District VI Neonatology Meeting
“Controversies in Neonatal Clinical care”

Registration Form

September 7 & 8, 2018
Hilton Suites Chicago/Magnificent Mile 198 Delaware Place, Chicago, Illinois

Register by Wednesday, August 23, 2018 for printed name tag on-site
(Registration is available on-line and on-site, just no printed name tag on site if registered after August 23, 2018)

Contact Details (Fields with * are required)

First Name*: ____________________________ Last Name*: ____________________________
Degree*: ____________________________ AAP ID Number ____________________________
Country*: ____________________________ Address*: ____________________________
City*: ____________________________ State*: ________ Zip Code*: __________
Cell Phone*: ____________________________ Email*: ____________________________
Emergency Contact Name/Phone: ____________________________

I have special needs (specify, including dietary restrictions):

Prices

<table>
<thead>
<tr>
<th>Category</th>
<th>Registration</th>
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<tbody>
<tr>
<td>Residents/Fellowship Trainees</td>
<td>$50</td>
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<tr>
<td>AAPSONPM Member</td>
<td>$285</td>
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<tr>
<td>AAP Fellow/Member and Nonmember Physicians (Section Nonmembers)</td>
<td>$335</td>
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<tr>
<td>Neonatal Nurse Practitioner (NNP) or RN</td>
<td>$235</td>
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<td>One day only registration</td>
<td>$150</td>
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Checks may be made payable to the American Academy of Pediatrics and mailed to:

American Academy of Pediatrics/Registration

PO BOX 776442
Chicago, IL 60677-6442

Cancellations must be received in writing by September 7, 2018, to receive a refund less a $50 administrative fee. Written requests may be e-mailed to registration@aap.org or faxed to 847-228-5059.

If your membership has changed or lapsed, the registration staff will charge the appropriate fee accordingly. Your registration will be confirmed via e-mail. The AAP reserves the right to cancel this activity due to unforeseen circumstances or to limit enrollment, should attendance exceed capacity. Costs incurred, such as airline or hotel penalties, are the responsibility of the individual.
Controversies in Neonatal and Perinatal Clinical Care

11th District VI Neonatology Meeting

Sponsored by the AAP Section on Neonatal Perinatal Medicine

Hilton Chicago Magnificent Mile Suites
Acknowledgement

This meeting has been largely made possible through an educational grant from Mead Johnson Nutrition. The District VI Association of Neonatologists thanks Mead Johnson Nutrition for their loyal and generous support.

Save the Date: September 6-7, 2019

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American Academy of Pediatrics

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Jason Newland MD
Washington University

Robin Ohls MD
University of New Mexico

Aloka Patel MD
Rush University Children’s Hospital

Nishant Srnivasan MD
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Lois Starr MD
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Betty Vohr MD
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Women& Infant’s Hospital of Rhode Island

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Welcome
We welcome you to our 11th annual District VI Neonatology Conference in Chicago, Illinois. Our exciting program, "Controversies in Neonatal and Perinatal Clinical Care," features experts in the field, providing evidence-based practice guidance for care of vulnerable newborns. This conference is applicable to neonatal practitioners in academic or private practice neonatology. We offer a forum for education and discussion of controversial issues in neonatal clinical care, provider education, advocacy, and quality improvement.

Friday consists of two half-day sessions including continental breakfast and buffet lunch. Topics covered during the first session include: We will hear again this year from Mark Delmonte from AAP Department of Federal Affairs during lunch for the ever-popular "Legislative Update."

The second Friday session includes discussions of. The two Friday sessions are followed by a hands-on procedural skills workshop sponsored by University of Illinois Chicago Division of Neonatology for all participants, especially our trainee colleagues. There will be an early evening reception after the skills workshop Friday providing abundant opportunities for networking with speakers and district colleagues.

Saturday morning will begin with a continental breakfast followed by the morning session, covering

At lunch Saturday, participants will be provided with updates on activities of both the AAP Section on Neonatal Perinatal Medicine and the District VI Association of Neonatologists. We look forward to seeing old friends and new and to provide participants with a meaningful continuing education experience at the eleventh annual District VI Neonatology meeting!

