



# A Collaborative Core Curriculum for ICU New Hire RNs

Building excellence through a shared mental model

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A close-up photograph of a person wearing a white lab coat, pointing their right index finger towards a screen. The background is blurred, showing more of the lab coat and the person's torso. A white rectangular box with a blue horizontal bar at the top is overlaid on the right side of the image, containing the text 'About Us'.

**About Us**

# Our Objectives



1. The learner will be able to state the importance of standardization for a curriculum
2. The learner will be able to identify areas they can collaborate on to provide evidence-based practices among similar units
3. The learner will be able to improve communication and teamwork within a multidisciplinary team.



# Why This Project?

# Background



## Nationwide Children's Hospital

- Only Pediatric Center in Central Ohio
  - Total Beds:- 508 plus off-sites for a total of 701
  - Comprised of 4 ICUs:
    - Cardiothoracic ICU
    - Trauma PICU
    - Respiratory PICU
    - NICU
  - Over 17,000 employees
  - Over 4,500 RNs
  - Level 1 Trauma Center
  - Transplant Center
- 
- ICUs within our organization share core knowledge, skills, and competencies
  - Historically, each of our ICUs has provided separate orientations leading to:
    - inconsistencies in practice
    - variations in onboarding
    - poor use of resources

# Our Why

- Identified the need for collaboration and standardization
- Better utilization of resources- working "smarter not harder"
  - Massive onboarding since pandemic
  - Offload educators, allowing focus on specific unit education/trainings

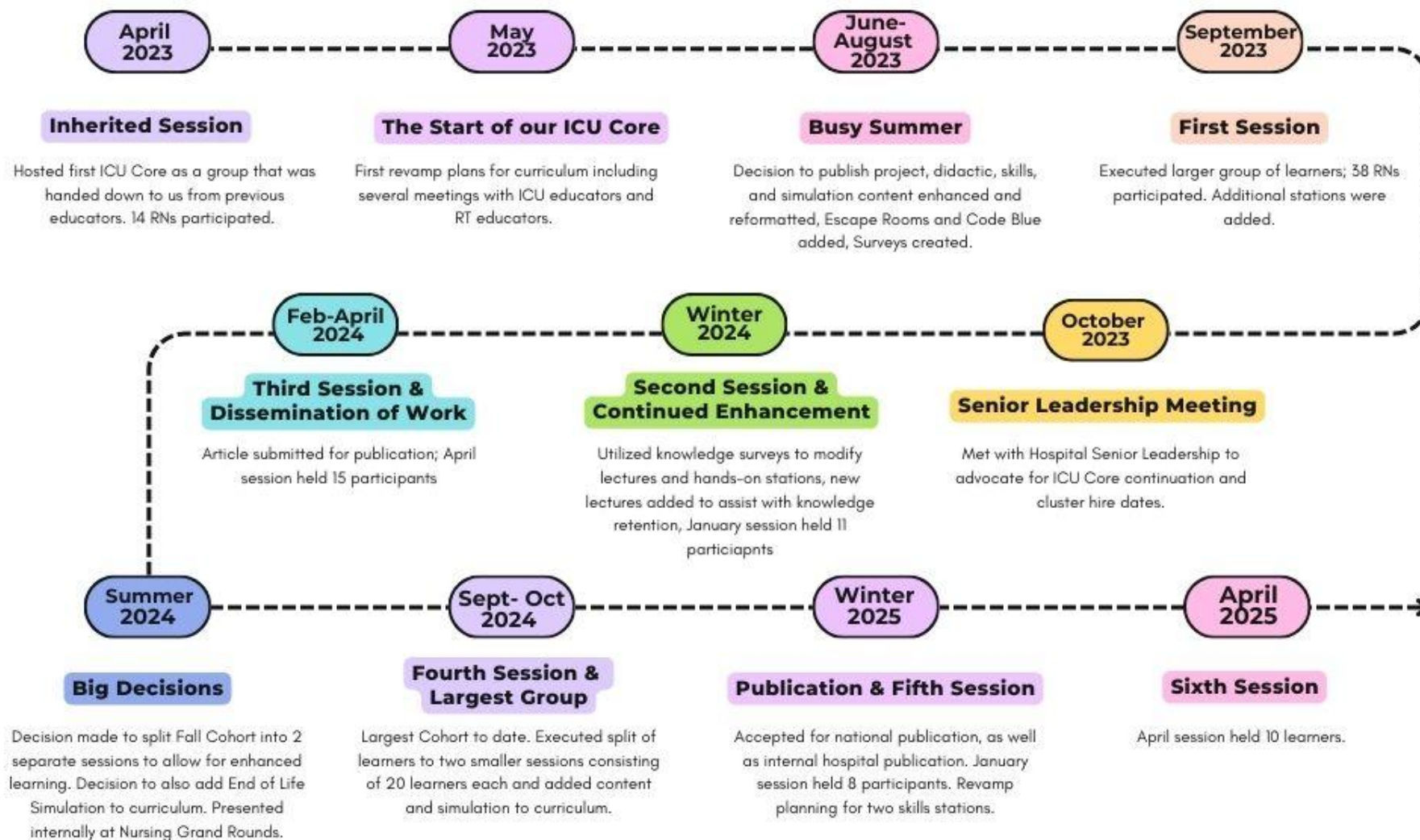


- Collaborative Initiative sought to:
  - Increase knowledge
  - Increase comfort
  - Establish a precedence for collaboration on other educational initiatives/endeavors across the units

# How We Did It

A blurred background image of a desk with a laptop, headphones, a coffee cup, and books. The laptop is open and positioned in the center-right. To its right is a pair of black headphones. In the foreground, there is a dark blue travel mug and a white coffee cup. The desk is light-colored, and the background is softly out of focus, showing a stack of books and a small plant.

# Project Timeline





## *Inherited ICU Core....*



- Held in 2023
- Initially seen as burden
- After this first session together, we saw the potential of the curriculum





# How We Revamped ICU Core

## Research

- Worked with the librarian to complete a literature search
- Used the literature search to ensure we provided evidence-based curriculum



## Collaboration

- Collaboration between ICUs
- Work closely with Simulation team
- Multidisciplinary involvement
- Now include CCFP (Critical Care Float Pool) into ICU Core
- Monthly meetings

## Evaluation

- Pre- and post-surveys
- Feedback survey for content experts and educators
- Addition of various lectures & simulations
- Removal of lectures that did not meet needs
- Immediate debrief on last day of ICU core

# Changes made for September 2023

*aka Our First Rendition of Core*

- Schedule adjusted to accommodate from lessons learned
- Didactic content added
- More hands on
- Ability to assess knowledge gained throughout the week through pre and post surveys
- 2 Escape Rooms
- Code Blue Simulation



