95% benchmark. During Phase I, BCMA compliance was at 82% and reached to 95% by the end of phase II, successfully meeting the desired hospital-based benchmark. The percentage of nurses with 95-100% increased from 6% to a high of 64% by the end of phase II.

Conclusion

BCMA usage among nurses in the ED improved after initiation of the education program and the Epic Rover App[®]. Implementing the Epic Rover App[®] proved to consistently increase nurses' compliance with BCMA over the three-month pilot period (Figure 2). The Epic Rover App[®] serves as a sustainable solution to improving nurses' compliance with using BCMA systems in all clinical setting. The results of this pilot are generalizable as BCMA is currently being used across five hospitals in the JHH health system.

References

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BCMA Compliance – Pre and Post Epic RoverApp Implementation

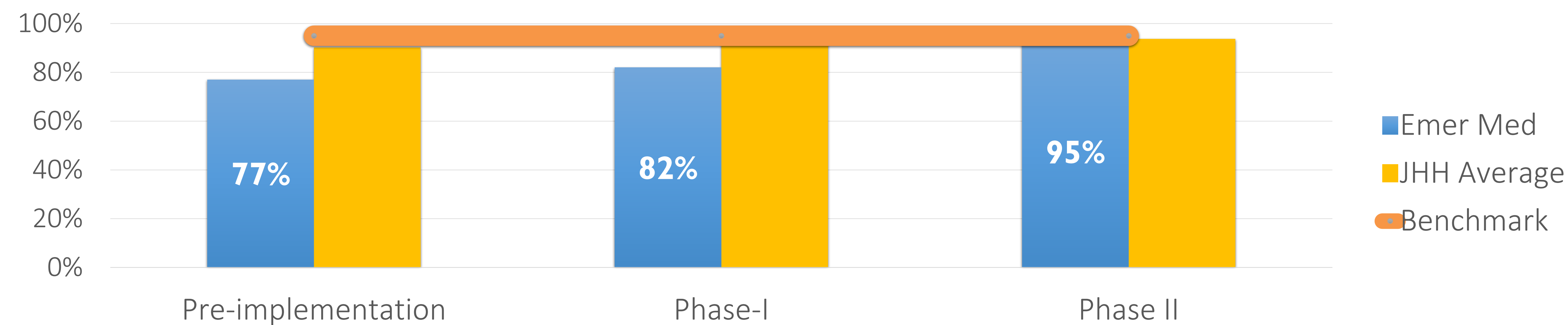


Figure 1

BCMA Compliance Rates - Jan '17 - Jan '18

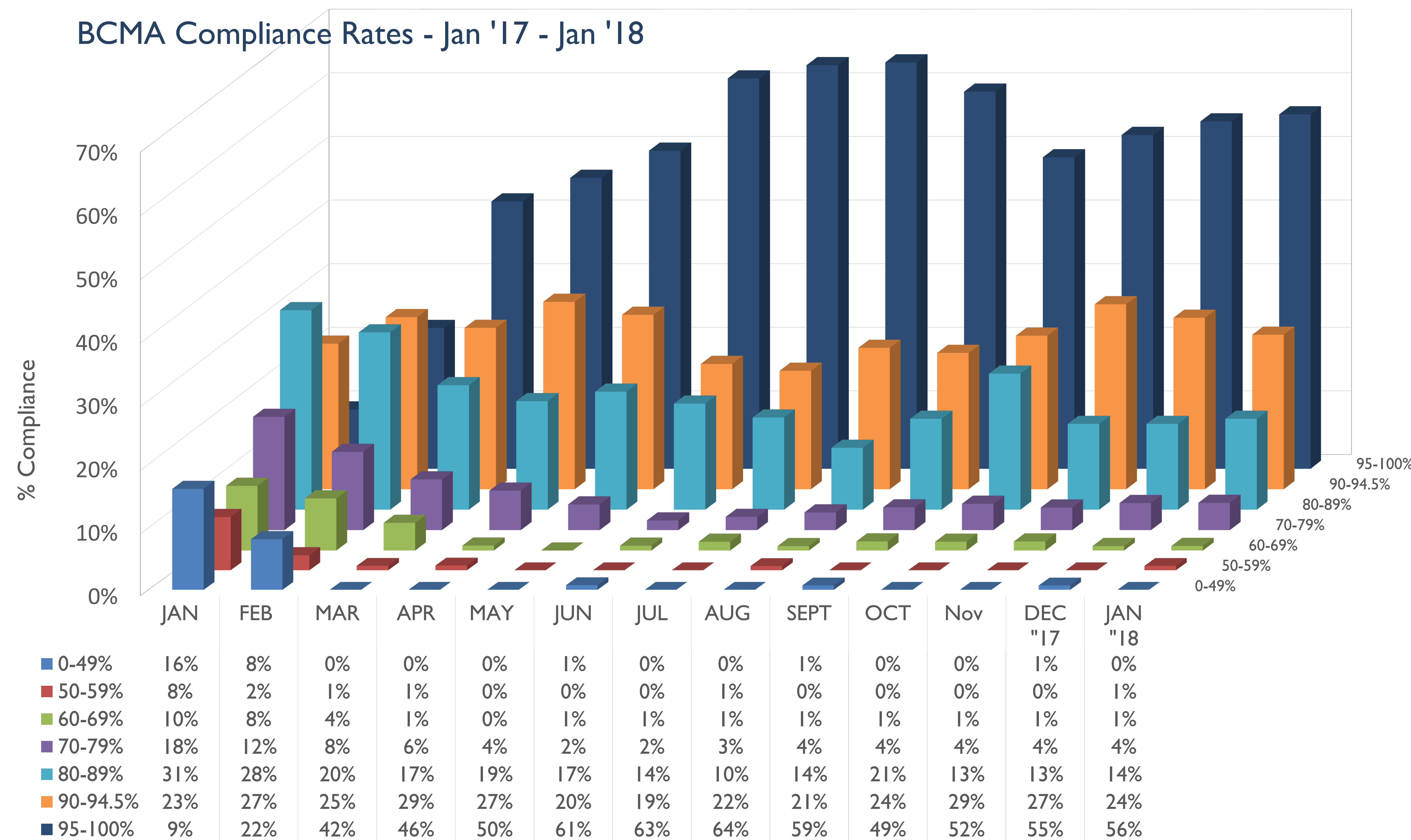


Figure 2