Julie B Lindower, MD, MPH
President, District VI Association of Neonatologists
**Program Overview:**
This conference will present topics that represent commonly encountered clinical situations in which the proper course of action is unclear or controversial and clinicians must use currently available evidence, recommendations based on experience, expertise, and opinion to guide decision making. This meeting will present current thinking based on evidence, new guidelines, and practitioner experience, and offer the opportunity for participants to exchange views, suggest approaches to clinical research, and refine decision making in these difficult areas of clinical practice. Among the controversies being discussed will be the latest information on early hearing detection and intervention, preterm language development, genetic testing in the NICU, enhancing neurodevelopment in bronchopulmonary dysplasia, neonatal sepsis and antibiotic stewardship, erythropoiesis-stimulating agents in preterm infants, mother’s own or donor breastmilk feeding in very low birthweight infants, pharmacologic management of patent ductus arteriosis (PDA), hemodynamic consultation and point of care echocardiography, the utility of bowel and advanced cranial ultrasound in the NICU. We will also continue to offer updates on healthcare advocacy from the AAP Department of Federal Affairs on the current issues affecting neonatal and pediatric patients at the national level. There will be practical sessions that will provide hands-on and interactive learning around common neonatal procedures and current state quality collaboratives within District 6.

*The goal of this activity is to improve patient care by increasing learner competence in implementing the most current guidelines and evidence-based practice into the management of the neonate in the NICU setting.*

**Statement of Need:** While guidelines in the treatment of the newborn do exist and are continuously updated, controversies within the field confuse physicians who are looking for the most effective evidence-based solutions to common and uncommon challenges in the NICU. Collaborative and solution-based forums are needed in order to foster discussion and adoption of updated clinical guidelines and implementation of the evidence-based practice changes.

**Target Audience:** You should attend if you are a: neonatologist, pediatrician, family practitioner or an advance practice provider caring for infants and newborns, or a trainee with a focus in neonatology.

**Purpose and Objectives:** The Controversies in Neonatal and Perinatal Clinical Care Conference was started in 2008 as a source for high quality neonatal professional education for the providers in District VI of the Section of Neonatal Perinatal Medicine (SoNPM). This educational conference seeks to:

- Provide guidance and support to physicians in the daily practice of neonatal-perinatal medicine
- Offer a forum for the discussion of a variety of important clinical issues, but also include topics addressing the logistics of practice including advocacy, health care reform, and ethical and societal perspectives as they relate to neonatal-perinatal medicine
- Create networking opportunities for neonatologists and other pediatric professionals responsible for the delivery of care to the fetus and newborn

**Predicted Outcomes:**
When returning to their practices, physicians should possess the necessary tools to increase their competency and performance in implementing guidelines and evidence-based practice management in the areas of statewide quality collaboratives, early hearing detection and intervention, preterm language development, genetic testing in the NICU, enhancing neurodevelopment in bronchopulmonary dysplasia, neonatal sepsis and antibiotic stewardship, erythropoiesis-stimulating agents in preterm infants, mother’s own or donor breastmilk feeding in very low birthweight infants, pharmacologic management of patent ductus arteriosis (PDA), hemodynamic
consultation and point of care echocardiography, and the utility of bowel and advanced cranial ultrasound in the NICU

**Accreditation and Designation:**
The American Academy of Pediatrics (AAP) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The AAP designates this live activity for a maximum of 13.75 *AMA PRA Category 1 Credit(s)™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This activity is acceptable for a maximum of 13.75 AAP credits. These credits can be applied toward the AAP CME/CPD Award available to Fellows and Candidate Members of the American Academy of Pediatrics.

The American Academy of Physician Assistants (AAPA) accepts certificates of participation for educational activities certified for *AMA PRA Category 1 Credit™* from organizations accredited by ACCME. Physician assistants may receive a maximum of 13.75 hours of Category 1 credit for completing this program.

This program is accredited for 13.75 NAPNAP CE contact hours of which 0 contain pharmacology (Rx) content per the National Association of Pediatric Nurse Practitioners (NAPNAP) Continuing Education Guidelines.

**Commercial Support:** The AAP gratefully acknowledges support for its educational conference in the form of an educational grant provided by Mead Johnson Nutrition.

**Reception:** Network with faculty and colleagues to share ideas and discuss practice issues in an informal setting.

**Disclosure Policy:** This activity has been planned and implemented in accordance with the ACCME® Essential Areas and Elements and ACCME® Policies to ensure balance, independence, objectivity, and scientific rigor. All individuals responsible for content, regardless of role(s), are required to document financial relationships or the absence of relationships with commercial interests, and all potential conflicts of interest must be resolved prior to the activity. Disclosure of off-label, experimental or investigational use of drugs or devices must also be made known to the audience.