Monday 9/11	Tuesday 9/12	Wednesday 9/13	Thursday 9/14	Friday 9/15
7:30am-4pm	8am-5pm	8am-4:30pm	8am-4:00pm	8am-3:30pm
Breakfast: H2B ordering  <b>8-9:30:</b> Upper Airway & Respiratory Assessment: Onsy <b>9:30-10:30:</b> Lower Airway and Asthma: Laura Wingert <b>10:30-11:00:</b> Intubation pathway- RN perspective: BP <b>11:00-12:00:</b> Vent Modes Lecture: Tom and Andrew	Breakfast: H8B ordering  <b>8:00-11:00:</b> Neuro Assessment, Seizure, Head Bleed, Stroke: Marlena/Jen <b>11:00-12:00:</b> AIM team: Alice Bass <b>12:00-1:00:</b> Wound Team: Megan	Breakfast: H4B ordering  <b>8-8:30:</b> Rhythms: Michelle <b>8:30-9:30:</b> Overview of CHD: Jenn <b>9:30-10:30:</b> Hemodynamic monitoring/ABGs: Ahquilah <b>10:30-11:00:</b> NEC: Justin Julian <b>11:00-11:30:</b> GI: Justin Julian <b>11:30-12:30:</b> PIVE: Sam	<b>8-9:</b> LOOP: Bridgette <b>9-10:</b> AKI + dialysis: Steph <b>10-11:</b> Shock: Frazier <b>11-12:</b> Pain team: Lindsay <b>12:00-1:00:</b> DKA: Sarah  <b>Room: ED040</b>	<b>8:00-9:00:</b> Code Blue Lecture/MTP: Tensing <b>9:00-9:30:</b> Interactive Crash Cart: LV/AT
<b>Room: CD2.6A</b>	<b>Room: CD2.6A</b>	<b>Room: CD2.3</b>		<b>Room: CD2.2 &amp; CD2.6</b>

Lunch as Station	Lunch as Station	Lunch as Station	Lunch as Station	Lunch as Station
<p><b>Room: Sim Labs</b></p> <p>12:00-4:00 Sims/skills (Chart 1) *40-minute stations</p> <ol style="list-style-type: none"> <li>1. Lunch</li> <li>2. Vent scavenger hunt</li> <li>3. HFOV+ Cuirass</li> <li>4. NIV</li> <li>5. Resp Skin padding: wound team &amp; BP</li> <li>6. Trachs, Ventimasks, Aerosols: RT</li> </ol> <p>(RTs at each station)</p>	<p><b>Room: Sim Labs</b></p> <p>1:00-5:00 Sims/skills (Chart 2) *40-minute stations</p> <ol style="list-style-type: none"> <li>1. Lunch</li> <li>2. Sim 1-Resp Distress: LV &amp; AB</li> <li>3. Sim 2-DOPE: TH &amp; AT</li> <li>4. EVD scenario: BP</li> <li>5. Chest tubes: RT</li> <li>6. Wound Vacs &amp; Ostomies: Megan</li> </ol>	<p><b>Room: Sim Labs</b></p> <p>12:30-4:30 Sims/Skills (Chart 3) *40-minute stations</p> <ol style="list-style-type: none"> <li>1. Lunch</li> <li>2. Prone &amp; Abd. Pressure: BP</li> <li>3. CPR Feedback + rhythm sim: AB</li> <li>4. <i>Aline: RT</i></li> <li>5. <i>CVP and ABG: AT</i></li> <li>6. IV Insert/Assess: LV &amp; Tasha W.</li> </ol> <p><i>**stations 4&amp;5: run for 35 min to flip station**</i></p>	<p><b>Room: H2B/H4B Pt Rm.</b></p> <p>1:30-4:00 Sims/Skills (Chart 4) *30-minute stations</p> <ol style="list-style-type: none"> <li>1. Lunch</li> <li>2. Insulin Pens &amp; PCA pump: LV</li> <li>3. Temp management: BP</li> <li>4. Belmont: RT</li> <li>5. Push-pull: AT</li> </ol>	<p><b>Room: CD2.2 &amp; CD2.4</b></p> <p>10:00-3:00 Sims/Skills (Chart 5) *60-minute stations</p> <ol style="list-style-type: none"> <li>1. Lunch</li> <li>2. Escape room 1: MR (sim), AT</li> <li>3. Escape Room 2: BP</li> <li>4. Code Blue: AB/LV/RF</li> <li>5. Plinker: RT</li> </ol> <p>3:00-3:30: Survey</p>

# FRIDAY FUNDAY

## Decided to integrate:

- Two escape rooms- where participants complete 20 total hands on tasks related to information learned throughout the week.
- Mega Code Blue simulation- with physician team lead
- Plinker- knowledge review



# Escape Room Knowledge and Skill Assessment

9. Setup a push pull and draw up 10/kg for a 5 kg patient.



10. If you primarily work in the CTICU, this is your patient's vent screen. What are their settings?



Name: \_\_\_\_\_  
Unit: \_\_\_\_\_  
Time In: \_\_\_\_\_  
Time Out: \_\_\_\_\_  
Number of "Phone a Friend": \_\_\_\_\_

### Escape Room 1

- 1.
2. \_\_\_\_\_
3. \_\_\_\_\_
- 4.
5. \_\_\_\_\_
6. \_\_\_\_\_
- 7.
8. \_\_\_\_\_
- 9.
10. \_\_\_\_\_

Name: \_\_\_\_\_  
Unit: \_\_\_\_\_  
Time In: \_\_\_\_\_  
Time Out: \_\_\_\_\_  
Number of "Phone a Friend": \_\_\_\_\_

### Escape Room 2

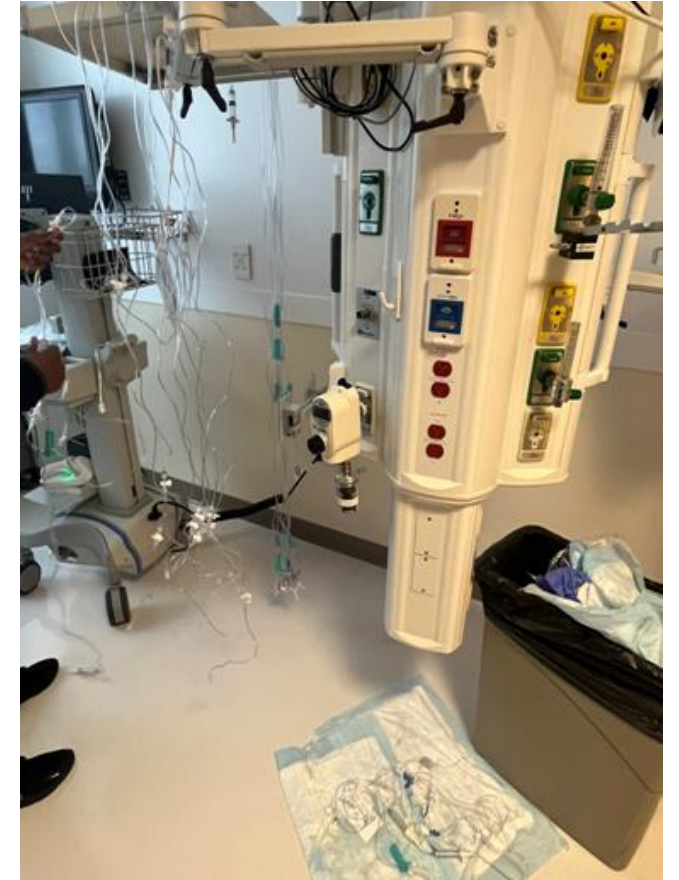
- 1.
2. \_\_\_\_\_
- 3.
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
- 7.
8. \_\_\_\_\_
- 9.
- 10.

