

Simulation-based Training Coupled with Virtual Mentoring for Nurse Educators is an Effective Tool for Infection Prevention.

Nurse Educator Simulation Training (NEST) Advancing Pediatric Cardiac Critical Care Nursing Learning and Infection Prevention through Simulation-Based Training in India

Background: Ongoing access to in-house training and professional and leadership development is critical for nurses to achieve and maintain high levels of clinical competency and practice required for good patient outcomes. Yet, in lower- and middle-income settings, high levels of nurse turnover and limited access to advanced training opportunities make it difficult to maintain an experienced workforce and high-quality outcomes. To address this need, Children's HeartLink partnered with the International Quality Improvement Collaborative for Congenital Heart Disease (IQIC), Boston Children's Hospital's (BCH) Immersive Design Systems (IDS), and G. Kuppuswamy Naidu Memorial Hospital (GKNMH) to develop and implement a nurse educator-driven and infection prevention program using simulation.

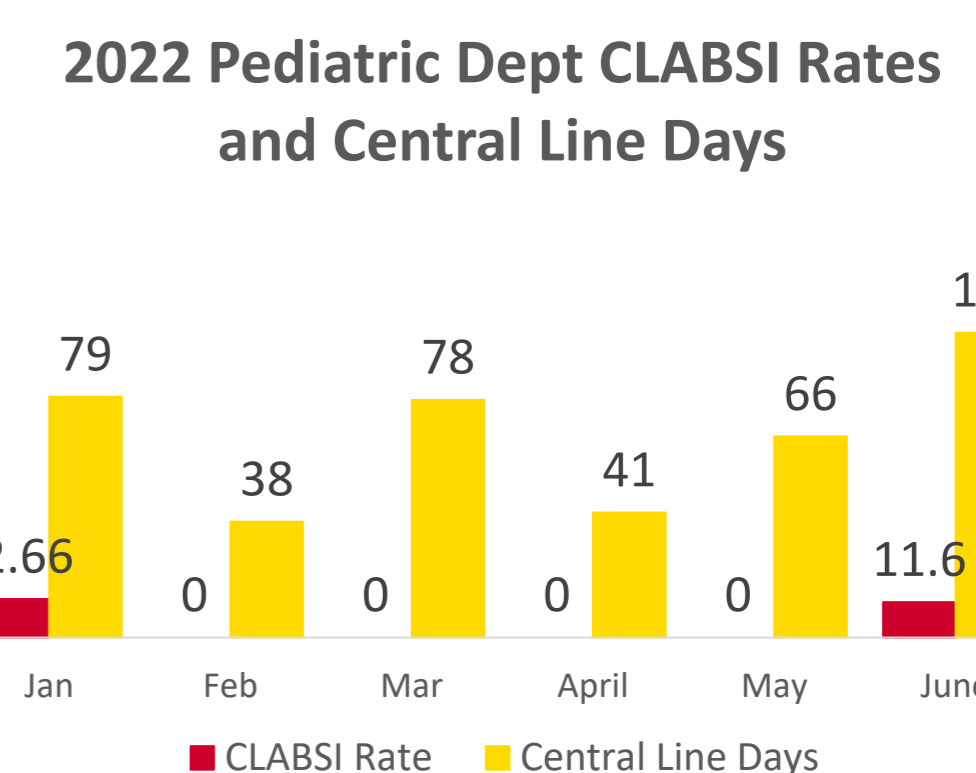
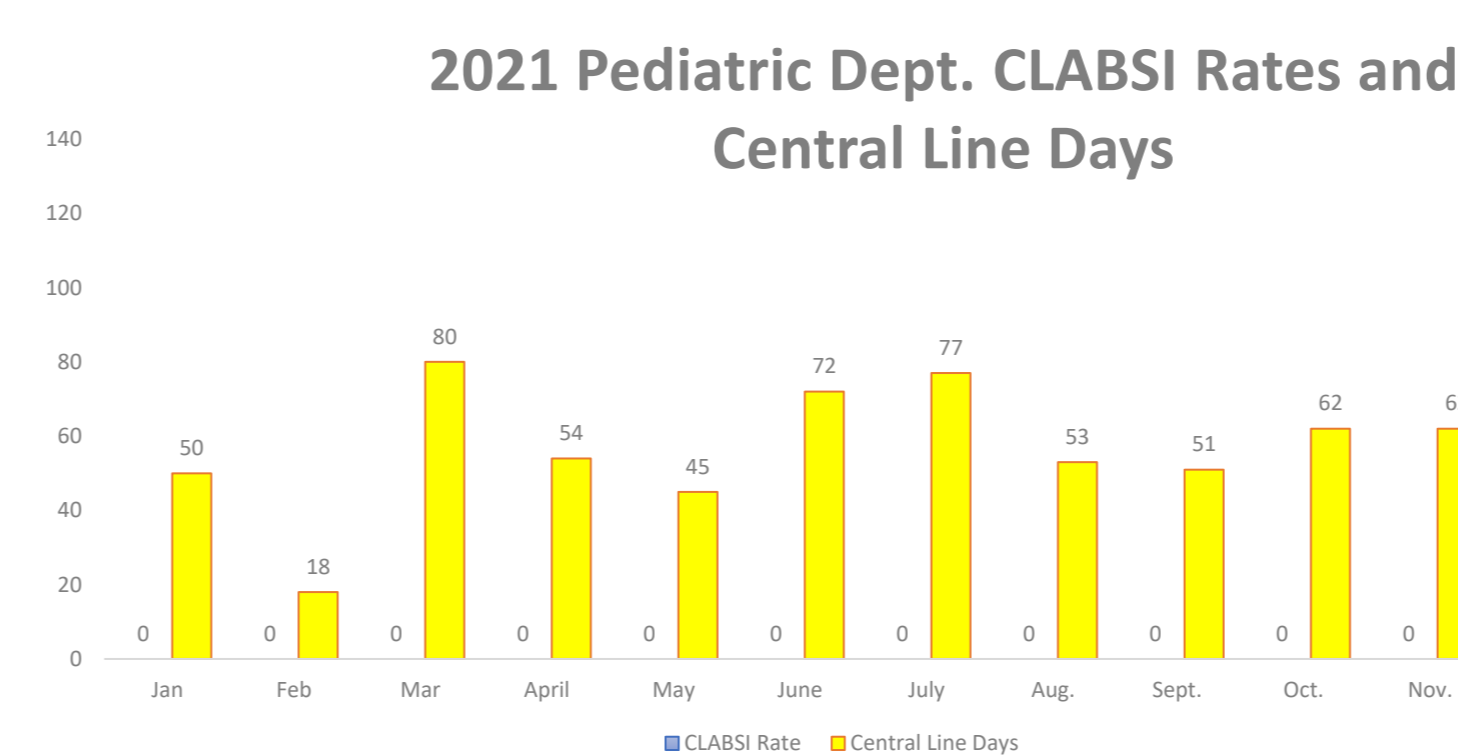
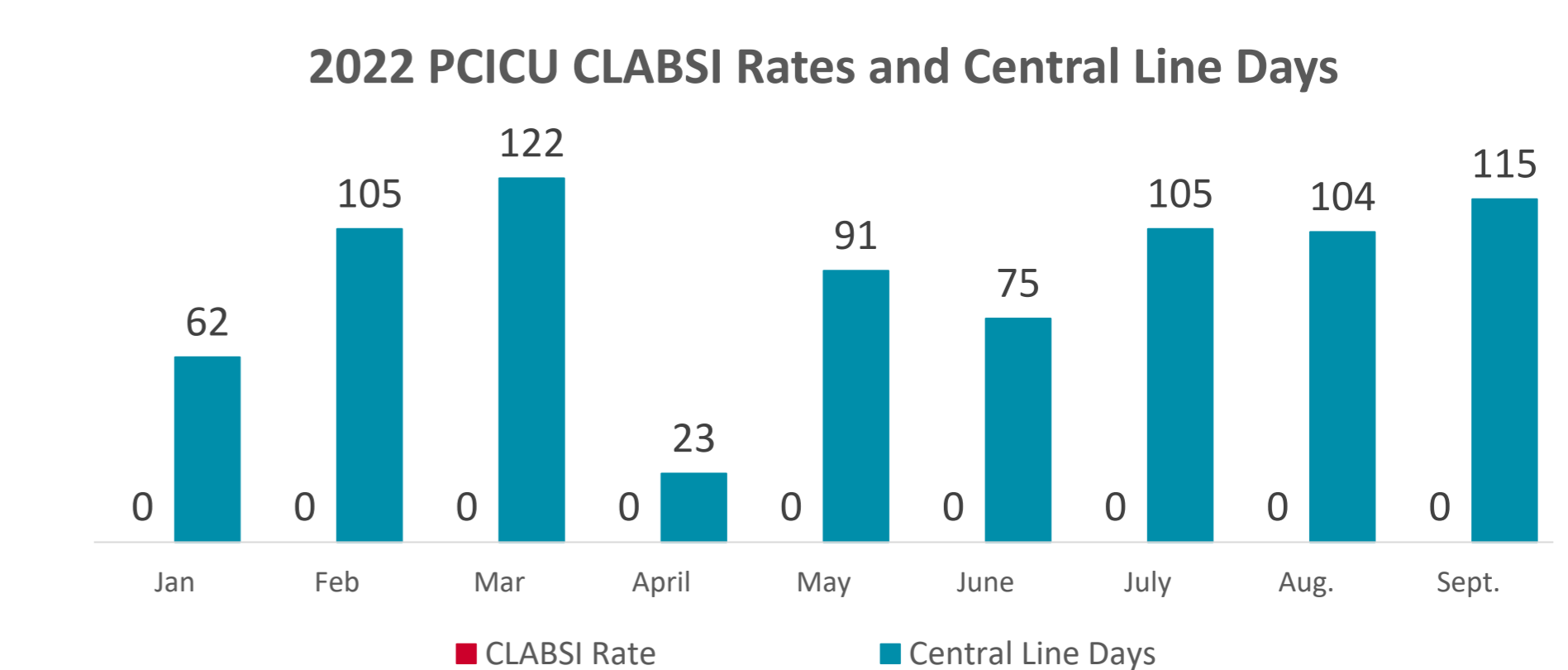
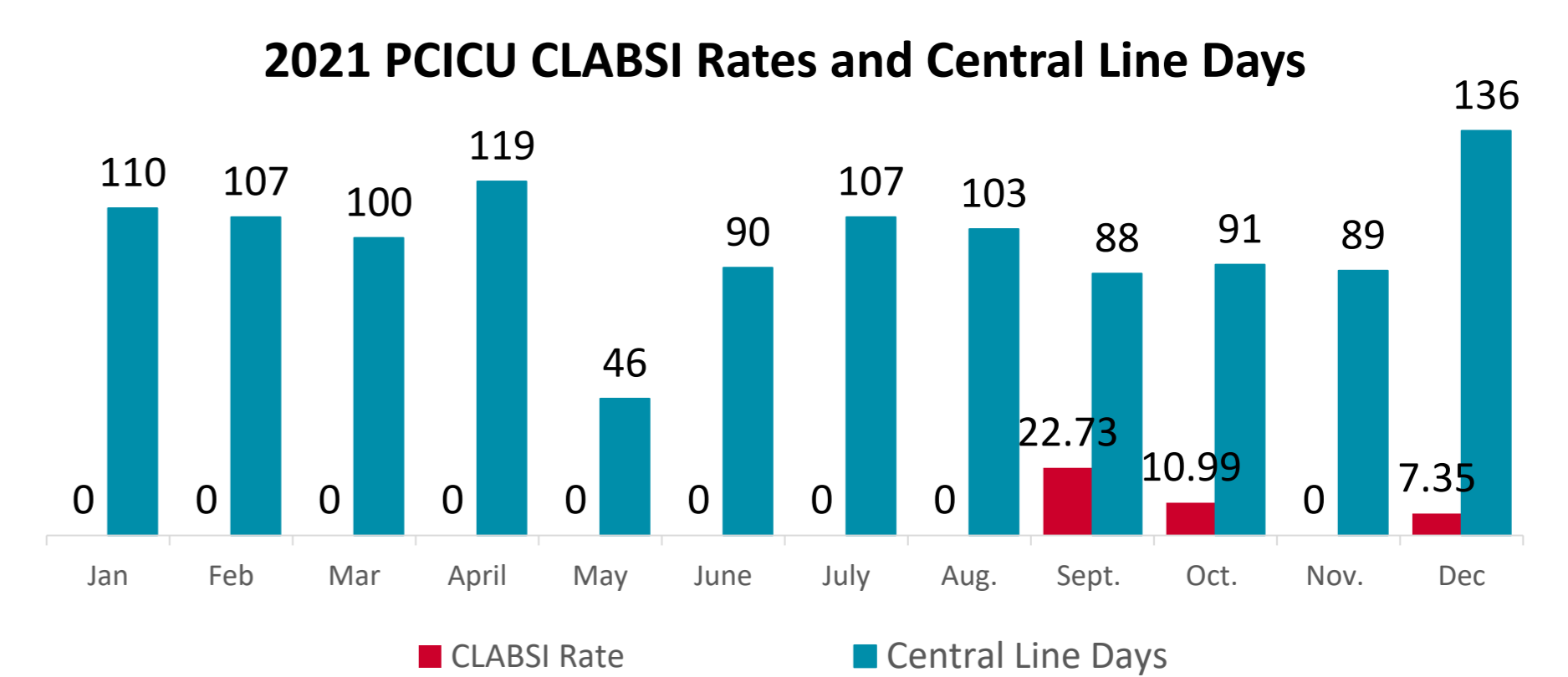
Result 1: A virtual train-the-trainer curriculum was developed to increase knowledge and practice on CVL dressing change and to teach nurse educators how to teach other nurses they work with. Curriculum content included:

