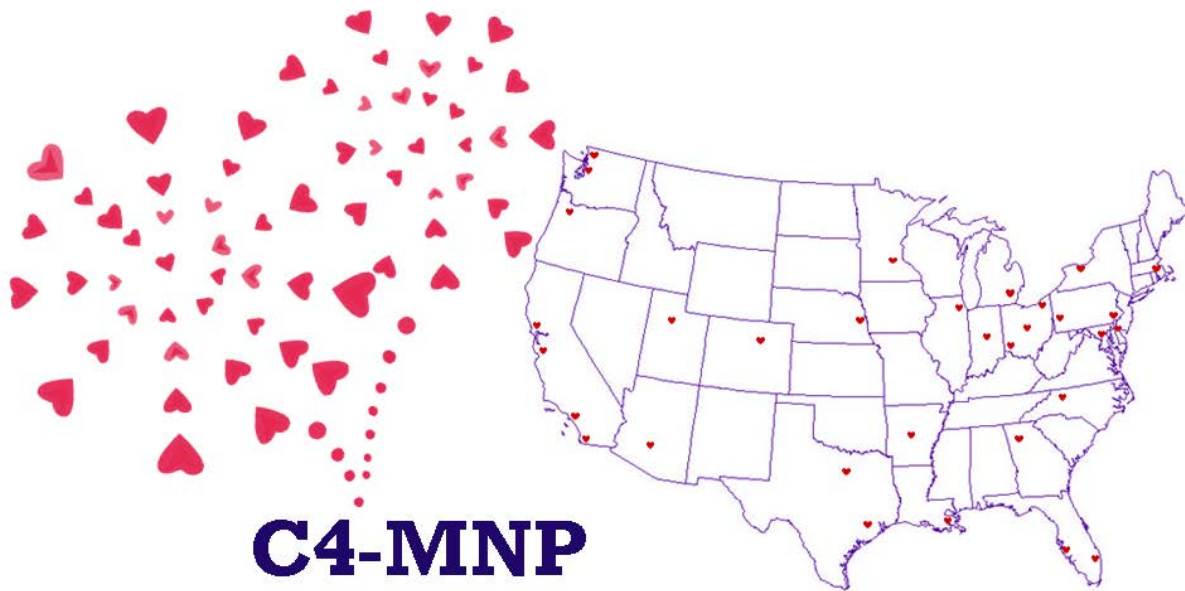


# Consortium for Congenital Cardiac Care - Measurement of Nursing Practice

## *Simulation for Cardiac Nursing Orientation*

### *State of Practice Assessment Aggregate Result Report*

October 23, 2017 – November 20, 2017



## **C4-MNP**

Consortium for Congenital Cardiac Care Measurement of Nursing Practice

### **Project Team:**

Annette Imprescia BSN, RN, CCRN

Jean Connor PhD, RN, CPNP, FAAN

Lauren Hartwell MPH

Courtney Porter MPH

Dear Colleagues,

We are pleased to inform you that we have completed the analysis of surveys for the Consortium for Congenital Cardiac Care - Measurement of Nursing Practice (C4-MNP) state of practice assessment regarding the use of simulation for cardiac nurse orientation.

The purpose of the C4-MNP state of practice assessment regarding the use of simulation for cardiac nurse orientation was to understand how simulation is being utilized for nursing orientation to pediatric cardiac clinical areas in an effort to composite expertise and inform the development of a standardized simulation curriculum for nursing orientation that can be utilized by programs across the country.

This survey was developed by Annette (Toni) Imprescia RN, BSN, CCRN, Staff Nurse Level III - Clinical Educator practicing in the Cardiac Intensive Care Unit (CICU) at Boston Children's Hospital. In addition to her clinical roles, Toni is faculty and Associate Clinical Director, Nursing for SimPeds at Boston Children's Hospital.

The survey was open to C4-MNP centers for four weeks between October 23, 2017 and November 20, 2017. There were 33 unit-level responses submitted across 32 sites (64% from CICUs, 27% from cardiac step-down units, and 9% from mixed pediatric ICUs). Below, please find the aggregate result report.

We would like to extend our heartfelt appreciation for your continued commitment to this collaborative as we work to improve outcomes for pediatric cardiovascular patients and their families.

Sincerely,



Jean Anne Connor PhD, RN, CPNP, FAAN  
Director, Nursing Research  
Cardiovascular & Critical Care  
Boston Children's Hospital  
Boston, MA 02115  
[jean.connor@childrens.harvard.edu](mailto:jean.connor@childrens.harvard.edu)  
617-355-8890 (t)

## Executive Summary

### **Survey Overview**

Cardiac Intensive Care Unit (CICU) nurses require extensive training to function effectively in the complex clinical setting. Historically, training has been provided in the form of precepted clinical time and classroom content. The CICU at Boston Children's Hospital has run a standard "High-Signal" and Skills Session Simulation Curriculum for over 10 years. Multiple pediatric intensive care units across the country have also added simulation as an enhancement to nursing orientation. This survey was developed to describe the current state of simulation for cardiac nurse orientation, and to inform the development of a standardized nursing orientation simulation curriculum.