# Meeting with Senior Leadership

*following September 2023 Core*

## **Goals for our meeting:**

- Discussion regarding future of ICU Core
- Cluster hiring initiative
- Expectations-all new hires attend Core
- Budget
- Approval for pursuing conferences/publication





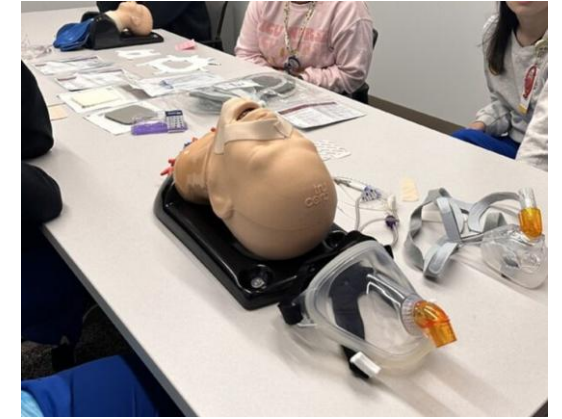
# What We Do Now

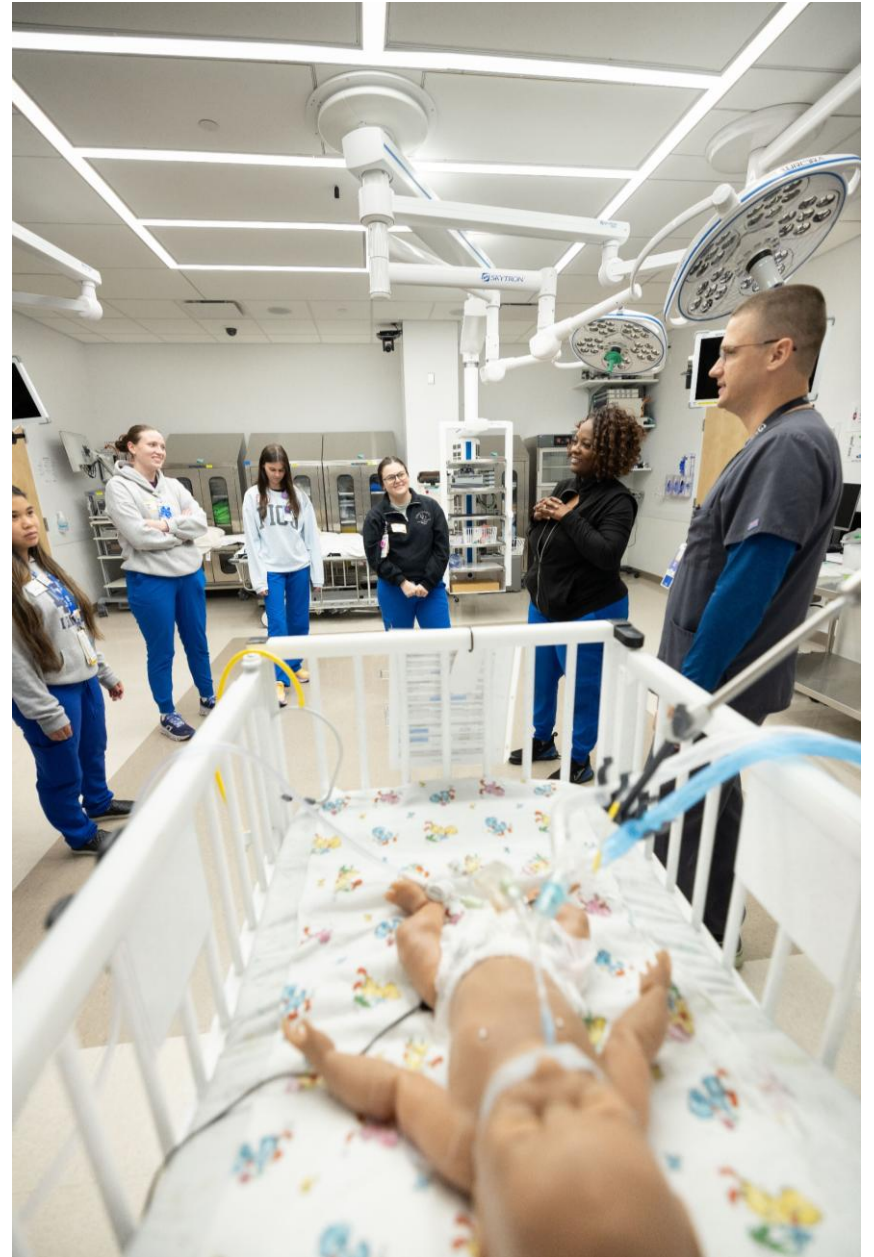


- Five-day, 40-hour program
- Didactic, hands-on, and simulation (low and high fidelity)
- Evidence-based Curriculum with a shared mental model
- Multidisciplinary Involvement

Lunch: 30 min	Lunch: 30 min	Lunch: 30 min	Lunch: 30 min	Lunch during downtime
<p><b>Room: Sim Labs</b></p> <p>1:45-5:30 Sims/skills (Chart 1) *45-minute stations</p> <p>1. Vent Escape 2. Unit Vent Tour/Other Vent scavenger hunt 3. HFOV, Nitric, Ambu Bag Demo 4. NIV 5. Trachs, Ventimasks, Aerosols, Skin Padding: RT</p> <p>(Core RTs at stations 1-3)</p>	<p><b>Room: Sim Labs</b></p> <p>1:30-5:30 Sims/skills (Chart 2) * 60-minute stations</p> <p>1. Sim 1-Resp Distress: LV &amp; AB: LH &amp; LK 2. Sim 2-DOPE: TH &amp; AT 3. EVD scenario/Sedation Meds: CC 4. Proning/C-collar App &amp; Wound Vac/Code Meds: Wound Team &amp; RT</p> <p>Stations 3-4: 1:30-3:30 Stations 1-2: 3:30-5:30</p>	<p><b>Room: Sim Labs</b></p> <p>1:30-4:30 Sims/Skills (Chart 3) *45-minute stations</p> <p>1. Chest Tubes, IAP, NG: RT &amp; CC 2. CPR Feedback + Rhythm sim: AB 3. Aline and CVP: AT 4. IV Insert/Assess: LV &amp; Tasha W.</p>	<p><b>Room: Sim Labs</b></p> <p>1:30-4:30 Sims/Skills (Chart 4) *60-minute stations</p> <p>1. Shock Escape Room: LV 2. Insulin Pens, temp management, CADD: RT 3. Push-pull and Belmont: AT</p>	<p><b>Room: Sim Labs</b></p> <p>10:00-2:30 Sims/Skills (Chart 5) *60-minute stations</p> <p>1. Escape room 1: CC, (sim-MC), AT, ST 2. Escape Room 2 &amp; Plinker: RT, H4B Sarah, Amber, (sim-EA) 3. Code Blue: NH/LV/RF 4. EOL Sim: CC/AB</p> <p><b>10-12: Sims</b> <b>12-2: Escape Rooms</b> (2.3/2.4)</p> <p>2:00-2:30: Survey</p>

