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Enhancing Practice Transition: The Impact of Cardiac Academy

Jaclyn Campbell, DNP, APRN, RN, CCRN, CPNP-AC, Michelle Manteiga, MSN, RN,
Breanna Benitez, MSN, RN



Background

Cardiovascular care of the pediatric patient is a highly specialized field with limited exposure in nursing school curriculum. The need for a transition to practice program was identified by feedback from staff in the cardiac intensive care unit (CVICU) and procedural areas that new nurses are challenged with understanding the complexity of this patient population. Navigating the intricacies of nursing staffing in highly specialized departments presents significant challenges, including balancing the demands of delivering safe, high-quality patient care with organizational goals like reducing reliance on purchased outside labor (POL), decreasing vacancy rates, and improving retention. The department was experiencing workforce deficits as evidenced by the following, which ultimately led to the creation of the Cardiac Academy:

- 20% vacancy rate
- 25% turnover rate
- Increased use of POL
- Use of monetary incentive to enhance staffing
- Decreased employee engagement scores



Objectives

- Prepare nurse residents for autonomous practice in the CVICU & Cardiac Procedural Areas
- Improve retention
- Develop a consistent pipeline of staff
- Decrease POL
- Boost employee engagement
- Improve the work environment
- Optimize patient outcomes

Description

- The Cardiac Academy is a year long program designed to transition new graduate nurses to independent practice.
- The cohorts consisted of 6 or less participants with the intention of optimizing clinical training through providing a focused curriculum supporting clinical exposure throughout the continuum of cardiac care coupled with didactic sessions.
- The education sessions were designed to strengthen the novice nurse's clinical skills and knowledge related to pediatric cardiac care.
- An interdisciplinary approach was used in choosing presenters for the didactic sessions including pharmacist, experienced CVICU nurses, VAD coordinator, speech pathologist, quality specialist, cardiac interventionalist and cardiologist.
- The familiarity and relationships developed with the interdisciplinary team is imperative to transition to practice.

Materials & Methods

The following was considered when designing the content for the Cardiac Academy:

- Curriculum development for a 1-year program that includes simulation, didactic, virtual learning modules, and clinical training.
- 10 weeks of clinical training rotations in the CVOR, cardiac catheterization, cardiac recovery room, and CVICU.
- Resident draft day to place nurses in one of the four designated specialty areas aligned with their desired area & skill set.
- Subsequent focused orientation in designated cardiac sub-specialty area:
 - 16-18 weeks for CVIMCU
 - 6-8 months for procedural suites
- Monthly academy leadership rounding & education sessions throughout the first year of practice

Results

- Implementation of the Cardiac Academy has led to an overall improvement in department workforce trends (Table 1).
- At the 14-month mark the retention rate of the cardiac academy participants remains 100%. Participants in the program have been placed in the CVOR, Interventional Suites, CVIMCU, and CV recovery room.

Table 1: Workforce Metrics

	Pre-Implementation 2023	Post-Implementation 2024	Percentage Changed
Purchased Outside Labor	5.4 FTEs	Eliminated April 2024	100% Decrease
RN Vacancy	20 %	6%	70% Decrease
RN Turnover	25 %	8.7%	65% Decrease
SMD Link Employee Engagement	3.72	4.25	14% Increase
AACN Healthy Work Environment	3.33	4.14	24% Increase

Cardiac Academy Testimonials

"I think it has been very beneficial to explore different areas and compare what would fit me best. It has been helpful in being able to understand the various areas patients alternate throughout their care."

"The Cardiac Academy program has provided invaluable benefits for me as a new graduate nurse, primarily through its rotation opportunities in procedural areas and CVICU/CVIMCU units. These rotations have offered diverse experiences, allowing me to gain hands-on learning in specialized cardiac care, develop confidence and proficiency, receive tailored training, benefit from mentorship and support, and build a professional network within the cardiac nursing specialty, all of which are crucial for my growth and success in this field."

"The cardiac sessions have been the most beneficial considering pediatric cardiology is not touched much in nursing school."



Conclusion

Based on the success of the first Cardiac Academy cohort, this program has been continued for all new graduate nurses transitioning to practice in cardiac specialty areas. The feedback provided from the participants has been used to enhance the program design and curriculum for subsequent sessions. Additionally, the cardiac department is retaining nurses with a turnover rate 52% lower than the national pediatric cardiac average, meeting key index drivers for employee engagement and sustaining a healthy work environment.



Joe DiMaggio Children's Hospital® Cardiac Academy Nurse Resident Course Agenda Winter Cohort 2023/2024			
Onboarding with Clinical Nurse Educator: TBD			
Basic Arrhythmia Class: TBD			
PALS: TBD			
Pediatric Essentials of Critical Care Orientation: TBD			
Simulation Sessions			
Date & Time	Location	Pediatric Learning Solutions Online Modules	Topics of Review
TBD	6 th Floor Conference Room/Sim lab	• Assessment of the Critically Ill Child • Pediatric Assessment: The Cardiovascular System	Room Set-up for Admission & Safety checks Phillips Monitor Review Vital Sign Basics
TBD	6 th Floor Conference Room/Sim lab	• Comprehensive Assessment of the Neonate	Cardiac Defects IV Infusion, tubing, and more Feeding Tubes
TBD	6 th Floor Conference Room/Sim lab	• Basic Principles of Oxygen Therapy, specialty gases, and non-invasive ventilation • Nursing Management of Chest Tubes	Chest tube management Respiratory equipment (blender), PHTN
TBD	6 th Floor Conference Room/Sim lab	• Hemodynamic monitoring • Procedural Sedation in the Pediatric Patient	Invasive monitoring Procedural Sedation
TBD	6 th Floor Conference Room/Sim lab	• Pediatric General Post-op Care of the Transplant Patient	Code Management Care of the intubated patient Hemodynamics

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