

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 nursing practice of hyperkalemia in pediatric cardiac intensive care.

The purpose of this project was to describe the current nursing practice in cardiac intensive care for hyperkalemia including its definition, recognition, and treatment.

The survey questions were developed by Rebecca Reid BSN, RN, CCRN, CPN, PEAK II of Children's Hospital of Philadelphia in collaboration with Amy Jo Lisanti PhD, RN, CCNS, CCRN-K of Children's Hospital of Philadelphia.

The invitation to participate was sent to 40 C4-MNP centers and 22 completed the survey for a response rate of 55 percent. 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,

Rebecca Reid BSN, RN, CCRN, CPN, PEAK II
Clinical Nurse Expert
Cardiac Intensive Care Unit
Children's Hospital of Philadelphia
reidr@email.chop.edu

Amy Jo Lisanti PhD, RN, CCNS, CCRN-K
Clinical Nurse Specialist/Nurse Researcher
Cardiac Nursing
Children's Hospital of Philadelphia
LISANTI@email.chop.edu

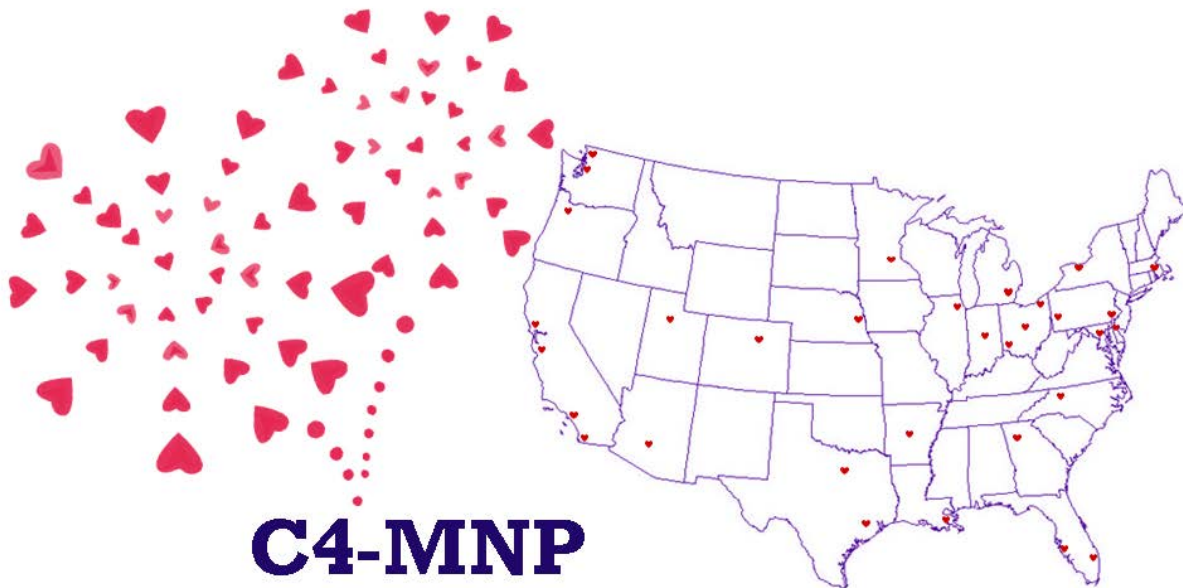
Jean Anne Connor PhD, RN, CPNP, FAAN
Director, Nursing Research
Cardiovascular & Critical Care
Boston Children's Hospital
jean.connor@childrens.harvard.edu

Boston Children's Hospital

Consortium for Congenital Cardiac Care – Measurement of Nursing Practice

State of Nursing Practice Assessment – Aggregate Results Report: *Nursing Practice of Hyperkalemia in Pediatric Cardiac Intensive Care*

April 29, 2019 – June 26, 2019



C4-MNP

Consortium for Congenital Cardiac Care Measurement of Nursing Practice

Project Lead:

Rebecca Reid BSN, RN, CCRN, CPN, PEAK II

Project Mentor:

Amy Jo Lisanti PhD, RN, CCNS, CCRN-K

Project Team:

Benjamin Cerrato MPH

Courtney Porter MPH, CPHQ

Jean Connor PhD, RN, CPNP, FAAN

Executive Summary

Survey Overview

Hyperkalemia can be a potentially lethal problem for pediatric patients in the cardiac intensive care unit (CICU). Patients in the CICU are at an increased risk for hyperkalemia for a multitude of reasons. Many CICU patients are in renal failure, on potassium supplementation, and/or on potassium reabsorbing medications, all of which can increase blood potassium levels.