# Pictures of ICU Core in Action







# Challenges We Faced



## September 2023

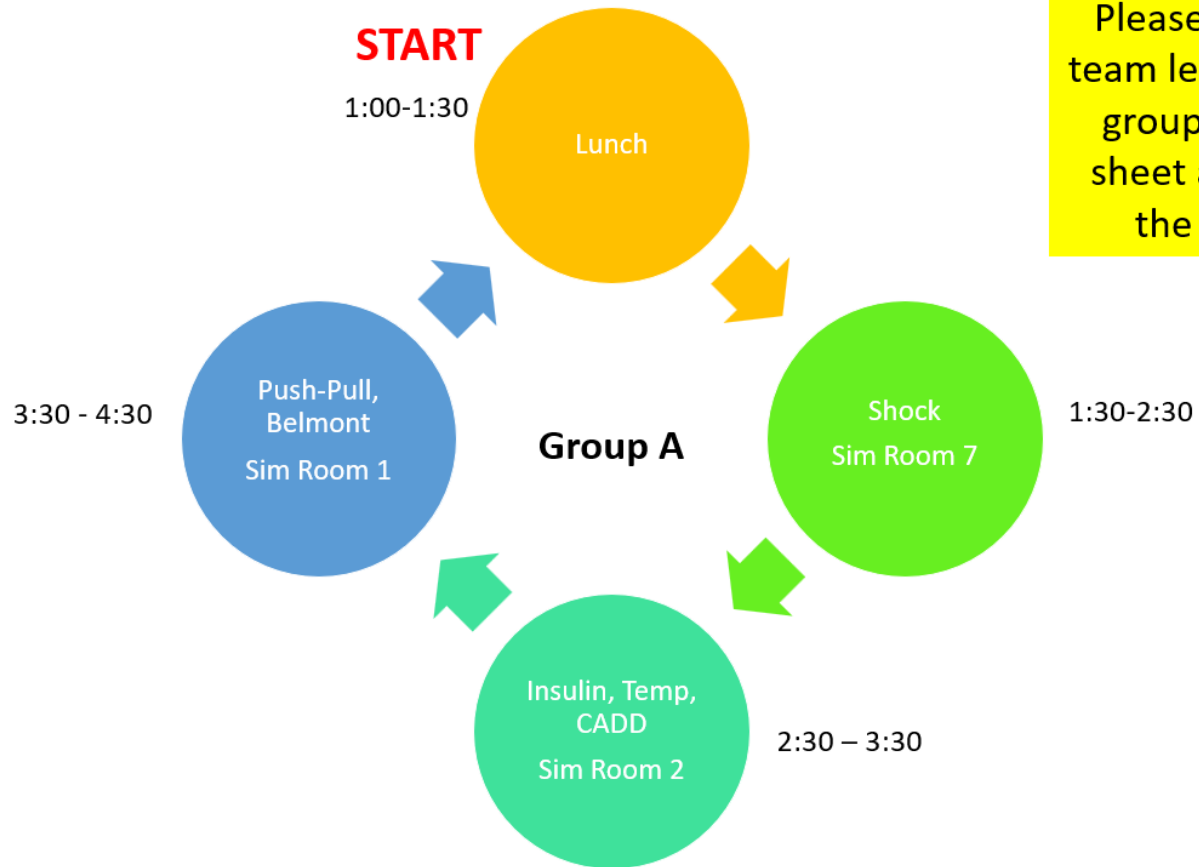
- 38 participants (first large cohort)
- Need to adjust schedule from smaller cohort
  - Lunch into rotations
  - Shorted stations
  - Limited hands on for individual participants
- Increased number of ancillary help
- The need for quick turnover in supply use

## September 2024

- Decided to split this next large cohort into a September and October session
  - Schedule closely mimics smaller cohort scheduling
  - Optimal time allotted for each station
- Increased support from all resources
- Each learner has own supplies for task training



Thursday 4/24/25 Chart 4	Group A	Group B	Group C
1:00-1:30	Lunch	Lunch	Lunch
1:30-2:30	Shock (Sim Room 7)	Push-Pull, Belmont (Sim Room 1)	Insulin, Temp Management, CADD (Sim Room 2)
2:30-3:30	Insulin, Temp Management, CADD (Sim Room 2)	Shock (Sim Room 7)	Push-Pull, Belmont (Sim Room 1)
3:30-4:30	Push-Pull, Belmont (Sim Room 1)	Insulin, Temp Management, CADD (Sim Room 2)	Shock (Sim Room 7)



Please designate a team leader from the group to take this sheet and navigate the rotations!

# Ongoing Challenges

- Cluster hire dates
- Process of scheduling
- Room availability
- Supplies
- Time commitment

