

# Neonatal Pharmacology Conference 2022: Incorporating Evidence-Based Practice into Clinical Decision Making



November 9-11 2022

Francis Marion Hotel  
Charleston, South Carolina

In-person & virtual attendance available

All live streaming sessions have been approved for  
*AMA PRA Category 1 Credits™*

Presented by the Medical University of South Carolina  
Neonatal Advanced Practice Provider Team,  
Division of Neonatology,  
and the Office of Continuing Medical Education



# Neonatal Pharmacology Conference 2022: Incorporating Evidence-Based Practice into Clinical Decision Making

## COURSE FACULTY

### Neena Champaigne, M.D., FACMG, FAAP

Clinical Associate Professor  
Division Chief, Pediatric Genetics  
Medical University of South Carolina

### Margaret Conway-Orgel, DNP, NNP-BC

Assistant Professor  
Nell Hodgson Woodruff School of Nursing  
Emory University, Atlanta, GA  
Neonatal Nurse Practitioner  
Shawn Jenkins Children's Hospital  
Medical University of South Carolina

### Reese H. Clark, M.D.

Executive Director  
Pediatrix Center for Research,  
Education, Quality and Safety  
Vice President of Clinical Research  
MEDNAX Inc  
Clinical Professor of Pediatrics  
USC Greenville School of Medicine  
Greenville, SC

### Cassandra Coleman, M.D.

Neonatology Fellow  
College of Medicine  
Medical University of South Carolina

### Rachel Greenberg, M.D.

Associate Professor of Pediatrics  
Division of Neonatal-Perinatal Medicine  
Program Director, Duke Neonatal-Perinatal Medicine Fellowship  
Duke University Medical Center  
Duke Clinical Research Institute

### Heidi Karpen, M.D.

Associate Professor of Pediatrics  
Associate Director Neonatal-Perinatal Medicine  
Fellow Training Program  
Emory University/Children's Healthcare of Atlanta

### Laura E. Lach, D.O.

Neonatal-Perinatal Medicine Fellow  
Shawn Jenkins Children's Hospital  
Medical University of South Carolina

### Courtney Perry, PharmD

Assistant Professor  
Director of Pharmacology and Therapeutics Course  
Wake Forest School of Medicine- Physician Assistant Program  
Winston-Salem, NC and Boone, NC  
Pediatric Clinical Pharmacist  
Wake Forest Baptist Medical Center, Winston-Salem, NC

### Rita Ryan, M.D.

Professor of Pediatrics (Neonatology)  
Case Western Reserve University  
UH Rainbow Babies & Children's Hospital  
Cleveland, OH

### Julie Roach Ross, M.D.

Associate Professor of Pediatrics  
Division of Neonatology  
Medical University of South Carolina

### Heidi Stefflik, M.D., MSCR

Assistant Professor  
Department of Pediatrics  
Division of Neonatal-Perinatal Medicine  
Medical University of South Carolina  
Darby Children's Research Institute

### Katherine Twombly, M.D., FAAP, FAST

Professor of Pediatrics, College of Medicine  
Professor, College of Graduate Medical Studies  
Chief, Pediatric Nephrology  
Medical Director, Pediatric Kidney Transplant  
Medical Director, Acute Dialysis Units  
Medical University of South Carolina

### Katherine Vincent, DNP, APRN, NNP-NC

Neonatal Nurse Practitioner  
Shawn Jenkins Children's Hospital  
Medical University of South Carolina

### Carol Wagner, M.D.

Professor  
Department of Pediatrics  
Associate Director of Nexus Research Center  
Medical University of South Carolina

### Luke Wessler

Third Year Medical Student  
Medical University of South Carolina



## CONFERENCE DESCRIPTION

The need for evidenced-based practice in neonatology is increasingly important as clinical decisions and treatments are made. The conference is designed to help NICU professionals including physicians, advanced practice providers, nurse managers and experienced staff nurses make those decisions. The goal of the conference is to share evidence based approaches in the care of the neonate.

## IN-PERSON ATTENDANCE

In addition to virtual attendance for the conference, in-person attendance at the Francis Marion Hotel will be offered. The in-person attendance will be offered on a first come, first serve basis until conference capacity is reached.

