

Background



Barcode-assisted medication administration is an effective tool in reducing medication errors (Hutton et al., 2021).



Problem: Despite the hospital quality and patient safety goal of 95% compliance, BCMA scores were below expectations in the pre-op and post-op units at a large academic institution. Non-compliance with BCMA can pose significant risks to patient safety (Mulac et al., 2021).



Purpose: identify and address barriers to BCMA to promote increased compliance, meet hospital goal and support safe medication administration.

Methods & Findings

Information was audited using the hospital's electronic health software. Interviews and observations were also conducted with bedside nurses and to determine the root causes of non-compliance. The variables to BCMA use included:

1. POOR WI-FI CONNECTIVITY
2. LACK OF PERSONAL DEVICE CHARGERS
3. NO BARCODE ON PACKAGING
4. SHORT BATTERY LIFE ON MOBILE DEVICE
5. OUTDATED DEVICE SOFTWARE
6. FADED BARCODE INK ON PATIENT ID BRACELET
7. LOCATION OF DEVICE CHARGING STATION
8. AMOUNT OF CHARGING STATIONS

Implementation

3 Months of Implementing

Over the course of three months, we implemented the following interventions to help combat BCMA scanning barriers.

1 Education

- 1:1 counseling with nurses who's monthly BCMA score was less than 95%.
- Provided tutorials about how to check individual scores
- Educated nurses how to ensure their work phone had the latest iOS software update
- Encouraged nurses to leave their mobile devices on the unit's central charging station before going off duty.

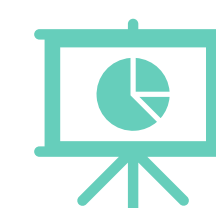


2 Acknowledgement

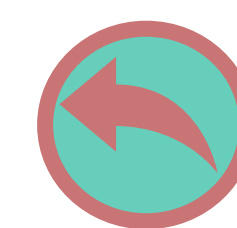
Publicly praised nurses who achieved 100% compliance at huddles.

3 Collaborate

- Troubleshooted with our IT department on improving Wi-Fi connectivity.
- Collaborated with our pharmacy department to create barcodes for medications that lacked them.



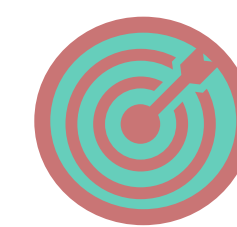
Results



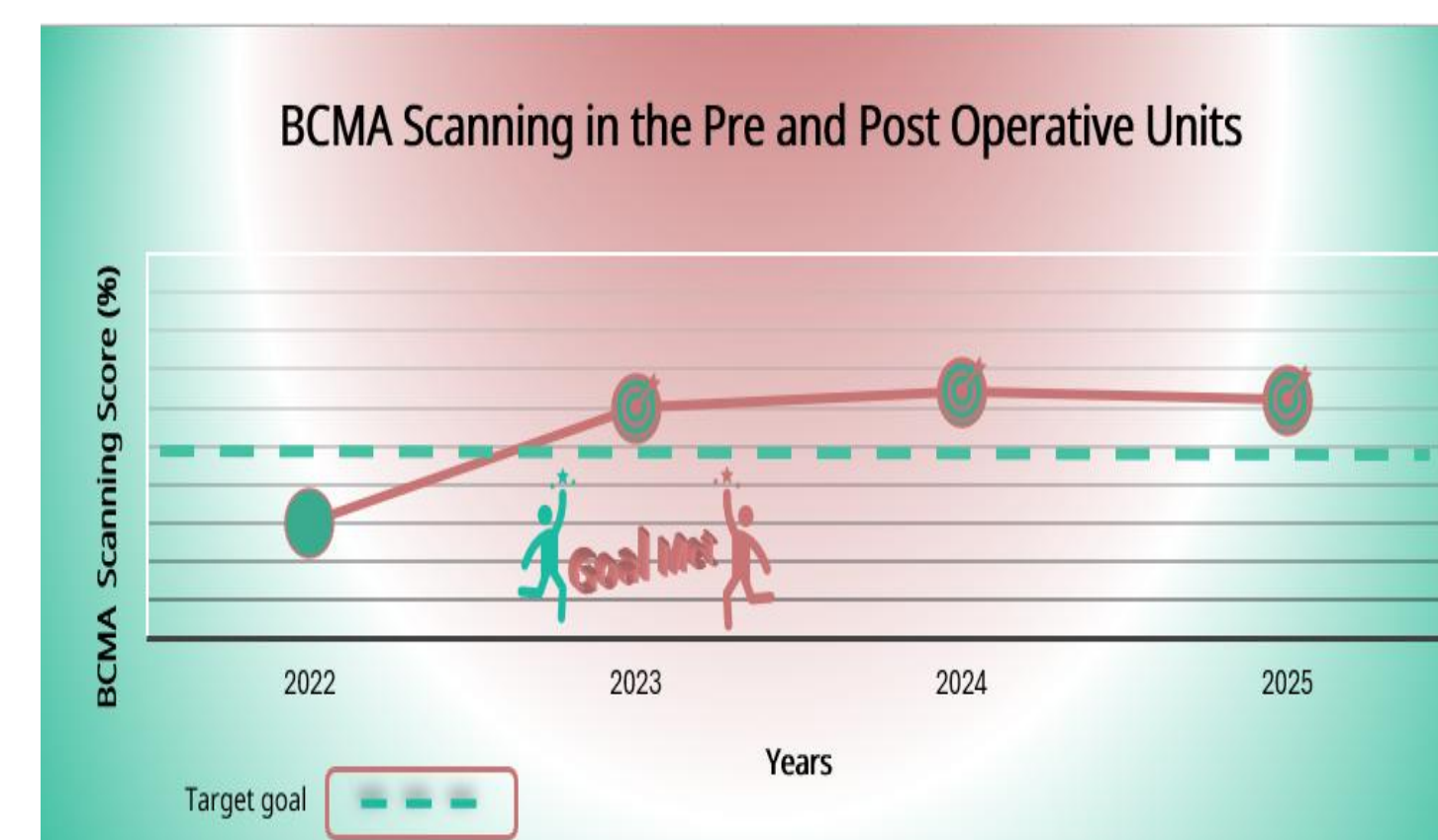
Pre-intervention: BCMA compliance in the pre-op and post-op units nearing hospital goal.