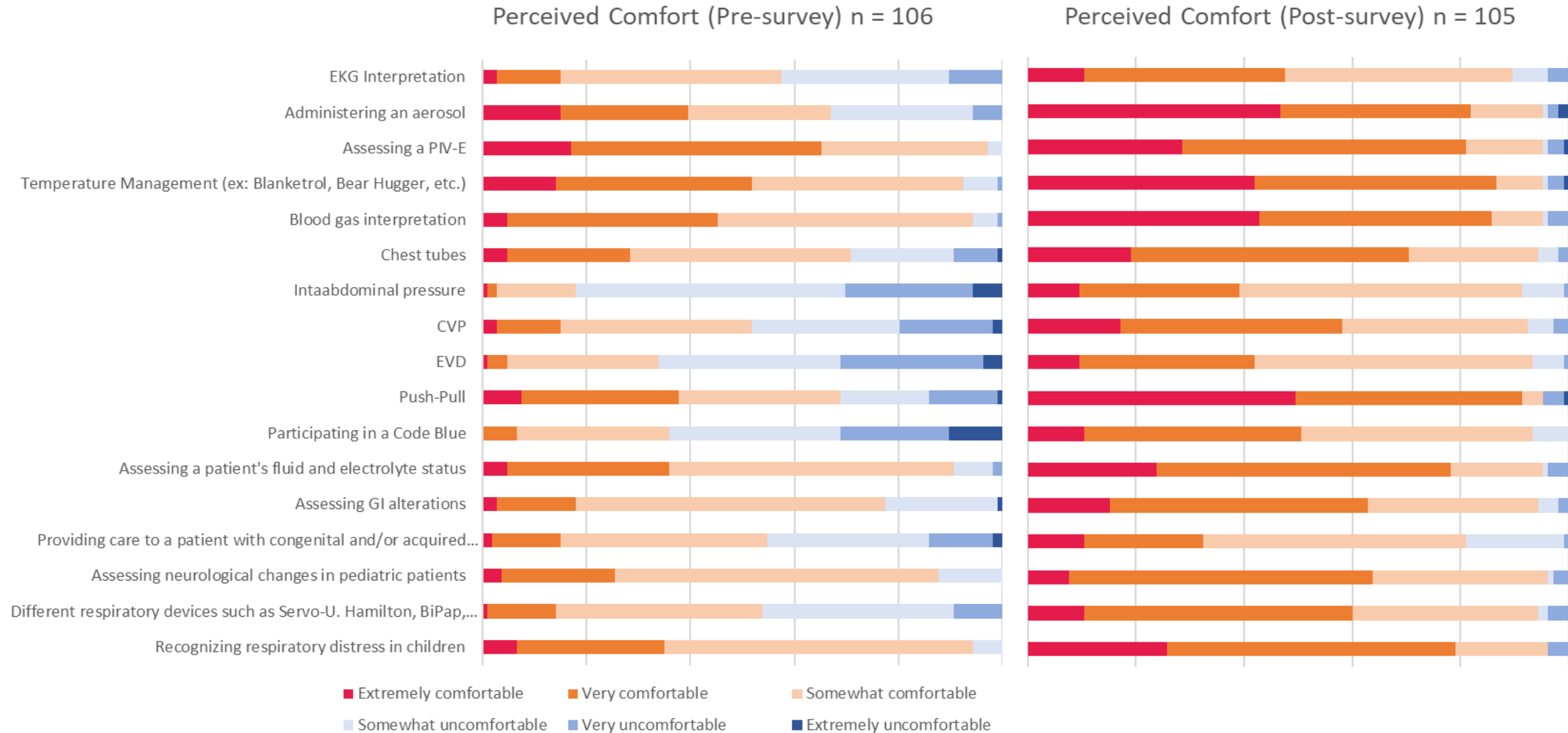




# Participant Results

# Comfort Results

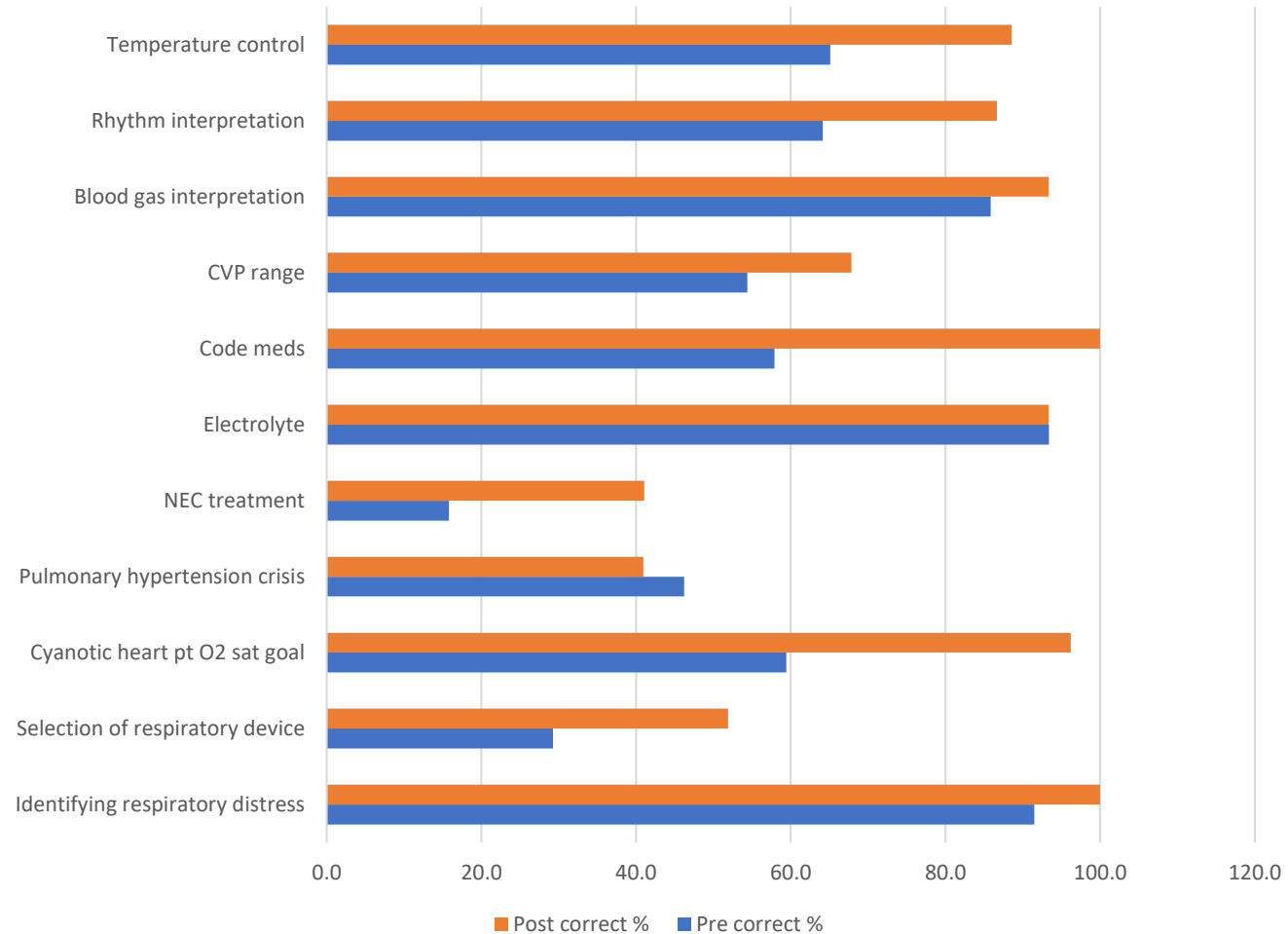
A Pre-Survey was given before first lecture on Monday. A Post-Survey was given at end of day Friday.



# Knowledge Results

A Pre-Survey was given before first lecture on Monday. A Post-Survey was given at end of day Friday.

Comparison of Correct Answer Percentage in Knowledge Questions



# Results


A Pre-Survey was given before first lecture on Monday. A Post-Survey was given at end of day Friday.

## Pre-Survey Knowledge Check

6. What are the goal saturations of a patient with a cyanotic heart defect?

[More Details](#)

 Insights





 55-65%	0
 65-75%	3
 75-85%	23
 85-95%	12



## Post-Survey Knowledge Check

6. What are the goal saturations of a patient with a cyanotic heart defect?

[More Details](#)

 55-65%	0
 65-75%	0
 75-85%	38
 85-95%	0



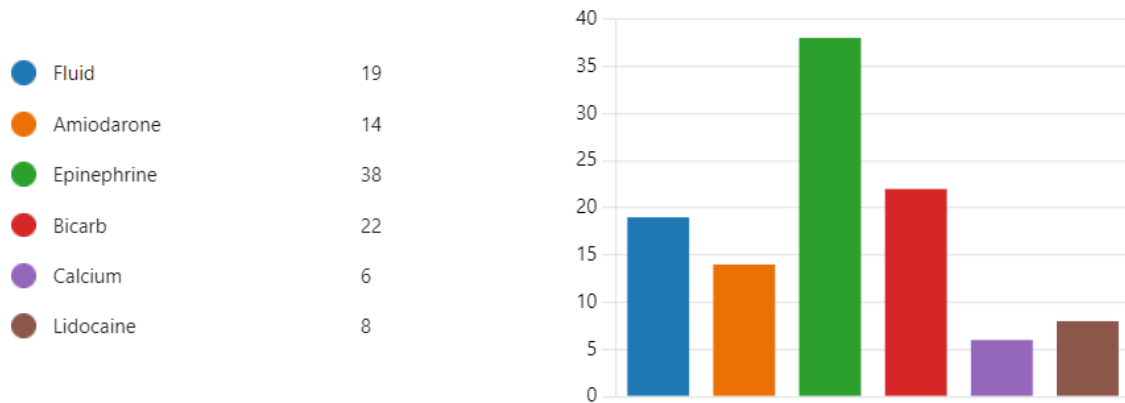
# Results

A Pre-Survey was given before first lecture on Monday. A Post-Survey was given at end of day Friday.