**Disclosure of Financial Relationships and Resolution of Conflicts of Interest:** The AAP Policy on Disclosure of Financial Relationships and Resolution of Conflicts of Interest is designed to ensure quality, objective, balanced, and scientifically rigorous AAP CME activities. All individuals in a position to influence and/or control the content of AAP CME activities are required to disclose to the AAP and subsequently to learners that they either have no relevant financial relationships or any financial relationships with the manufacturer(s) of any commercial product(s) and/or provider of commercial services discussed in CME activities. All potential conflicts of interest are identified and resolved prior to an individual's confirmation of service at an AAP CME activity. Beyond disclosure of financial relationships, AAP CME faculty are required to disclose to the AAP and to learners when they plan to discuss or demonstrate pharmaceuticals and/or medical devices that are not approved by the FDA and/or medical or surgical procedures that involve an unapproved or “off-label” use of an approved device or pharmaceutical. The AAP is committed to providing learners with commercially unbiased CME activities.

**Disclosure of Financial Relationships and Resolution of Conflicts of Interest for AAP CME Activities Grid**
The disclosure grid is provided as an insert along with program booklet. Please see Sarita Gilligan at the registration table if you did not receive one. The document is also available online at d6an.org. Please direct any questions to the District VI Association of Neonatologists President and/or Conference Program Chair.
District VI Neonatology Meeting

11th Annual Controversies in Neonatal Clinical Care

Program
September 7-8, 2018
Hilton Chicago Magnificent Mile Suites, Chicago, Illinois

Lakeshore Ballroom

Friday, September 7, 2018
7:00 am – 8:00 am  Continental Breakfast – Foyer Lakeshore Ballroom

8:00 am – 8:15 am  Program Introduction: Julie B. Lindower

8:15 am – 9:00 am  2018 Update: Early Hearing Detection and Intervention (EHDI)
Systems of Care
Betty Vohr

9:00 am – 9:45 am  Genetic Testing in the NICU
Lois Starr

9:45 am – 10:15 am  Q&A, updates/break

10:15 am – 11:00 am  Optimizing neurodevelopment in children with bronchopulmonary
dysplasia (BPD)
J. Wells Logan

11:00 am – 11:15 am  Q&A, updates/break

11:30 am – 1:00 pm  Lunch
AAP Legislative Update
Mark Delmonte

1:00 pm – 1:45 pm  The Importance of Preterm Infant Language Development and
Outcomes
Betty Vohr

1:45 pm – 2:30 pm  Neonatal Sepsis: Epidemiology and Management
Jason Newland

2:30 pm – 2:45 pm  Q&A, updates/break

2:45 pm – 3:30 pm  Antimicrobial Stewardship in the NICU
Jason Newland

3:30 pm – 5:00 pm  Neonatal Procedural Simulation Workshop
Nishant Srivasan

5:00 pm – 6:00 pm  Adjourn to reception
Saturday, September 8, 2018

7:00 am – 8:00 am  Continental Breakfast – Foyer
8:00 am – 8:15 am  Introduction and Announcements
8:15 am – 9:00 am  Use of Erythropoiesis Stimulating Agents to Increase Red Cell Mass & Improve Neurodevelopmental Outcomes in Preterm Infants
  Robin Ohls
9:00 am – 9:45 am  Mother’s Own Milk and Donor Milk for VLBW Infants
  Aloka Patel
9:45 am – 10:15 am  Q&A, updates/break
10:15 am – 11:00 am  Pharmacologic Management of Patent Ductus Arteriosus
  Chris McPherson
11:00 am – 11:15 am  Q&A, updates/break
11:30 am – 1:00 pm  Lunch
  Section on Neonatal Perinatal Medicine TeCAN/MidCAN updates
  District VI Association of Neonatologists update
  Need names here, Julie Lindower, DSAN President
1:00 pm – 1:45 pm  Role of the Hemodynamic Consultation and TnECHO in the Modern NICU
  Patrick McNamara
1:45 pm – 2:30 pm  Bowel Ultrasound: A powerful, yet underutilized imaging modality in the NICU
  Kara Gill
2:30 pm – 2:45 pm  Q&A, updates/break
2:45 pm – 3:30 pm  Advanced Cranial US: How mastoid views and ACA Doppler imaging can affect patient care
  Kara Gill
3:30 pm – 4:30 pm  Midwest State Perinatal Quality Improvement Collaboratives: From Getting Started to New Innovations
  Ann Anderson Berry
4:30 pm – 4:45 pm  Questions and wrap-up,
  Complete all evaluations
  Adjourn
Physician Attributes

All AAP CME activities should be developed in the context of desirable physician attributes. Please find the core competencies below with their abbreviations and definitions which will be referred to in the following “Activity Purpose and Objectives” and highlighted for each presentation.

