# SBH Leading the Way with Knowledge- Based Medication Administration for Patient Safety

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# Overview/project description

### Background:

Compliance with Knowledge- Based Medication Administration (KBMA) utilization was below the SBH standard and jeopardized patient safety. In accordance with the Agency for Healthcare Research and Quality and the National Institute for Health have identified how the utilization of barcode medication administration reduces medication errors and improving patients safety exponentially.

The Joint Commission has identified medication safety as of the 2022 National Patient Safety Goals utilizing medications safely and identification of patients correctly.

Patient Safety is one of the highest priorities for Saint Barnabas Health System. Ensuring proper patient identification and proper medication administration was identified as an immediate performance improvement initiative for the Intensive Care Unit (ICU). Therefore, an interdisciplinary team supported ICU including IT, Nursing Leadership, Pharmacy, Senior Leadership Physicians, Staff Nurses and VP of Nursing Quality and Informatics.

## **Goals/objectives**

#### Goals:

Short term goal: To ensure the safety of medication delivery to our patients by improving the utilization of Knowledge Based Medication Administration ( KBMA) to over 80% within the time frame of 3 months in ICUs.

### Long term goals:

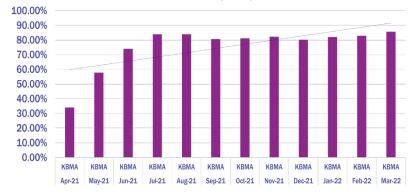
- 1. To sustain the utilization of KBMA compliance to over 80% in ICUs and as evidenced by the use of a systematic standardized process developed by the interdisciplinary team.
- 2. To establish as a long term goal the optimization of systems and processes to achieve KBMA compliance of 100% in ICUs.

## Methods/ Measurements

- 1. Systematic approach utilizing both quantitative and qualitative initiatives to identify opportunities for improvement.
  2. Incorporating an interdisciplinary team to focus on operations, equipment needs and educational opportunities.
- 3. Team approach to do unit tracers and to observe medication administration, utilization of KBMA scanners, and computers.
- 4. Daily reviews of KBMA dashboards for compliance on the units.
- 5. Random observations by the Nursing Directors during medication administration to ensure that bar coding was utilized.
- 6. Identified any 'gaps' in real time and they were addressed.

## **Results/findings/conclusions**





Findings: Significant improvements on the overall utilization of KMBA within ICUs. Comparatively, our compliance rates improved from 30% in 2021 to 80% and more in March of 2021. We have steadily sustained our compliance rates over 80% in the ICUs areas.

### References

Deyong, II.; Vanderkooi, ME; Barletta JF. Effect of bar-code-assisted medication administration on medication error rates in an adult medical intensive care unit. American Journal of Health-System Pharmacy, [s. l.], v. 66, n. 12, p. 1110–1115, 2009. DOI 10.2146/ajhp.080355. Disponível em: https://search.ebscohost.com/login.aspx?direct=true&uthType=shib&db=ccm&AN=10536329&site=eds-live&scope=site. Acesso em: 3 feb. 2022

Mulac, A., Mathiesen, L., Taxis, K., & Gerd Granås, A. (2021). Barcode medication administration technology use in hospital practice: a mixed-methods observational study of policy deviations. BMJ quality & safety, 30(12), 1021–1030. https://doi.org/10.1136/bmjqs-2021-013223

Thompson KM, Swanson KM, Cox DL, Kirchner RB, Russell JJ, Wermers RA, Storlie CB, Johnson MG, Naessens JM. Implementation of Bar-Code Medication Administration to Reduce Patient Harm. Mayo Clin Proc Innov Qual Outcomes. 2018 Nov 26;2(4):342-351. doi: 10.1016/j.mayocpiqo.2018.09.001. PMID: 30560236; PMCID: PMC6257885.

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