## Pre-Survey Knowledge Check

10. In the event a Code Blue is called on your patient, what medications do you anticipate drawing up immediately. Select all that apply.

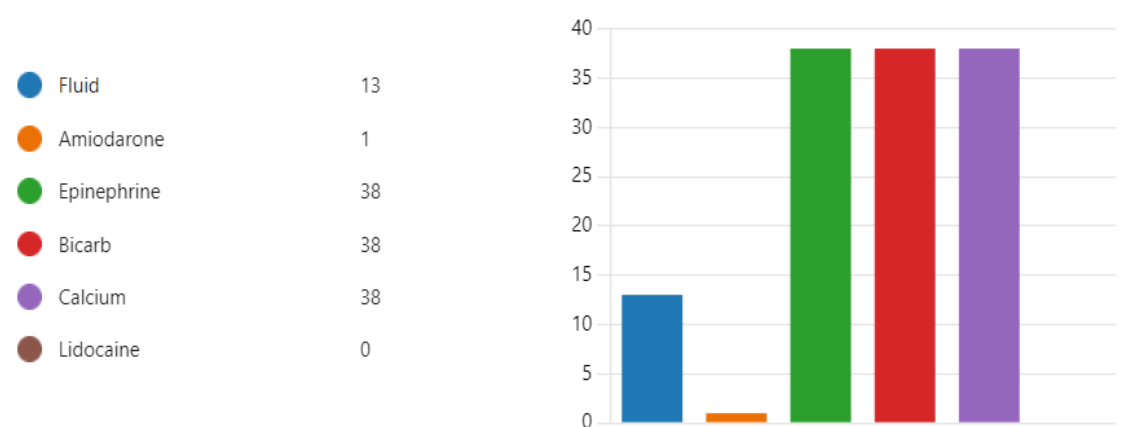
[More Details](#)



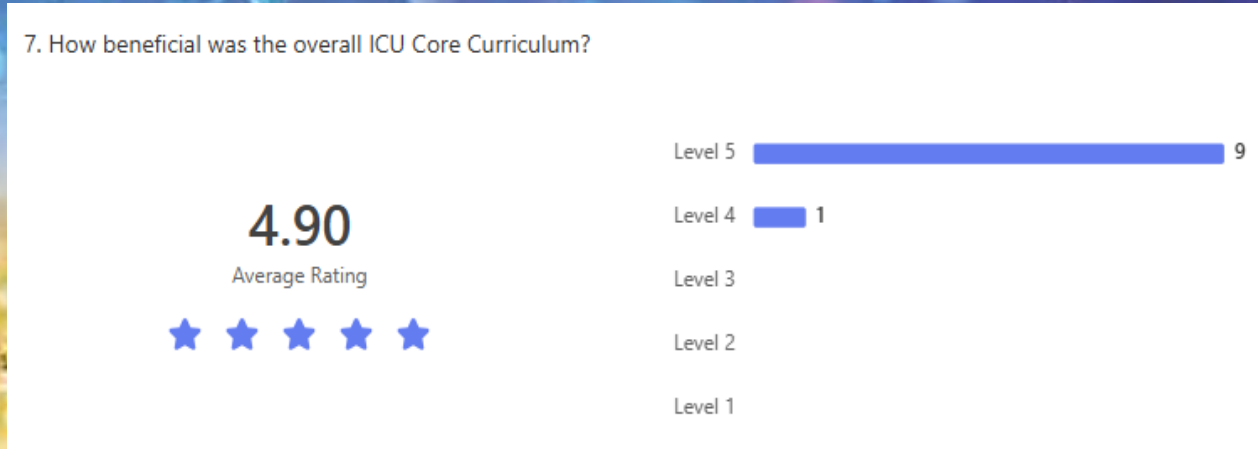
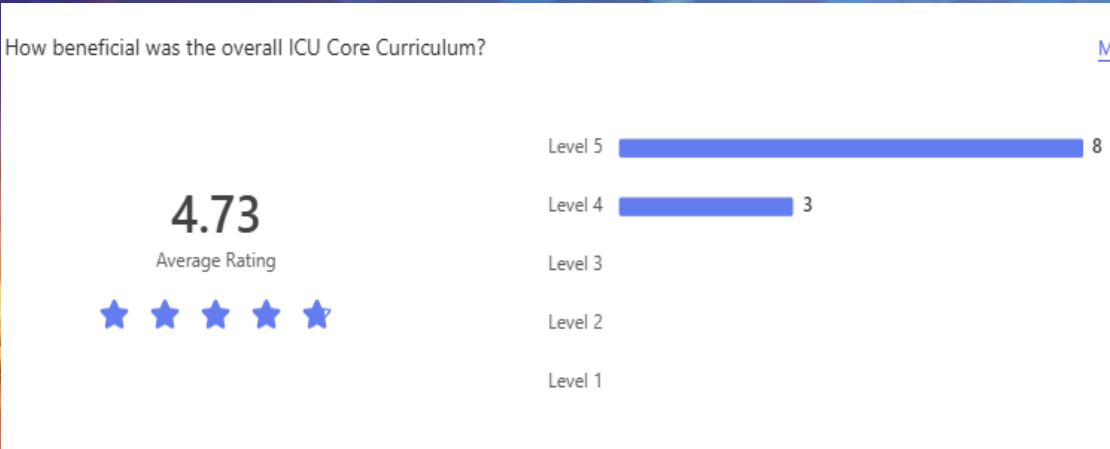
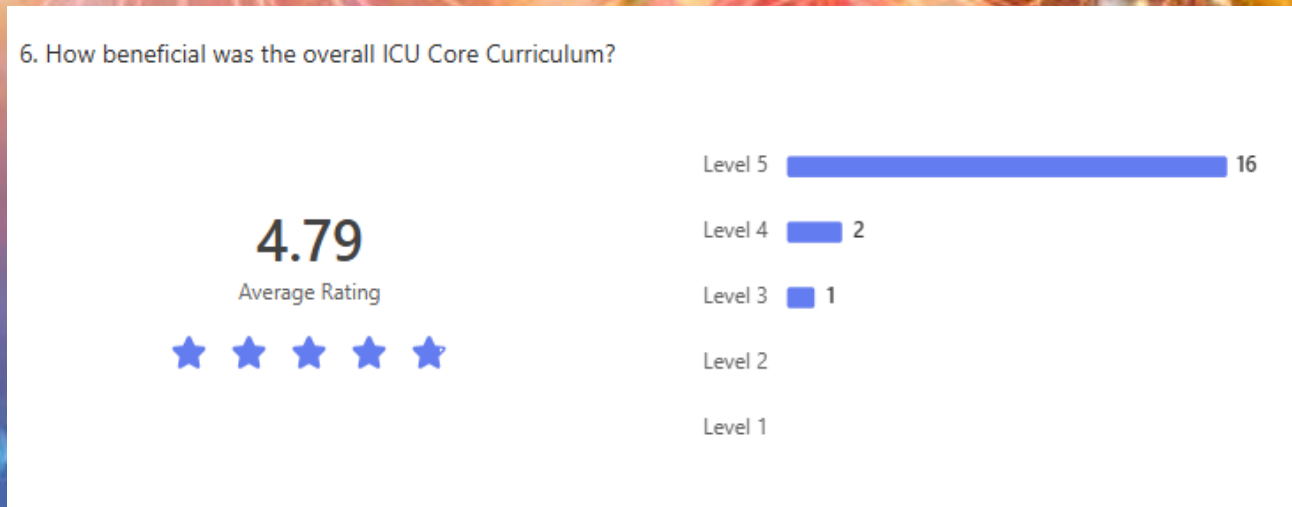
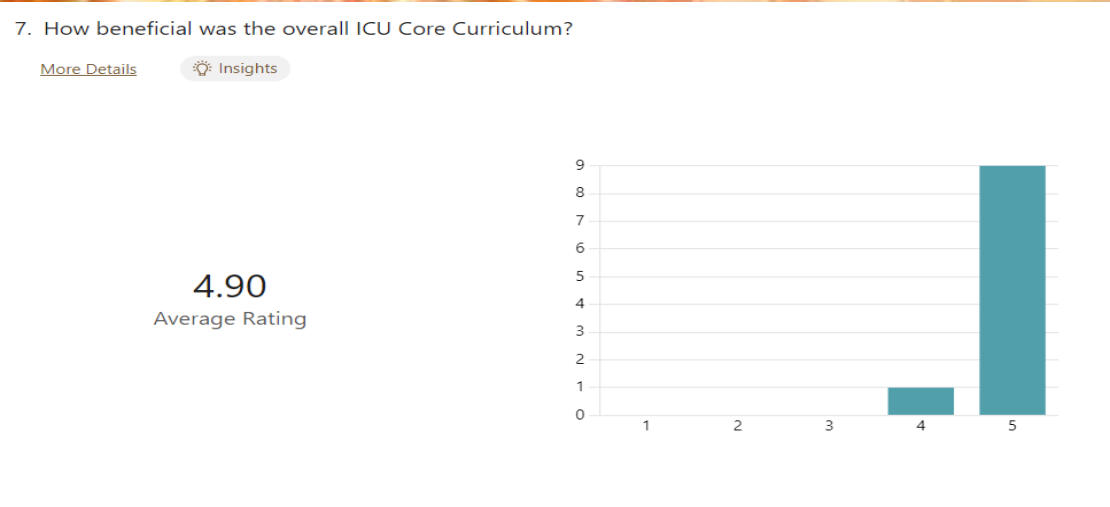
## Post-Survey Knowledge Check