## REGISTRATION FEES

	Early	Regular
In-person Attendance	\$450	\$500
Virtual Attendance	\$450	\$500
Access to Recorded Videos (Optional)	\$100	\$100

Early registration fees apply if registration is received on or before August 31, 2022.

The fee for in-person attendance includes tuition, breaks, online syllabus and certificates of attendance. The fee for live streaming the meeting includes tuition, online syllabus, and certificates of attendance.

Please make your check payable to Medical University of South Carolina and mail with the registration form included in this brochure to: Monica Conetta, MUSC Office of CME, 96 Jonathan Lucas Street, HE221A, MSC 754, Charleston, SC 29425.

## ACCESS TO RECORDED PRESENTATIONS

The MUSC Office of CME, with the permission of each speaker, will be recording each presentation of the conference. The videos will be posted online after the conference and be available for those who are not able to live stream the entire conference. Viewing the videos will offer the same amount of CME credit and can be viewed for up to 14 days following the posting date. The *non-refundable* fee for this service is \$100.00 and is only available to individuals registered for the conference. **Access to the videos will be granted to registered attendees who purchase this option in advance of the conference.**

**Credit Designation:** The Medical University of South Carolina designates this enduring material for a maximum of 1.0 *AMA PRA Category I Credit(s)*™ for each video. Physicians should only claim the credit commensurate with the extent of their participation in the activity.

## CREDIT DESIGNATION

The Medical University of South Carolina designates this live activity for a maximum of **20.00 AMA PRA Category 1 Credit(s)**™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



**Nursing Credit:** This activity has been submitted to the South Carolina Nurses Association for approval to award contact hours. The South Carolina Nurses Association is accredited as an approver of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

**Advanced Practice Registered Nurses:** This continuing education activity awards a total of **20.00 PH** (pharmacology hours). Hours for controlled substances are 2.0.

## ACCREDITATION

The Medical University of South Carolina College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

## DISCLOSURE STATEMENTS

In accordance with the ACCME Standards for Integrity and Independence in Accredited Continuing Education anyone involved in planning or presenting this educational activity will be required to disclose any financial relationships with any ineligible companies. An ineligible company is any entity whose primary business is producing, marketing, selling, reselling, or distributing healthcare products used by or on patients. Any financial relationships with these ineligible companies have been mitigated by the MUSC Office of CME. Speakers who incorporate information about off-label or investigational use of drugs or devices will be asked to disclose that information at the beginning of their presentation.

## REGISTRATION METHODS

*(Please use ONE of these methods to register. Do not mail if previously faxed or telephoned).*

- **Mail** registration form with check made out to "Medical University of South Carolina" or credit card information to:  
Monica Conetta, Office of CME, Medical University of South Carolina, 96 Jonathan Lucas Street, HE 221A, MSC 754, Charleston, SC, 29425
- **Telephone:** (843) 876-1925 – Registration by credit card only
- **Fax:** (843) 876-1931 – Registration by credit card only
- **Online:** <https://tinyurl.com/Neonatal2022online>





# Neonatal Pharmacology Conference 2022: Incorporating Evidence-Based Practice into Clinical Decision Making

**COURSE AGENDA** At the end of each presentation, learners should be better able to achieve the respective objectives stated.

