

Implementing a Comprehensive Open-Heart Program

Rose Sullivan, BSN, RN, CCRN, SCR.N & Mayette Rasco, BSN, RN, CCRN-CSC
Houston Methodist Sugar Land Hospital
Sugar Land, Texas

Background/Introduction

Houston Methodist Sugar Land Hospital is a 350-bed not-for-profit, faith based, twice designated Magnet hospital. The Surgical Intensive Care Unit (SICU) is a 20-bed unit Beacon designated by the American Association of Critical Care Nurses (AACN) since 2014.

Critical care is challenging with various levels of knowledge, skills, and abilities of the critical care nurses in a general SICU that care for patients after open-heart surgeries, neurosurgery, neurovascular, breast flaps, and abdominal surgeries. General SICUs can be more challenging than specialized units due to the variability of the patient population. This variability along with staff turnover and an increase in CV volumes led to the development of the CV Bootcamp (CVBC).

Purpose

The purpose of the comprehensive Cardiovascular (CV) Bootcamp is to provide the didactic, skills, and experiential learning to prepare critical care nurses to have competence and confidence in caring for CV patients.

Methods

The CV Bootcamp is a 3-month training program for SICU nurses with collaboration from the multidisciplinary team members. Four CV Bootcamps have been offered since October 2022 which include:

- ❖ Pre-assessment exam to gauge baseline CV knowledge
- ❖ 2-day program to provide didactic and hands-on simulation
- ❖ Three follow-up exams to determine knowledge retention and progression of critical thinking
- ❖ Open-heart surgery observation in the OR
- ❖ Five orientation shifts with a preceptor (& more if needed)
- ❖ Monthly mini-CV series featuring topics such as: open chest mock drill, mobilizing the CV patient, chest x-ray interpretation
- ❖ ECMO, IABP, and Impella classes
- ❖ Four-hour skills lab

