



Virtual Training  
via



1.5 Day Course



Children's  
of Alabama

UAB MEDICINE

## CURRICULUM AGENDA

Monday, May 23, 2022

ALL TIMES LISTED ARE CENTRAL DAYLIGHT TIME

7:30-7:45	<b>Log-In/Zoom Admittance</b> Participants should log in by 7:45; everyone will enter a waiting room and will be admitted at 7:45.	1:15-2:15	<b>Hands-On (All Participants)</b> ~ Theresa Mottes, MSN, APRN, CPNP-AC, CDN ~ Jessica Potts, BSN ~ Kara Short, MSN, CRNP ~ Cara Slagle, MD
7:45-8:00	<b>Introductions</b> What to expect/housekeeping items ~ Kara Short, MSN, CRNP	2:15-3:45	<b>Breakout Session: Providers</b>
8:00-8:05	<b>Welcome</b> ~ Coke Matthews III Chief Development Officer, Children's of Alabama Executive VP, Alabama Children's Hospital Foundation	2:15-2:30	<b>Medications During Kidney Support Therapy</b> ~ Traci Henderson, RPh
8:05-8:50	<b>Indications for Kidney Support Therapy for Acute Kidney Injury, Fluid Overload, and Congenital Kidney Failure</b> ~ David Askenazi, MD, MSPH	2:30-2:45	<b>Nutrition During Kidney Support Therapy</b> ~ Kristin Mullarkey, RD, LD, CNSC
8:50-9:35	<b>Principles of Neonatal Kidney Support Therapy, Part 1</b> ~ Theresa Mottes, MSN, APRN, CPNP-AC, CDN	2:45-3:15	<b>Hyperammonemia</b> ~ David Selewski, MD
9:35-9:45	Break	3:15-3:45	<b>Access for Kidney Support Therapy in Infants</b> ~ Vince Mortellaro, MD
9:45-10:30	<b>Principles of Neonatal Kidney Support Therapy, Part 2</b> ~ David Selewski, MD	2:15-3:45	<b>Breakout Session: Nurses</b>
10:30-11:15	<b>Principles of Neonatal Kidney Support Therapy, Part 3</b> ~ Tennille Webb, MD	3:45-4:00	<b>Hands-On Nursing Specific Skills</b> ~ Theresa Mottes, MSN, APRN, CPNP-AC, CDN ~ Jessica Potts, BSN ~ Kara Short, MSN, CRNP ~ Cara Slagle, MD
11:15-11:45	<b>Caring for the Neonate on Kidney Support Therapy: The Intensivist's Perspective</b> ~ Kara Slagle, MD	4:00-4:15	Break
11:45-1:00	Lunch Break	4:15-4:30	<b>All participants</b>
1:00-1:15	<b>Caring for the Neonate on Kidney Support Therapy: A Parent's Perspective</b> ~ Kara Short, MSN, CRNP and families with KST patients	4:30-4:45	<b>Educating Your Team</b> ~ Theresa Mottes, MSN, APRN, CPNP-AC, CDN
		4:45	<b>Caring for Your Program</b> ~ David Askenazi, MD, MSPH
			<b>Concluding Remarks: Bringing It All Together</b> ~ Kara Short, MSN, CRNP
			<b>Dismissal</b>

## Continuing Education

Children's of Alabama designates this live activity for a maximum of 10.5 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Children's of Alabama is accredited by the Medical Association of the State of Alabama to provide continuing medical education for physicians.

[Register here](#)

Questions? Contact David Askenazi or Meagan Reagan



**NICKS**  
Neonatal and Infant Course for  
**KIDNEY SUPPORT**

Virtual Training  
via

**zoom**

**1.5 Day Course**



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## **CURRICULUM AGENDA**

**Tuesday, May 24, 2022**

**ALL TIMES LISTED ARE CENTRAL DAYLIGHT TIME**

8:15-12:00 **Morning Groups**  
~ Simulation Team and NICKS Faculty

1:15-5:00 **Afternoon Groups**  
~ Simulation Team and NICKS Faculty

Participants will be divided into either morning or afternoon groups (based on requests made at time of registration to the extent possible). All efforts will be made to honor registrant's session preference, but organizers are unable to guarantee simulation session assignment will match preference. All participants will be actively engaged in four separate simulations. NICKS and Simulation Center faculty will be supervising simulations and readily available to answer questions. All simulations will include a post debriefing.

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## OVERALL LEARNING OBJECTIVES

At the end of the course, the learner will:

1. Recognize the epidemiology of neonatal acute kidney injury and neonatal congenital kidney failure.
2. Recognize the indications and optimal timing of kidney support therapy in neonates and infants.
3. Identify the principles central to the provision of safe and effective treatment using different forms of neonatal kidney support therapy.
4. Develop strategies to optimize the kidney support program at each participant's home institution through educational, administrative, personnel and quality improvement initiatives.

## SESSION-SPECIFIC LEARNING OBJECTIVES

### Indications for Kidney Support Therapy for Acute Kidney Injury, Fluid Overload and Congenital Kidney Failure

- Review the epidemiology of neonatal and pediatric acute kidney injury (AKI)
- Recognize the impact of fluid overload (FO) in critically ill neonates and children
- Discuss the epidemiology of congenital kidney failure (CKF)
- Outline the goals of KST for neonates and infants with AKI/FO

### Principles of Neonatal Kidney Support Therapy, Part 1

- Discuss the timing of kidney support therapy for neonates and infants with AKI, fluid overload and congenital kidney failure (CKF)
- Describe the terminology of KST
  - \* Clearance mode (diffusion vs. hemofiltration vs. ultrafiltration)
  - \* Peritoneal vs. veno-venous
  - \* Continuous vs. intermittent vs. prolonged intermittent
- Discuss elements of the PD prescription
- Discuss specifics (features, pros and cons) for different KST machines available for small children