## Wednesday, November 9, 2022

- 7:00am Registration/Breakfast/Exhibits
- 7:25 Login for Virtual Attendance
- 7:30 **Patent Ductus Arteriosus (PDA) and the Results of Implementation of Protocolized Prophylaxis, Screening and Treatment in the Medial University of South Carolina (MUSC) Neonatal Intensive Care Unit (NICU)**  
*Heidi J. Steflik, M.D.*  
Review treatment and outcome data surrounding the institution of the 2019 MUSC NICU PDA Prophylaxis, Screening, Evaluation, and Treatment Protocol. Specifically, Describe MUSC PDA prophylaxis indications, contraindication, and clinical outcomes. Describe MUSC PDA screening indications and clinical outcomes. Describe MUSC PDA treatment indications, contraindication, and clinical outcomes. Appraise planned protocol revisions and future PDA treatment directions at MUSC.
- 8:30 **Congenital Syphilis: Rising Rates Prompting a Review**  
*Heidi J. Steflik, M.D.*  
Describe epidemiology of neonatal syphilis including epidemiologic trends in last decade. Summarize prenatal screening strategies for and treatment of maternal syphilis and strategies for prevention of congenital syphilis. Describe presentation and key physical examination findings of congenital syphilis and appropriately stage disease. Prescribe appropriate treatment for congenital syphilis and review associated outcomes.
- 9:30 **BREAK/Exhibits**
- 10:00 **Keepin' it Balanced: Fluid and electrolyte management for extremely low birth weight infant's (ELBW's), Katherine Vincent, DNP**  
Recognize the difference between extremely low birth weight infants' (ELBW's) water balance, electrolyte requirements, and body composition vs other neonates. Summarize the latest evidence on fluid, electrolyte, and acid/base balance in ELBW's. Compare the difference between pre-diuretic, diuretic, and post diuretic phases in ELBW's. Describe how to optimize parental nutrition for ELBW's. Identify clinical features and laboratory evidence that guides optimal fluid and electrolyte management in ELBW's.
- 11:00 **Demystifying Hyponatremia, Katherine Twombly, M.D.**  
Correct hyponatremia at appropriate rate. Pick correct fluids to correct hyponatremia. Prevent complications from hyponatremia treatment.
- 12:00pm **Lunch (on your own)**
- 1:15 **Postnatal Steroid Exposure in Very Low Birthweight Neonates and Associations with Acute kidney injury, Cassandra Coleman, M.D.**  
Define neonatal acute kidney injury. Identify infants at greatest risk for acute kidney injury. Review common uses of steroids in very low birthweight neonates. Investigate rates of acute kidney injury in infants that received steroids compared to those that did not. Investigate rates of recurrent acute kidney injury in infants that received steroids compared to those that did not. Identify infants that may benefit most from steroid use to attempt to prevent acute kidney injury.
- 2:15 **Hans and Franz Want to Pump You Up! Steroids in the NICU**  
*Rita Ryan, M.D.*  
Choose the optimal steroid type, dose and timing for the preterm infant in the NICU
- 3:15 **BREAK/Exhibits**
- 3:45 **Use of IVIG for immune-mediated hemolysis in the newborn period**  
*Rita Ryan, M.D.*  
Describe when to use and when not to use IVIG in babies with hyperbilirubinemia and why.
- 4:45 **Adjourn for the Day**

## Thursday, November 10, 2022

- 7:00am Registration/Breakfast/Exhibits
- 7:25 Login for Virtual Attendance
- 7:30 **Mystery Case: Cracking the code of Tuberous Sclerosis**  
*Laura E. Lach, D.O.*  
Recognize the presentation of tuberous sclerosis in the neonatal population. Review the genetic basis of tuberous sclerosis. Review diagnostic criteria for tuberous sclerosis. Familiarize with current management and treatment of tuberous sclerosis
- 8:30 **Gene Therapy**  
*Neena Champaigne, M.D.*  
Describe different approaches for gene therapy used to treat rare diseases. Discuss the current gene therapy available for spinal muscular atrophy. Recognize the risks, benefits, and limitations of gene therapy in clinical practice.
- 9:30 **BREAK/Exhibits**
- 10:00 **The Role of Pre-and Probiotics in the Health of Neonates**  
*Carol Wagner, M.D.*  
Differentiate between patterns in neonatal and young infant microbiome as a function of delivery mode, gestational age, feeding type and environmental factors such as antibiotic exposure and NICU admission, and the impact that these patterns have on both short-term and long-term health. Distinguish health effects of a narrower vs. diverse microbiome pattern in infants who are healthy, preterm, fed donor vs. mother's own milk, and those who develop feeding intolerance and necrotizing enterocolitis. Through review of published clinical trials on the health effect of pre- and probiotics on the gut microbiome, knowledge of factors that impact the microbiome profile, and additional therapies that may be prescribed such as dietary changes for lactating women, one will have a better sense of current practices, interventions and the future research necessary in achieving better neonatal health
- 11:00 **New Publications in 2022 that should change NICU Care**  
*Reese Clark, M.D.*  
Discuss the changes in RSV prevention. Recognize the efficacy of hydrocortisone in preventing bronchopulmonary disease. Review new information surgical and medical treatment of complicated intraabdominal infections
- 12:00pm **Lunch (on your own)**
- 1:15 **New Publications in 2022 that should change NICU Care Continued**  
*Reese Clark, M.D.*  
Discuss the rate of spontaneous closure of the ductus arteriosus in premature infants (gestational age of 23-32 weeks at birth) discharged home with a persistently patent ductus arteriosus.
- 2:15 **The Long and Short of Neonatal Intestinal Failure: Parenteral Nutrition, Neonatal Bile Flow and Cholestasis**  
*Heidi Karpen, M.D.*  
Define "Intestinal Failure" and "Parenteral Nutrition Associated Cholestasis and Liver Disease". Appreciate the causes of intestinal failure, treatment plans and prognosis the physiology of bile formation and flow. Be able to delineate the causes of cholestasis, unique risk to the neonate and the role of septic mediators
- 3:15 **BREAK/Exhibits**