- Nurse Educators (2 sessions on simulation teaching and 4 mentoring sessions):
 - Clinical learning:
 - Revised CVL Dressing Change checklist
 - Revised equipment and materials
 - Preparation to Teach:
 - Preparation of course agenda
 - Support with teaching materials development
 - Review of steps to implement effective simulation
 - Review of equipment (mannequin)
 - Course evaluation
- Participants: nurse educators delivered theory AND sim training

Result 2: After receiving simulation training and mentorship, first-time nurse educators to develop and deliver a new course to 124 nurses in 12 trainings implemented at GKNMH

In particular, the Nurse Educators noted the effectiveness of mentoring sessions where they were able to practice teaching the course, share their materials, and receive helpful feedback before launching the course

Result 3: CLABSI rates post-course (taught Dec. 2021 to March 2022) decreased when compared to the pre-course timeframe



Methods

Over the course of 10 months, two GKNMH nurse educators were trained virtually, using simulation, in central line care and maintenance. Then, through virtual mentorship, the nurse educators learned how to deliver an educational program on Central Venous Line (CVL) dressing change protocol, using simulation teaching strategies and skill assessment. The nurse educators delivered CVL training to 124 bedside nurses at GKNMH. Data was collected on pre and post-participant training scores and CLABSI rates.

Conclusion

Virtual simulation-based infection prevention curriculum training is an effective tool to engage nurse educators, advance their capacity to deliver infection prevention teaching and lower PCICU CLABSI in an LMIC setting. Our experience suggests that the course format and train-the-trainers approach may be effective with other topics taught by nurse educators, supporting their growth and development as clinicians and educators.

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