I. Accreditation Council for Graduate Medical Education (ACGME) & American Board of Medical Specialties (ABMS) – Competencies
   ▪ Patient Care and Procedural Skills (PC): Provide care that is compassionate, appropriate and effective for the treatment of health problems and the promotion of health
   ▪ Medical Knowledge (MK): Established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care
   ▪ Practice-based Learning and Improvement (PBL): Involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care
   ▪ Interpersonal and Communication Skills (ICS): Results in effective information exchange and teaming with patients, their families, and other health professionals
   ▪ Professionalism (P): As manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population
   ▪ Systems-based Practice (SBP): As manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value

II. Institute of Medicine Competencies:
   ▪ Provide patient-centered care (PCC): Identify, respect, and care about patients’ differences, values, preferences and expressed needs; listen to, clearly inform, communicate with, and educate patients; share decision making and management; and continuously advocate disease prevention, wellness, and promotion of healthy lifestyles, including a focus on population health
   ▪ Work in interdisciplinary teams (ID): Cooperate, collaborate, communicate, and integrate care in teams to ensure that care is continuous and reliable
   ▪ Employ evidence-based practice (EBP): Integrate best research with clinical expertise and patient values for optimum care, and participate in learning and research activities to the extent feasible
   ▪ Apply quality improvement (QI): Identify errors and hazards in care; understand and implement basic safety design principles, such as standardization and simplification; continually understand and measure quality of care in terms of structure, process, and outcomes in relation to patient and community needs; and design and test interventions to change processes and systems of care, with the objective of improving quality
   ▪ Utilize informatics (UI): Communicate, manage knowledge, mitigate error, and support decision-making using information technology.

III. Interprofessional Education Collaborative Competencies:
   ▪ Values/Ethics for Interprofessional Practice (VE)
   ▪ Roles/Responsibilities (RR)
   ▪ Teams and Teamwork (TT)
   ▪ Interprofessional Communication (IC)
Activity Purpose and Objectives 2018

The District VI Controversies in Neonatal Clinical Care conferences was started in 2008 in order to provide expert advice and guidance to neonatal providers within District VI of the AAP on clinical issues about which there is controversy or new information with which attendees can make immediate changes in their practice. Our conference seeks to:

- Provide guidance and support to physicians in the daily academic and/or private practice of neonatal/perinatal medicine
- Offer a forum for discussion of a variety of important issues, primarily clinical care, but also including the logistics of practice including advocacy, health care reform, and medico-legal environment as it relates to neonatal-perinatal medicine.
- Create networking opportunities for neonatologists and other pediatric professionals responsible for the delivery of care to the fetus and newborn

Session Content and Objectives

Betty Vohr: "2018 Update: Early Hearing Detection and Intervention (EHDI) Systems of Care"

Background: It was over 50 years ago in 1965 that the Babbidge Report to the Secretary of HEW recommended the development and implementation nationwide of “universally applied procedures for early identification and evaluation of hearing impairment.” Subsequent studies have provided the evidence that early hearing detection and intervention improve the language, cognitive, literacy and behavior outcomes of children who are deaf or hard of hearing. For children whose parents choose speech as the means of communication, early fitting with amplification and increased daily use of amplification contribute to improved outcomes. MRI studies have provided evidence of the negative effects of sensory deprivation on the brain. Challenges of screening in the NICU and well-baby nursery and updates on risk factors for hearing loss including Zika virus will be reviewed. Current barriers and strategies for achieving early successful follow-up including use of the electronic medical record, Department of Health data base, and partnering with peer parents will be shared.

Learning Objectives: (PC, MK, PBL, ICS, SBP, ID, EBP, QI, UI)

- Describe historical landmarks in universal newborn hearing screening and key innovations contributing to improved outcomes
- Describe current EHDI challenges in the NICU and well-baby nursery with an update on risk factors
- Describe the impact of Electronic Medical Records and peer parents as partners

Lois Starr: "Genetic Testing in the NICU"

Background: Genetic testing is changing by design and practice contributing to an exponential increase in our ability to diagnose rare disease. Care providers in the NICU order cytogenetic and molecular genetic studies on a routine basis. We review the basics of postnatal genetic testing to the more complex methods of diagnostics from a genetics perspective for the complicated neonate. FISH, Karyotype, microarray, basic and more complicated screening sequencing studies are often appropriate studies to be ordered in the NICU, but often a source of confusion. This talk
will review the use and process of these studies, turn-around-time, common misunderstandings and the future of genetic testing in the NICU setting.