### Principles of Neonatal Kidney Support Therapy, Part 2

- Discuss access for patients who need KST
- Review options for KST on Extracorporeal Membrane Oxygenation (ECMO)
- Review options for priming circuits and the rationale for blood primes
- Acquire strategies for optimizing blood prime procedures
- Compare the options, benefits, risks, set up, complications and monitoring for different anticoagulation options

### Principles of Neonatal Kidney Support Therapy, Part 3

- Discuss elements of a CVVH/CVVHD prescription (blood flow, dialysis/replacement rates, ultrafiltration rates)
- Discuss filtration fraction
- Discuss approaches to ultrafiltration rate prescription
- Troubleshoot potential ultrafiltration issues and discuss plans to address these issues
- Review hematocrit scenarios

### Caring for the Neonate on Kidney Support Therapy: The Intensivist's Perspective

- Discuss how approaches to making decision to start KST in the ICU
- Discuss cardio-pulmonary disease care in neonates on KST
- Discuss strategies to have the best collaborative practices for your KST program

### Caring for the Neonate on Kidney Support Therapy: A Parent's Perspective

- Discuss cases of end-stage kidney disease in patients who required ECMO and KST and overview of their current status
- Consider the perspective of the parents and the responsibilities of taking care of babies on KST

### Hands-On (All Participants)

- Demonstrate features of manual peritoneal dialysis
- Demonstrate features of modified CVVH on Aquadex
- Demonstrate features of CARPEDIEM
- Review troubleshooting of extracorporeal circuits
- Discuss initiation of KST

### Medications During Kidney Support Therapy

- Discuss importance of medication goals during KST
- Review guidelines for medication during KST

### Nutrition During Kidney Support Therapy

- Discuss importance of nutritional goals during KST
- Review guidelines for nutrition feeding during KST

### Hyperammonemia

- Discuss strategies for the care of a neonate with hyperammonemia
- Learn to mitigate potential negative consequences when performing high clearance KST

### Access for Kidney Support Therapy in Infants

- Review intravascular and peritoneal dialysis access options for KST
- Discuss the principles of PD and vascular access placement

[Register here](#)



At the end of the course, the learner will:

1. Recognize the epidemiology of neonatal acute kidney injury and neonatal congenital kidney failure.
2. Recognize the indications and optimal timing of kidney support therapy in neonates and infants.
3. Identify the principles central to the provision of safe and effective treatment using different forms of neonatal kidney support therapy.
4. Develop strategies to optimize the kidney support program at each participant's home institution through educational, administrative, personnel and quality improvement initiatives.

## OVERALL LEARNING OBJECTIVES

### SESSION-SPECIFIC LEARNING OBJECTIVES continued

#### **Hands-On Nursing Specific Skills (Nurses)**

- Demonstrate set-up of modified CVVH on Aquadex
- Discuss set-up of CARPEDIEM
- Review blood prime procedures
- Discuss options for circuit-to-circuit change
- Discuss dealing with access alarms
- Review recirculation procedures

#### **Educating Your Team for Kidney Support Therapy**

- Discuss frequency, documentation, training, and certification of team members
- Review educational training tools

#### **Caring for Your Program**

- Discuss the advantages and disadvantages of different types of nursing structures
- Review Roles and Responsibilities for all team members for the program — during KST initiation and during KST maintenance
- Discuss the importance of standardizing Policies and Procedures
- Review Elements of Order Sets
- Discuss potential quality improvement initiatives

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## FACULTY

### **David Askenazi, MD, MSPH**

Professor, Pediatric Nephrology  
Director, Pediatric and Infant Center for Acute  
Nephrology (PICAN)  
University of Alabama at Birmingham Children's of  
Alabama

### **Kara Short, MSN, CRNP**

Acute Dialysis Nurse Practitioner, Pediatric Nephrology  
Children's of Alabama

### **Theresa Mottes, MSN, APRN, CPNP-AC, CDN**

Acute Nurse Practitioner  
Lurie Children's Hospital, Cincinnati, Ohio

### **David Selewski, MD**

Associate Professor, Pediatric Nephrology  
Medical University of South Carolina

### **Tennille Webb, MD**

Assistant Professor, Pediatric Nephrology  
University of Alabama at Birmingham Children's of  
Alabama

### **Daryl Ingram, BSN, RN, CDN**

Acute Dialysis Nursing Coordinator  
Children's of Alabama

### **Jessica Potts, CPN, BSN**

Clinical Research Nurse Coordinator  
Pediatric Nephrology  
University of Alabama at Birmingham

### **Traci Henderson, RPh**

Pediatric Nephrology Pharmacist  
Children's of Alabama

### **Kristin Mullarkey, RD, LD, CNSC**

Clinical Dietitian  
Children's of Alabama

### **Cara Slagle, MD**

Assistant Professor, Division of Neonatology and  
Pulmonary Biology  
Neonatology Co-Director for the Center of Acute  
Care Nephrology  
Cincinnati Children's Hospital Medical Center and  
University of Cincinnati College of Medicine

### **Vince Mortellaro, MD**

Assistant Professor, Pediatric Surgery  
University of Alabama at Birmingham  
Children's of Alabama

### **Nancy Tofil, MD, MEd**

Professor and Director, UAB Pediatric Critical Care  
Medical Director, Pediatric Simulation Center at  
Children's of Alabama

### **Chrystal Rutledge, MD**

Assistant Professor, UAB Pediatric Critical Care Co-  
Director, Pediatric Simulation Center at Children's  
of Alabama

## Registration Information

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(payment by credit card only)

Physicians: \$325

Nurses/NPs: \$275

Fellows: \$200



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