### **Key Findings**

Across participating C4-MNP centers, 33 units responded to the survey representing the majority of centers. The majority of survey respondents represented a Cardiac Intensive Care Unit (64%), and 27% represented an inpatient or step-down cardiac floor.

- Among participating sites, 88% reported access to a centralized, hospital simulation program, while 91% of sites reported access to unit based simulation programs to train cardiac care providers.
- The majority of sites (73%) reported use of simulation during the training of new cardiac nurses.
- Of the sites that reported using simulation for cardiac nursing orientation, 73% used skill-based sessions, while 100% use scenario-based simulation.
- Common themes emerged for scenario topics including Roles in a Code, Arrhythmias, Principles of Teamwork, Elective Intubation, and Cardiac Tamponade.
- Trained simulation faculty was reported in 62% of participating sites.

### **Conclusion**

Simulation training is widely utilized in pediatric cardiac nursing orientation. This survey demonstrated that faculty training is variable. Common themes for scenario topics were identified. Establishing a standardized nursing orientation simulation curriculum may be beneficial for the future of pediatric cardiac nursing.

### **Next Steps**

The C4-MNP state of practice assessment regarding use of simulation in pediatric cardiac nursing orientation generated additional opportunities for advancing the science. Results from this state of practice survey will inform the development of a standardized nursing orientation simulation curriculum. Formation of an educational collaborative would be necessary to build consensus regarding a standardized nursing orientation simulation curriculum. Faculty training was identified as an area for improvement and standardization.

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**Topic One: Presence of Simulation Program**

Question 1. Does your center have a centralized simulation program?

Centralized Simulation Program	Respondents (N = 33)	
	# of Respondents Reported Yes	% of Respondents Reported Yes
	29	88%

*Of the 33 respondents, 3 reported why they do not have a centralized simulation program:*

The current nursing program has not supported a simulation program in the past for generalized pediatric nurses. The hospital is currently working on building a simulation team to run a centralized simulation program. The pediatric cardiac unit is starting a simulation team with the goal of running monthly simulation for the team.
We are currently working towards a formalized simulation program, as currently it is used infrequently without pre-established boundaries.
We do not have a Nursing simulation facility at our institution. We collaborate with a local university and use the facilities there.

Question 2. Does your center use unit-based simulation for training cardiac care providers?

Unit-Based Simulation Program	Respondents (N = 33)	
	# of Respondents Reported Yes	% of Respondents Reported Yes
	30	91%

Question 3. Does your center use simulation during the orientation of new cardiac nurses?

Simulation for Nurse Orientation	Respondents (N = 33)	
	# of Respondents Reported Yes	% of Respondents Reported Yes
	24	73%

**Topic Two: Description of Simulation Program**

Question 4. What type of simulation sessions does your program use during orientation? (check all that apply)

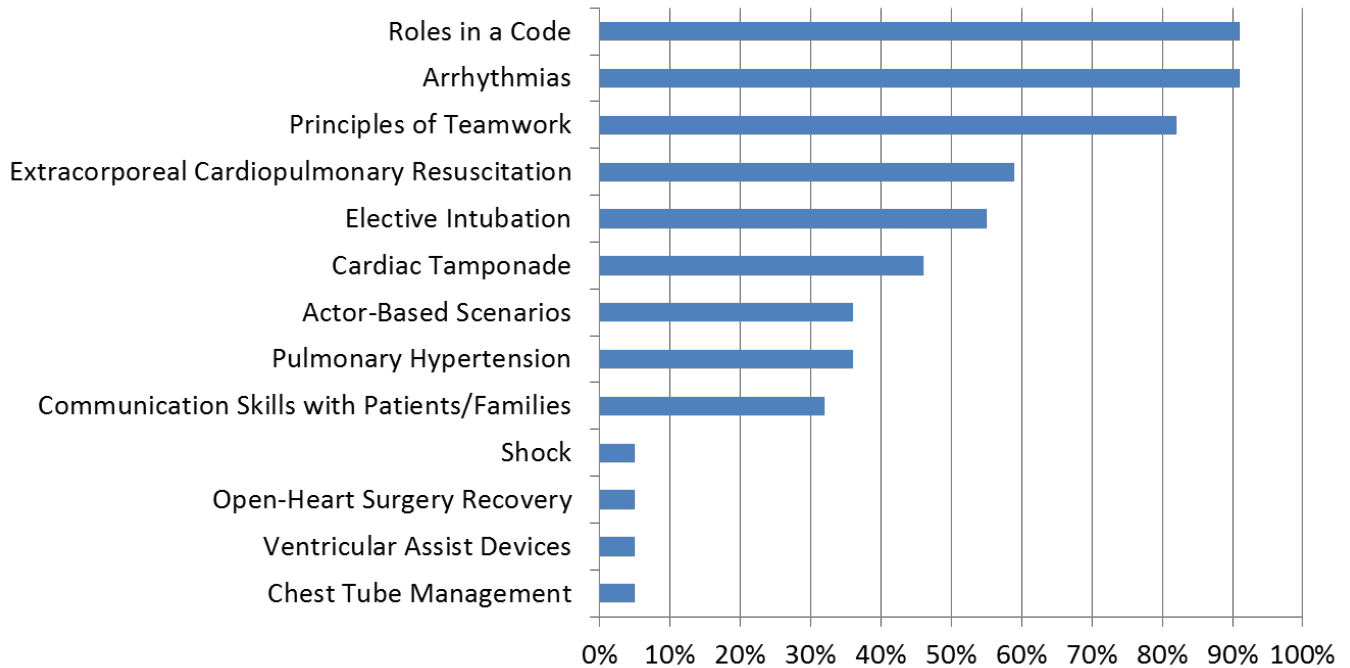
Type of Simulation Sessions	Respondents (N = 22)	
	# of Respondents	% of Respondents
Skills Session	16	73%
Scenario-based	22	100%

