

## Background

- In 2020, the UC Davis Medical Center Medical ICU (MICU) experienced an increase in catheter-associated infections parallel to the COVID-19 pandemic
- Patients required complex care plans and sophisticated avenues of care, resulting in longer dwell times of necessary catheters and tubes
  - Prone position for days to weeks
  - Continuous dialysis
  - Prolonged periods of continuous infusion medications that require central access for administration
- Considering the increasing care plan demands on nursing staff, a growing importance of reinforcing proper central line care developed

## Purpose

The purpose of this project was to specifically improve central line-associated blood stream infection (CLABSI) rates in the MICU and optimize patient outcomes.

## Methods

Three main interventions of action and education were implemented:

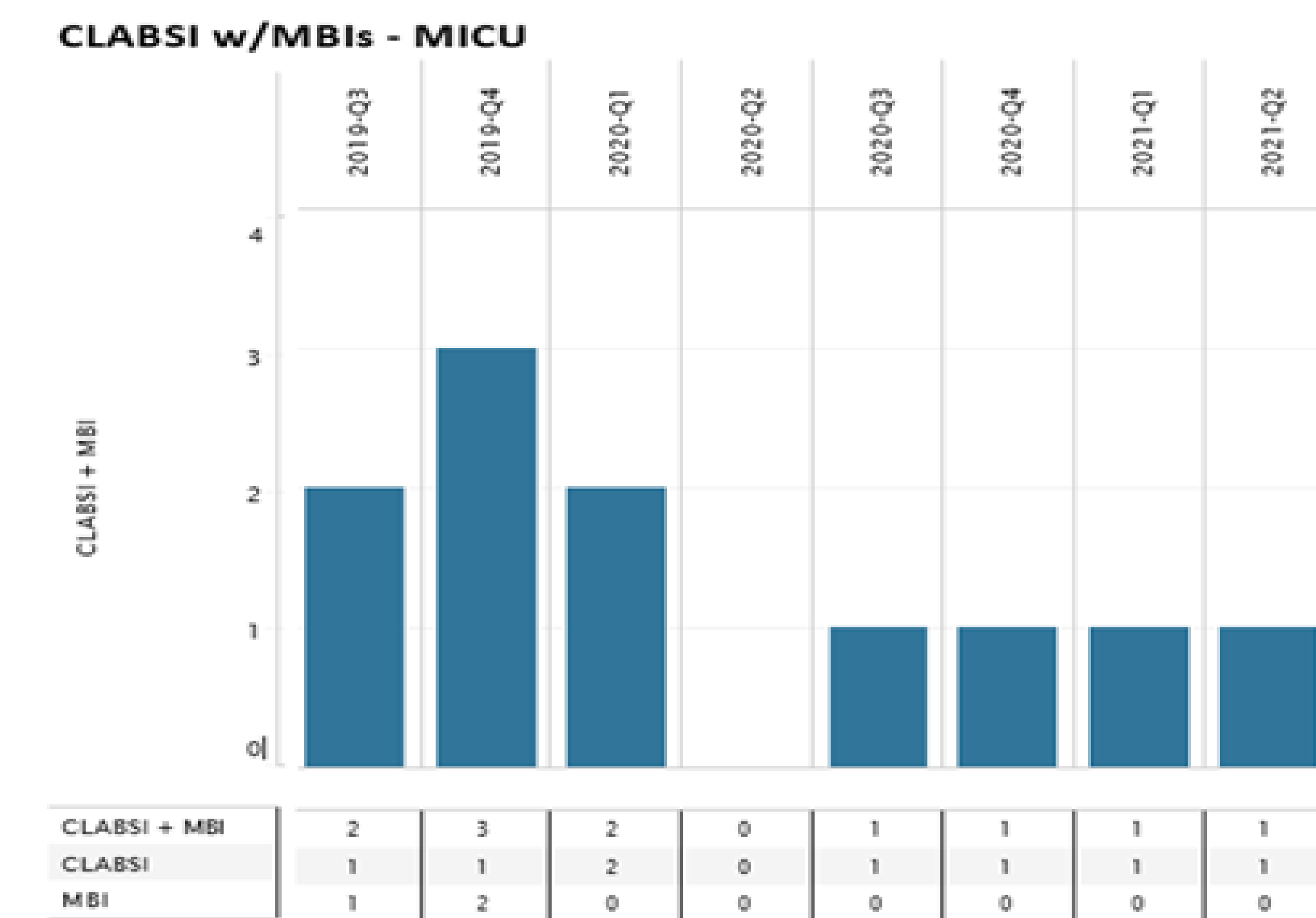
1. Nurses place first dressing on newly inserted central lines
2. Informational session using Glo Germ Kit and teaching central lines to reinforce cleaning practices
3. Information board adapted to educate on the fundamental care practices needed for central lines

## Implementation



## Findings

- 4 CLABSI cases in 2019 → 4 CLABSI cases in 2020 (to third quarter of fiscal year) despite the execution of these interventions, excluding MBIs
- Staff provided positive feedback regarding nurses placing central line dressings after insertion
- Education sessions informative



MBIs: mucosal-barrier infections (excluded from infection counts)

**100% of MICU CLABSI cases in 2020 were resulted in COVID patients that had been prone at some point during their hospital admission**

## Conclusion

- No change in CLABSI rates following interventions
- Continued reminders and small educational opportunities will help facilitate improved care practices in reference to central lines
- An emphasis on education for adaptations for prone patient care

## Limitations

- Time and access to staff for in-services with social distancing and remote access
- Inundation of information to staff each shift during pandemic making implementation and retention difficult

## Further Interventions

- In prone COVID patients, there is a demand to adapt to changes in conventional tube and line care
  - MICU Unit-Based Practice Council hopes to investigate further how staff can adapt their care of central lines in this patient population



## References

1. McGurk, K, Riveros, T, Johnson, N, Dyer, S. A primer on proning in the emergency department. *JACEP Open*. 2020; 1: 1703–1708. <https://doi.org/10.1002/emp2.12175>

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