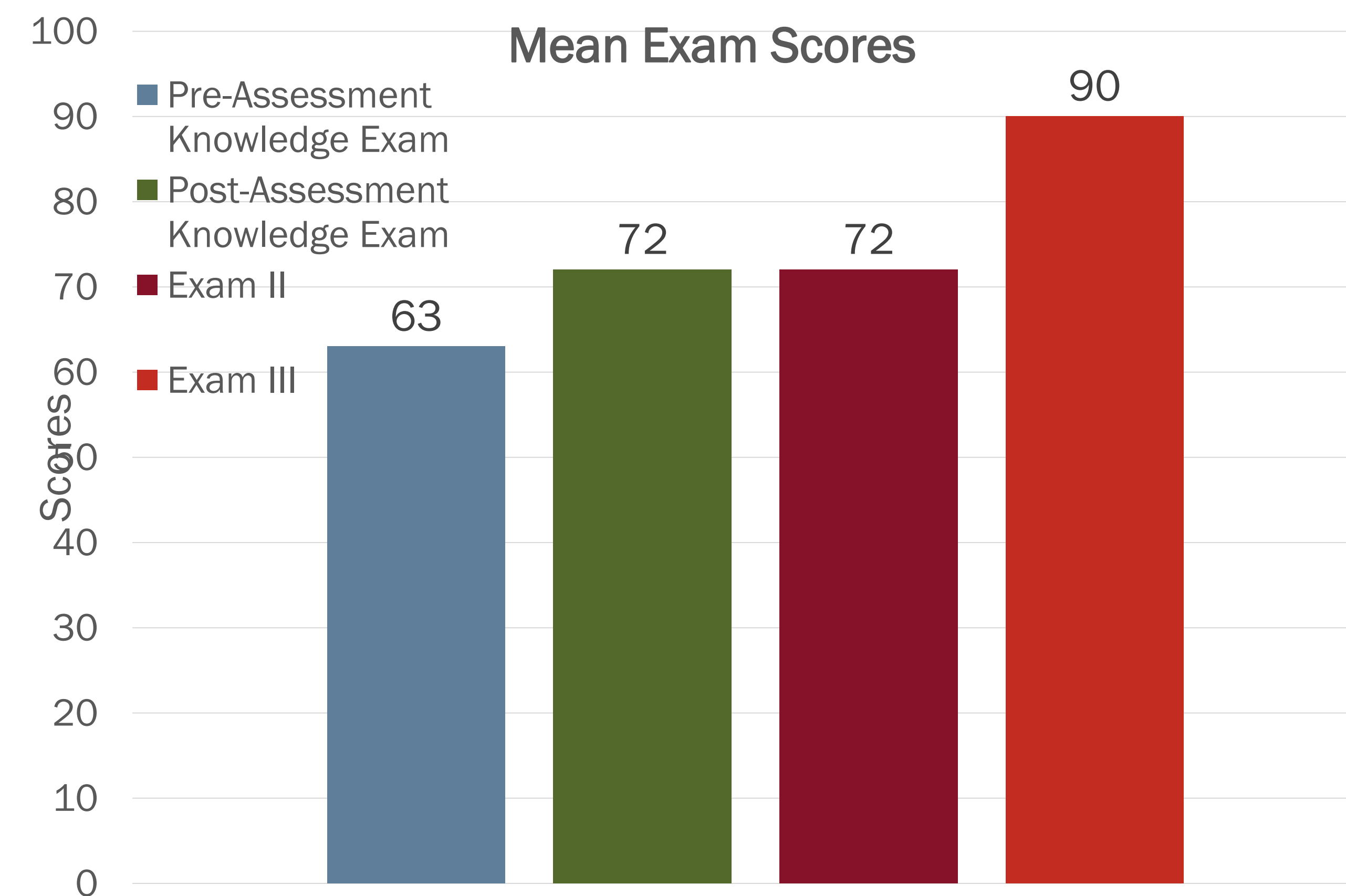
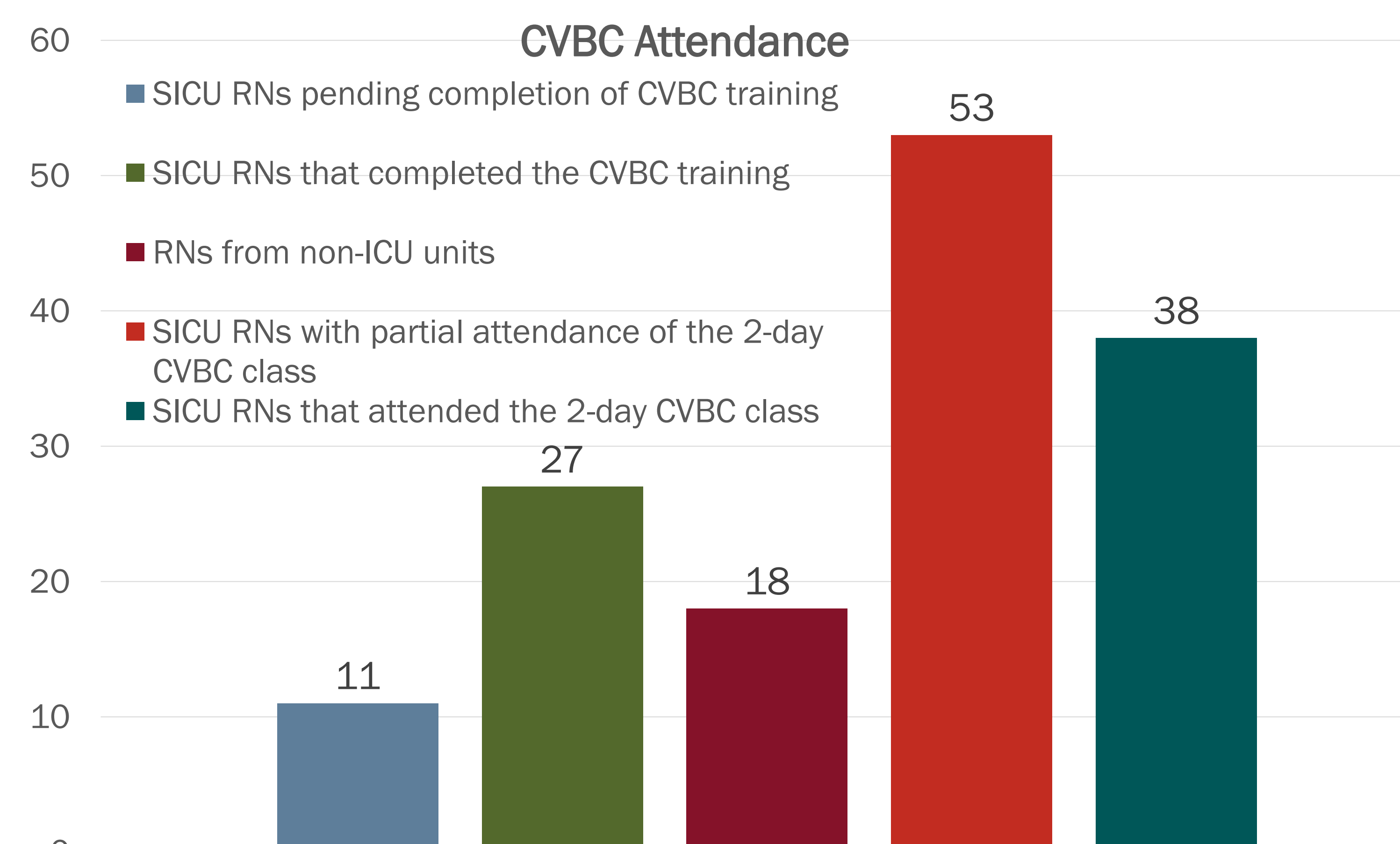
Acknowledgments