Question 5. How many simulation sessions does your program include?

Number of Simulation Sessions	Respondents (N = 21)	
	Median	Range
	4	1 – 19

Question 6. What topics are covered by your simulation program?

**What topics are covered by your simulation program? Check all that apply. (N=22)**



**Topic Two: Description of Simulation Program (continued)**

Question 7. What is the length of each simulation session?

Length of Simulation Sessions	Respondents (N = 22)	
	# of Respondents	% of Respondents
30 minutes	2	9%
60 minutes	11	50%
90 minutes	3	14%
120 minutes	5	23%
Varies by Session	1	4%

Question 8. What location do you use for your simulation sessions? (check all that apply)

*'Other' location(s) for simulation sessions:*

Bedside set ups
Classroom
Mock codes in all locations that the PICU responds

### Topic Three: Simulation Program Faculty

Question 9. Who facilitates the simulation sessions? (check all that apply)

Faculty for Simulation Sessions	Respondents (N = 22)	
	# of Respondents	% of Respondents
Nursing Faculty	21	97%
Physician Faculty	8	36%
Simulation Faculty	13	59%

Question 10. Is the faculty trained as a simulation instructor?

Faculty Trained	Respondents (N = 21)	
	# of Respondents Reported Yes	% of Respondents Reported Yes
	13	62%

Question 11. How was this person trained as a simulation instructor? (free text)

2 day course
8 hour Laerdal class to develop simulations
Attended debriefing training and simulation training. Master's prepared nurses.
Certification by CHSE
Combination training provided by simulation company called Laerdal, some physician trained and self-taught. We have a physician that was taught more specifically by Laerdal, this physician is our simulation director.
Formal training from Harvard's simulation program. She is also an instructor for our simulation center
HOSPITAL-BASED INSTRUCTOR COURSE
Instructor course taught at Center for Medical Simulation in Cambridge, MA
Only simulation faculty is trained. Their training is unknown.
Simulation course provided by simulation center
Some trained at outside sim program, some trained in house
Years of experience as ICU RN, Master's prepared (MSN/Ed), formal training with Sim Department 2-day Course

### Demographics



Question 12. Please describe your unit.

Unit Type	Respondents (N = 22)	
	# of Respondents	% of Respondents
Inpatient cardiac floor or step-down	6	27%
Cardiac intensive care unit	14	64%
Pediatric intensive care unit	1	4.5%
Mixed acuity adaptable unit	1	4.5%

Question 13. Number of beds in your unit.

Number of Beds	Respondents (N = 22)	
	Median	Range
	24	9 – 44

Question 14. Length of nursing orientation for new graduates (in weeks).

Length of New Grad Orientation	Respondents (N = 22)	
	Median	Range
	17	8 – 24

Question 14. Length of nursing orientation for experienced nurses (in weeks).

Length of Experienced RN Orientation	Respondents (N = 22)	
	Median	Range
	12	6 – 18

## Demographics (continued)

Question 15. Additional comments related to simulation to enhance nursing orientation.

I couldn't elaborate in the other box we do a minimum of 1 sim during orientation but then a minimum of 4 per year after that
None for orientation. Cleveland Clinic Children's has added simulation as our yearly hands on competencies. We covered trach care to central line that progresses to a line infection and needed to collect a specimen that progresses on to an R on T and a code situation. Followed by a debriefing and review of the new code sheets that were rolling out. On Nov 9th I will hold a simulation competency training for a catheterization patient that is not reversed and progresses to a code situation. The Peds Cath lab has not had their hands on competencies yet.
Nursing orientation utilizes skills sessions and simulation lab. There are 10 scenarios that are used in sim lab.
The simulation sections are (1) respiratory, (2) cardiac, & (3) mock codes. We teach nurses how to draw up weight based cardiac medications during code situations.
This has been exceptionally popular addition to our training program.
We invite fellows to participate in select scenarios to participate in their role as part of their training
We preform multidisciplinary mock codes on each unit with simulation. Additionally, we utilize simulation for education as applicable including PALS, onboarding and annual needs. Our simulation team is small, so we do have some limitations related to availability.
We run 2 scenarios per session and offer monthly sessions. All staff participate in 1 session per year; sessions for new RNs also include equipment/process orientation