# Neonatal Pharmacology Conference 2022: Incorporating Evidence-Based Practice into Clinical Decision Making

## COURSE AGENDA (CONTINUED)

### Thursday, November 10, 2022 (continued)

- 3:30 **Neonatal Parenteral Nutrition Associated Cholestasis and Liver Disease: Lipids and Therapeutics**  
*Heidi Karpen, M.D.*  
Improve practice by understanding the role of phytosterols and alternate lipid sources. Utilize evidence-based therapeutics and explore new scientific advances
- 4:30 **Sedation and Delirium in the Neonatal Patient: Are we missing the cues?**  
*Margaret Conway-Orgel, M.D.*  
Define delirium as it relates to the neonatal patient. Discuss medications commonly used for sedation and pain management in the NICU. Describe methods to assess and clinical approaches that may reduce the incidence of delirium.
- 5:30 **Adjourn for the Day**

### Friday, November 11, 2022

- 7:00am **Registration/Breakfast**
- 7:25 **Login for Virtual Attendance**
- 7:30 **Neonatal Opioid Withdrawal Syndrome: Current and Emerging Evidence in Clinical Management**  
*Julie Roach Ross, M.D.*  
Describe the current national trends in prenatal opioid exposure. Identify current assessment tools and evidence for their use. Critically evaluate evidence for current first and second line pharmacologic therapy options for neonatal opioid withdrawal.
- 8:30 **Antimicrobial Stewardship in the NICU**  
*Courtney Perry, PharmD*  
Discuss antimicrobial use in the NICU. Identify consequences of use/overuse of antimicrobials use in this population. Evaluate strategies for and benefits of antimicrobial stewardship in the NICU population
- 9:30 **BREAK/Exhibits**
- 9:45 **Common Maternal Medications and Their Impact on the Baby**  
*Courtney Perry, PharmD*  
Describe pharmacokinetics of drugs in pregnancy. Discuss medication selection for common maternal conditions during pregnancy. Identify impact of common maternal medications on fetal development and neonatal outcomes. Review medication used during the delivery period and their impact on the neonate
- 10:45 **Update on COVID-19 in Pregnant Women and Newborns**  
*Rachel Greenberg, M.D.*  
Review the epidemiology and known outcomes of infants following perinatal exposure to COVID-19. Discuss remaining gaps in knowledge regarding long-term outcomes of infants following perinatal exposure to COVID-19.
- 11:45 **Mid-Morning Break/Exhibits**
- 12:00pm **Neonatal Invasive Candidiasis: Update on Clinical Management and Prevention**  
*Rachel Greenberg, M.D.*  
Review the pathogenesis and risk factors for neonatal invasive candidiasis. Discuss strategies for treatment and prevention of neonatal invasive candidiasis.
- 1:00pm **Adjourn until 2023 (November 13-15, 2023)**