There is currently a lack of consensus in the literature and practice with regards to the definition of hyperkalemia, management of hyperkalemia, identification of pseudohyperkalemia, and what to do after hemolysis. The purpose of this project was to describe the current nursing practice for hyperkalemia including its definition, recognition, and treatment.

Key Findings

The response rate was 50% (22/44 centers). The findings demonstrated a wide variation in the current nursing practice in regards to care of CICU patients with hyperkalemia. Specifically, this survey showed a wide variation in what centers reported as a potassium level that was hyperkalemic and how they treated those high levels. The majority of respondents had an awareness of pseudohyperkalemia and the importance of considering hemolysis when interpreting potassium lab values.

Conclusions

Standard evidence-based guidelines for the identification and management of hyperkalemia are critically needed to support the prevention of the lethal consequences of untreated hyperkalemia.

Results

Response Rate

Frequency	%
22 / 40 Eligible Sites Responded	55

1. Definition of Hyperkalemia:

K+ Level (mEq/L)	Frequency (%)
K+ > 5	7 (31.8)
K+ > 5.5	7 (31.8)
K+ > 6	6 (27.3)
K+ > 6.5	2 (9.1)

2. Frequency of checking if K+ was a hemolyzed sample:

Frequency	Frequency (%)
Always/Often	19 (86.4)
Sometimes	3 (13.6)
Never	0 (0)

3. If a lab is identified as hemolyzed with elevated K+ levels, how often is the lab repeated?

Frequency	Frequency (%)
Always/Often	13 (59.1)
Sometimes	9 (40.9)
Never	0 (0)

4. If a tourniquet is used for blood sampling, how often do you monitor the length of time the tourniquet is in place?

Frequency	Frequency (%)
Always/Often	10 (5.5)
Sometimes	4 (18.2)
Never	8 (36.4)

5. How often in your nursing practice do you consider pseudohyperkalemia when examining K+ results?

Frequency	Frequency (%)
Always/Often	13 (59.1)
Sometimes	8 (36.4)
Never	1 (4.5)

6. Who typically decides when an elevated K+ level is real or falsely elevated?

Provider	Frequency (%)		
	Always/Often	Sometimes	Never
Beside RN	1 (4.5)	15 (68.2)	6 (27.3)
Charge or Resource RN	0 (0)	11 (50.0)	11 (50.0)
Lab/Pathologist	2 (9.1)	9 (40.9)	11 (50.0)
Front Line Ordering Clinician	8 (36.4)	13 (59.1)	1 (4.5)
Attending	7 (31.8)	14 (63.6)	1 (4.5)

7. Do you have one or more of these at your institution for hyperkalemia?

Nursing Processes	Frequency (%)
Pathway	2 (9.1)
Guideline	5 (22.7)
Standard	1 (4.5)
Order Set	5 (22.7)
None	12 (54.5)

8. Treatment strategies for hyperkalemia:

Treatment Strategy	Frequency (%)		
	Always/Often	Sometimes	Never
Furosemide	10 (45.4)	10 (45.5)	2 (9.1)
Calcium Gluconate	8 (36.3)	10 (45.5)	4 (18.2)
D50 + Insulin	7 (31.8)	4 (18.2)	11 (50.0)
Kayexalate	7 (31.8)	11 (50.0)	4 (18.2)
Sodium Bicarbonate	5 (22.7)	14 (63.6)	3 (13.6)
Calcium Chloride	5 (22.7)	8 (36.4)	9 (40.9)
D10 + Insulin	5 (22.7)	9 (40.9)	8 (36.4)
Albuterol	9 (9.1)	11 (50.0)	9 (40.9)
Hemodialysis	1 (4.5)	11 (50.0)	10 (45.5)