10. In the event a Code Blue is called on your patient, what medications do you anticipate drawing up immediately. Select all that apply.

[More Details](#)



# Why This Program Works!



# Comments from Participants:

I thought it was a great week! I have more confidence now than what I did a week ago

I learned a lot and appreciate the hard work of all the educators that put this together

I understand vent setting so much more. I will feel more comfortable in a code blue situation. I found ICU core week very beneficial; I think all the stations and scenarios were very helpful.

I feel more confident coming out of this class and going into work on my own. I feel like this class helped "fill in" the holes of education that I have received during orientation.

I am very grateful there is an ICU core class. It really helped me to put everything together that I learned especially for never doing ICU before.

I feel like I learned SO MUCH. This has been an amazing experience, and I appreciate all the lectures and sim. I feel like I'm going to be more confident going back to the unit!

# WHAT HAPPENED NEXT

- **Adaptation and Enhancement**
  - Reframed Respiratory Day
  - CPR/Bagging Practice
  - End-of-Life Simulation
  - Task-training Enhancement
- **Integration of “core” concept into other aspects of education**
  - Kidney Support Therapy (KST)
  - Code Blue training
  - CCRN exam prep
- **Poster presentation at SPN Conference**
- **Article Publication in JNPD**
- **Internal Publication in “Everything Matters in Patient Care”**



## Collaborative Effort to Establish Comprehensive and Effective Core Curriculum for ICUs

Rika Tanda, PhD, RN, CCRN, Brittany Palmer, BSN, RN, CCRN, Laura Valido, BSN, RN, Ahquilah Tucker, BSN, RN, CCRN

Nationwide Children's Hospital, Columbus, Ohio

### Background

This collaborative initiative involved three Intensive Care Units (ICUs) within a pediatric institution to create and implement a comprehensive core curriculum for new ICU nurses.

- Rapid nurse turnover also resulted in fewer experienced nurses acting as preceptors, thus adding another layer of strain on training new nurses in the critical care environment.
- New graduate nurses who work in critical care areas are expected to care for patients who are sicker and more complex than ever.
- Caring for these patients requires new critical care nurses to have a high level of critical thinking and clinical judgment.
- A centralized critical care core curriculum, rather than unit-based classes, has been reported as advantageous to standardization of educational contents, reduction of redundancy, and increased effectiveness in learning.

### Local Problem

In Nationwide Children's Hospital, a 551-bed pediatric institution, critical care classes for new hires are not offered through centralized nursing education.

- Each ICU provided educational activities through preceptorship and unit-based classes.
- Consistency in core contents was lacking.
- Core knowledge at the completion of orientation was variable amongst the units.
- Minimal collaboration amongst three ICUs regarding new hire onboarding.

In 2022, the original one-week long critical care core curriculum for new hires was put together by the three ICUs with content experts from multidisciplinary teams. While the original core curriculum served as a backbone of the current curriculum, it required refinement and a robust evaluation method for tracking the effectiveness of the curriculum.