- ❖ Special thanks to the multidisciplinary team
- ❖ Thanks to the Intensivists and the Acute Care Nurse Practitioners
- ❖ Thanks to the ICU staff and leadership
- ❖ Thanks to the Department of Clinical Education
- ❖ Thanks to our colleagues in the OR, cath lab, pharmacy, & CV surgeons

Results

RN vs. CV RN Staffing

| RN Staffing | Pre-implementation phase | Post-implementation phase |
|--|--------------------------|---------------------------|
| CV RNs on days / Total RNs on days | 14/19= 74% | 19/23= 83% |
| CV RNs on nights / Total RNs on nights | 11/22= 50% | 21/25= 84% |



Results/Implications

Prior to the CV Bootcamp, 61% of the SICU nurses were CV trained with 74% on days and 50% on nights. After implementation of the CV Bootcamp, the number of CV trained nurses increased by more than 20% with a significant increase on nights by more than 30%.

The average exam scores improved reflecting an increase in knowledge retention. Feedback from the CV surgeons, Intensivists, and experienced CV nurses has been overwhelmingly positive.

Future Actions

This model is currently being applied to the Neurosurgical/Neurovascular patient population with similar success and sustainability.

Celebrating the Team

We celebrate the achievements of the facilitators and graduates.



References

Santana-Padilla, Y.G., Bernat-Adell, M.D., & Santana-Cabrera, L. (2022). Nurses' perception on competency requirement and training demand for intensive care nurses. *International Journal of Nursing Sciences*, 9 (3), 350-356. <https://doi.org/10.1016/j.ijnss.2022.06.015>.

Paul, P. (2021). An evaluative study to assess nurses' competencies related to cardiovascular assessment with a view to plan inservice education in critical care areas of a selected hospital, Ludhiana, Punjab. *International Journal of Multidisciplinary Educational Research*, 10 (1(5)), 10-16. [http://ijmer.s3.amazonaws.com/pdf/volume10/volume10-issue1\(5\)2.pdf](http://ijmer.s3.amazonaws.com/pdf/volume10/volume10-issue1(5)2.pdf)