# MARIAN UNIVERSITY Indianapolis ——®

### Problem

- University in the Midwest with newer nurse anesthesia program covered MH in multiple lectures but no simulated MH crises were offered
- Mock drills are an invaluable way of replicating rare real-life scenarios
- Simulations ensure clinician readiness if such cases arise in the clinical setting.

## PICOT

• Will SRNAs at a private university in the Midwest have improved MH knowledge and retention following an hour-long MH lecture and simulated crisis compared to their knowledge prior to the educational intervention?

### Evidence

- Pre-test and post-test interventional design used to gather qualitative data
- Results analyzed for knowledge improvement/retention
- Primary aim:
  - Improve SRNAs' MH education to enhance crisis recognition and response

# Simulation-Based Training for Student Registered Nurse Anesthetists Managing Malignant Hyperthermia Hilda Aveja

BSN, SRNA

# Methods

- Convenience sampling
  - Recruitment of all SRNAs via email invitation
- Setting:
- University's simulation center
- Pre-test
  - Established MH knowledge baseline
  - n = 32
- MH lecture
- MH crisis simulation
- MH Key Action Checklist
  - 10 groups observed
- Simulation debriefing
- Post-test one
  - Provided immediately after debrief
  - Evaluated for MH knowledge improvement
  - n = 31
- Post-test two
  - Provided six to eight weeks after the intervention
  - Evaluated for MH knowledge retention
  - n = 12

# Outcomes

- MH Key Action Checklist • Groups collectively received mean score of 29.1/30.
- Knowledge improvement (paired t-test)
  - Mean score from pre-test to post-test one increased 2 points (95% CI [1.52-2.5]) (p <0.05).
- Knowledge retention (paired t-test)
  - Mean score from pre-test to post-test two increased 1.3 points (95% CI [0.83-1.83]) (p < 0.05).

# •MH Key Action Checklist

•Groups scored well •Use of visual guides or checklists are important for guiding treatment during a

CT1S1S

•Effective teams delegate roles, use closed-loop communication, and have frequent check-ins

•Effectiveness of educational intervention •Participants had statistically significant improvements in their post-tests scores •Results support the proposal that simulation-based training will improve MH knowledge and retention among

SRNAs

•Limitations

•Small sample size •Higher attendance from fist and second year SRNAs

•Future recommendations

•Replication this project in other settings can further validate its findings and ensure its applicability







# Conclusion

## References