Compliance increased during the intervention period between September to November.



The BCMA compliance target was met and has been sustained over the last two years.



Discussion

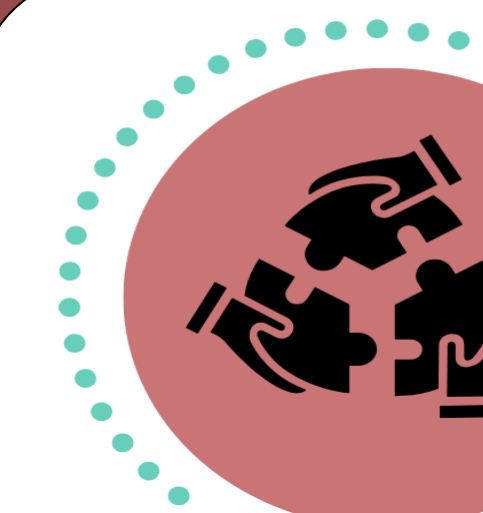
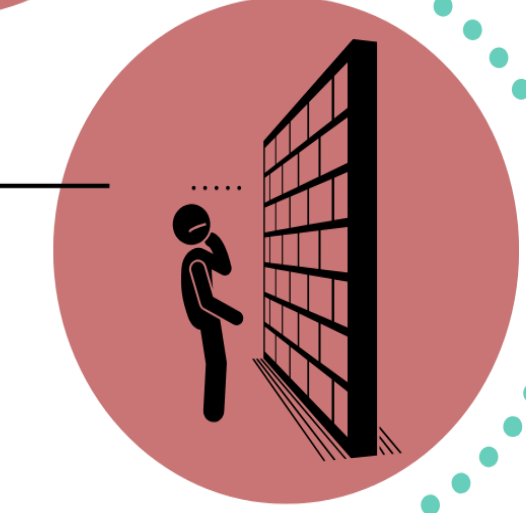


Safety

Bar code-assisted medication administration can significantly contribute to safe medication administration and prevent patient harm (Ye, 2023).

Barriers

Despite knowledge of its benefits, nurses may be non-compliant due to technical issues associated with the device. Identifying these barriers is key to promoting compliance (Mulac et al., 2021).



Collaboration

These results demonstrated that interdisciplinary collaboration between nursing, pharmacy, and IT can help enhance barcode scanning use and streamline safe medication administration.

Implications for Peri-Anesthesia Practice

- ❑ BCMA scanning plays a vital role in the safe administration of medications preoperatively and post operatively (Austin et al., 2022).
- ❑ It is imperative for nurses and nursing leaders to review the current data in order to find trends and patterns that negatively impact compliance.
- ❑ Continuously analyzing the data allows for evaluating past and future implementations.

References

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