## HOTEL ACCOMMODATIONS

**The Francis Marion Hotel**  
387 King Street  
Charleston, SC 29403  
(843) 722-0600

The Francis Marion Hotel, historic Charleston's landmark full service hotel, is in the heart of Charleston's historic district. Located at the newly restored Marion Square, the Francis Marion Hotel is only a few blocks from the Charleston Visitor Center, South Carolina Aquarium, restaurants, boutiques, galleries, museums, antique shops and night life. The hotel offers valet parking, spa, concierge, retail shops and the Swamp Fox Restaurant & Bar. Special group rates start at \$209.00, plus tax, per night. A limited number of guest rooms have been reserved and are being offered on a first come, first serve basis. The room block will be held until Sunday, October 9, 2022, however the room block may be filled prior to this date. In such a case, neither the group rate nor guest room availability can be guaranteed. Therefore, we recommend you make your reservation as soon as possible. Reservations can be made by calling the hotel directly at 843-722-0600 or 877-756-2121 and identifying yourself as being a participant in this meeting, or by following the online directions below. Link for online reservations:

**Online Booking Link:** <https://tinyurl.com/Neonatal2022FMH>  
**Online Booking Code:** NEONATAL22

**Parking:** Valet parking at the hotel is available at \$28.00 plus tax, per day and can be added to your guest folio. In addition, self-parking is available at \$20.00 per day (cash). Rates are subject to change with notice.

## CANCELLATIONS

A refund will be made upon written request prior to October 9, 2022; however, \$100 will be retained for administrative costs. No refunds will be made after October 9, 2022. We reserve the right to cancel the program if necessary. Full registration fees will be refunded for canceled programs. **By registering for this conference, you agree to this cancellation policy.**

## ELECTRONIC SYLLABUS

The conference syllabus will be provided online. Information will be emailed to you the week prior to the conference so that you may download a copy.

## AMERICANS WITH DISABILITIES ACT

It is the policy of the Medical University of South Carolina not to discriminate against any person on the basis of disabilities. If you feel you need services or the auxiliary aids mentioned in this act in order to fully participate in this continuing education activity, please call the Office of Continuing Medical Education at (843) 876-1925, or attach a note to your registration.

## MORE INFORMATION

For more information, visit [www.musc.edu/cme](http://www.musc.edu/cme), call the Office of CME at (843) 876-1925, or email [conetta@musc.edu](mailto:conetta@musc.edu).



## REGISTRATION FORM

# Neonatal Pharmacology Conference 2022

## Incorporating Evidence-Based Practice into Clinical Decision Making

November 9-11, 2022

*By Registering for this conference, you acknowledge and agree to the cancellation policy stated in this brochure.*

Name \_\_\_\_\_ Personal ID# XXX-XX-  
*As you would like it printed on your name badge.* *Please use the last four digits of your SSN*

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Specialty \_\_\_\_\_ Degree/Credentials \_\_\_\_\_

Daytime Phone (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_ Business Fax (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

Email \_\_\_\_\_  
*Please use the email address you check most regularly to ensure receipt of all CME Credit emails.*

☐ I do not want my name included on a list of participants to be included in handouts at the conference.

## Registration Fees

In-Person Attendance  
Virtual Attendance

**Early Bird Fees**  
Received on or by 8/31/2022  
☐ \$450  
☐ \$450

**Regular Fees**  
Received after 8/31/2022  
☐ \$500  
☐ \$500

Access to Recorded Presentations\*

- ☐ Yes, I would like access to the recorded videos for an additional fee of \$100.00  
☐ No, I do not want access to the recorded videos for an additional fee of \$100.00

\* The videos will be posted online after the conference. Viewing the videos will offer the same amount of CME credit and can be viewed for up to 14 days following the posting date

**Payment must accompany registration:**

- ☐ Check Payable to Medical University of South Carolina  
☐ MasterCard ☐ Visa ☐ American Express

Cardholder's Name \_\_\_\_\_

Card Number \_\_\_\_\_

Expiration Date \_\_\_\_\_

CVV Security Code \_\_\_\_\_

The fee for in-person attendance includes tuition, breaks, online syllabus, and certificates of attendance. The fee for live streaming the meeting includes tuition, online syllabus, and certificates of attendance.

**Please direct any inquiries to Monica Conetta, Office of CME 843.876.1925 or [conetta@muscc.edu](mailto:conetta@muscc.edu)**

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- Online: <https://tinyurl.com/Neonatal2022online>