### References

Doerger, M., Kesten, K., & Salazar, B. (2022). Just-in-time orientation of non-critical care nurses to the critical care environment. *The Journal of Continuing Education in Nursing*, 53(10), 466-472. doi: 10.3928/00220124-20220907-09

Montfort, K., Penick, M., Russ, D., Wilkes, R., King, K., & Lebet, R. (2020). Outcome-focused critical care orientation program: From unit based to centralized. *Critical Care Nurse*, 40(4), 54-65. doi:https://doi.org/10.4037/ccn2020585

Rak, K.J., Kahn, J.M., Linstrom, K., Caplan, E.A., Arpote, L., Barnes, B., Chang, C.H., George, E.L., Hess, D.R., Russell, J.L., Seaman, J.B., Angus, D.C., & Girard, T.D. (2021). Enhancing implementation of complex critical care interventions through interprofessional education. *ATC Scholar*, 3(3), 370-385. DOI: 10.34197/atc-scholar.2020-016500

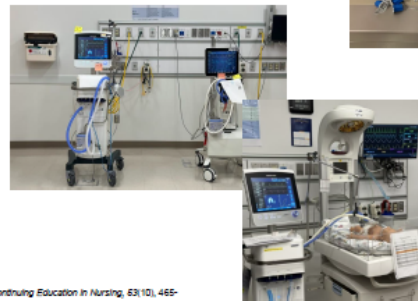
Short, K., Freedman, K., Matyas, J., Rosamilia, M., & Wade, K. (2019). Making the transition: A critical care skills program to support newly hired nurses. *Clinical Nurse Specialist*, 33(3), 123-127. DOI: 10.1097/NUR.0000000000000444

### Strategies



### Curriculum Schedule

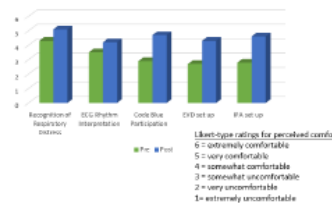
<b>Monday</b>	<ul style="list-style-type: none"> <li>• A.M. Respiratory Lectures</li> <li>• P.M. Respiratory Devices and Ventilators</li> </ul>
<b>Tuesday</b>	<ul style="list-style-type: none"> <li>• A.M. Neuro, AIM, and Wound/Ostomy Lectures</li> <li>• P.M. Respiratory Sims, Chest tube, EVD, Wound/Ostomy skills</li> </ul>
<b>Wednesday</b>	<ul style="list-style-type: none"> <li>• A.M. Cardiac, GI, and PIV Lectures</li> <li>• P.M. Invasive pressure monitoring, IV insertion and assessment, proning, CPR</li> </ul>
<b>Thursday</b>	<ul style="list-style-type: none"> <li>• A.M. Shock, AKI, DKA and Pain Lecture</li> <li>• P.M. PCA pump, fluid resuscitation, insulin pens, temperature management</li> </ul>
<b>Friday</b>	<ul style="list-style-type: none"> <li>• A.M. Code Blue lecture and Crash Cart</li> <li>• P.M. Mega code sim, Escape rooms</li> </ul>



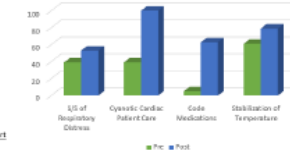
### Outcomes

- Fifteen specialty content experts participated
- Four high-fidelity simulations implemented
- Utilized two escape rooms to validate retention of knowledge and skills taught
- Improvement in perceived comfort for all 17 skill areas
- Increased correct responses among eight of 11 knowledge questions in the post-survey

Pre- and Post Perceived Comfort Level Change (n=38)



Pre- and Post Knowledge Change (n=38)



### Skills Session Set-up



### Conclusions

This joint effort among ICUs with different foci allowed for new nurses to enter critical care areas having similar core competencies while setting forth precedence for continued future collaboration amongst the three critical care areas.



## Collaborative Core Curriculum Initiative

### *Alignment With Nursing Professional Development Roles*

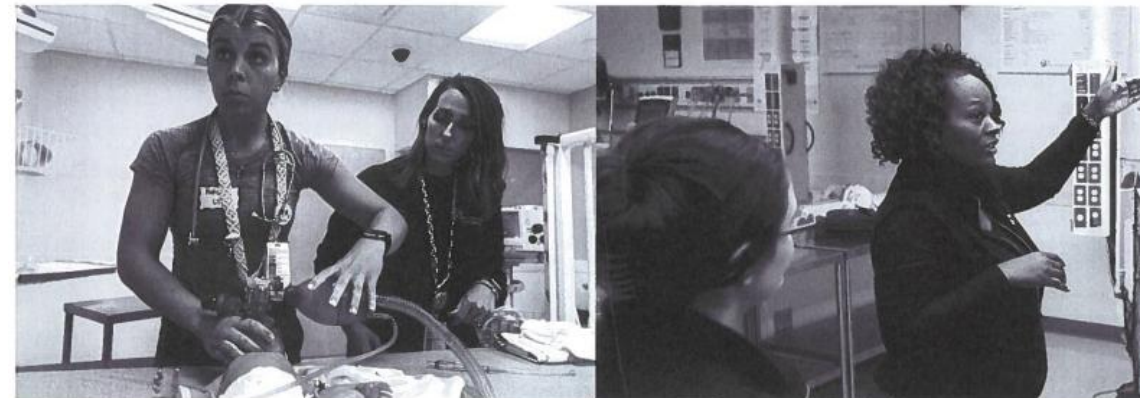
Brittany Palmer, BSN, RN, CCRN ○ Laura Valido, BSN, RN ○ Ahquilah Tucker, BSN, RN, CCRN  
○ Rika Tanda, PhD, RN, CCRN-k ○ Cathleen Opperman, DNP, RN, NDP-BC, EBP-C, NEA-BC, CPN

Multiple intensive care units shared core knowledge, skills, and competencies but provided separate orientations leading to inconsistencies in practice, variations in onboarding, and poor use of resources. In this article, the methods of aligning the nursing professional development practitioner roles to the process of standardizing a core curriculum are described. This collaborative initiative sought to increase the knowledge and comfort of the new nurses while setting precedence for collaboration with educational endeavors between the units.

## An Innovative and Collaborative Core ICU Curriculum: Building Excellence through a Shared Mental Model

Laura Valido, BSN, RN, Unit Educator  
Ahquilah Tucker, BSN, RN, CCRN, CES-P, Unit Educator

Three pediatric intensive care units (PICUs) within Nationwide Children's Hospital (H2B PICU, H4B Cardiac ICU and H8B Respiratory PICU) share core knowledge, skills and competencies. Historically these units provided separate orientations, leading to inconsistencies in practice, variations in onboarding and an inefficient use of resources. As unit-based educators, we recognized that new graduate nurses in critical care areas are expected to provide high-quality care for patients who are sicker and more complex than ever. Caring for these patients requires new critical care nurses to have a high level of critical thinking and clinical judgment. Working together to ensure we provided an evidence-based onboarding experience, we revamped, enhanced and implemented a comprehensive core curriculum for all new hires beginning in September of 2023. The primary objective was establishing a standardized curriculum of essential concepts relevant to all three units. The need to equip nurses to provide care seamlessly and regardless of their assignments within the ICUs was a substantial driving force for this collaboration.



***Ongoing  
collaboration  
for future  
sessions, as  
well other  
educational  
endeavors***

what's  
next?

***Working on  
a  
Simulation-  
focused  
article***

***Integration of enhanced survey and collection  
methods via statistical dashboard***



# How You Can Do It

- Seek out partnerships (similar units)
- Assess gaps in knowledge among like units
- Conduct literature review
- Meet with unit leadership
- Construct curriculum that includes multi-focused approach
- Ongoing evaluation of curriculum



# Questions?





**Thank You**