**Learning Objectives:** (PC, MK, P, SBP, PCC, ID, IC)

- Review concepts of clinical cytogenetics and molecular genetics with high impact in neonatal medicine
- Describe appropriate application and pitfalls of genetic testing
- Recognize the potential impact genetic testing will have on NICU practices in the future

**J. Wells Logan:** “Optimizing neurodevelopment in children with bronchopulmonary dysplasia.”

**Background:** Advances in neonatal care have led to increased survival among preterm infants with severe bronchopulmonary dysplasia (BPD), but numerous studies have shown a strong association between severe BPD and neurodevelopmental impairments at follow-up. This has increased the burden of optimizing care for this high-risk population, as BPD is the most common complication of prematurity. Interestingly, data suggest that differences in outcomes between centers are likely related to differences in care, suggesting that improvements in care could improve both respiratory and neurocognitive outcomes. It is becoming increasingly clear that growth and development overlap considerably, and are related to physiologic, nutritional, and environmental factors. Here we discuss a philosophical approach to care, one best achieved using a transdisciplinary care model designed to achieve a pro-growth, pro-developmental state. A pro-growth, pro-developmental state is best achieved with a complex balance of adequate respiratory support, consistent oxygenation, and positive, age-appropriate developmental experiences, all in an environment that minimizes exposures that suppress lung and brain growth.

**Learning Objectives:** (PC, MK, PBL, ICS, SBP, PCC, ID, IC)

- Briefly review the body of literature demonstrating the association between bronchopulmonary dysplasia and adverse neurodevelopmental outcomes.
- Understand the clinical factors most likely associated with the suppression of organ growth and development, and the potential impact on brain growth and neurodevelopmental outcomes.
- Understand the benefits of optimizing respiratory support, participation in age-appropriate activities, and development of a team infrastructure necessary to achieve, monitor, and maintain a pro-growth and pro-developmental state for infants with severe, established BPD.

**Mark Delmonte:** “AAP Legislative Update”

**Background:** The Chief Public Affairs Officer and Director of the AAP Federal Affairs office will give the latest information on federal legislation relating to health care policy and its impact on children and neonatologists.

**Learning Objectives:** (PC, MK, ICS, P, SBP, EBP, UI, IC)
• Understand the role of pediatricians, pediatric medical subspecialists, and surgical specialists in child health policy development.
• Identify current child advocacy needs at the federal level.
• Consider the role individuals can play in advocacy.

**Betty Vohr**: "The Importance of Preterm Infant Language Development and Outcomes"

**Background**: Multiple factors including degree of prematurity, neonatal morbidities, illness severity, hearing status, gender, language environment in the neonatal intensive care unit and in the home, maternal education level, social and environmental status of the family, and access to early intervention all contribute to the language outcomes of extremely preterm infants with and without hearing loss. Early guidance to parents and intervention services are necessary to optimize the language outcomes of preterm infants. There is increasing evidence of the potential for improvement in language skills with increasing age of preterm infants. Brain changes in language areas of the brain shown on conventional and fMRI, and a novel method for measuring the language environment of the infant will be presented.

**Learning Objectives**: (PC, MK, PBL, ICS, SBP, PCC, ID, EBP, QI, IC)

• The earliest evidence of language in infants.
• Risk factors for language delays & impairments
• Vulnerability of the preterm infant to language delay
• Relationship between the brain and language function

**Jason Newland**: "Neonatal Sepsis: Epidemiology and Management"

**Background**: This talk will discuss the epidemiology of neonatal sepsis addressing the rates of early onset and late onset sepsis. We will also discuss the strategies used to help determine when antibiotics should be used and how the early onset sepsis calculator can help in that decision. Finally, different antibiotic management strategies for infants with sepsis will be discussed.

**Learning Objectives**: (PC, MK, PBL, SBP, ID, EBP, QI, UI, TT, IC)

• Describe the epidemiology of neonatal sepsis
• List outcomes related to the use of early onset sepsis calculator
• List the antibiotic management strategies for infants diagnosed with sepsis

**Jason Newland**: "Antimicrobial Stewardship in the NICU"

**Background**: This talk will provide insight into the current state of antibiotic use and antibiotic resistance in the neonatal population. Additionally, we will discuss current antimicrobial stewardship techniques to improve the use of antimicrobials in NICUs.

**Learning Objectives**: (PC, MK, SBP, ID, QI)

• Understand the changing epidemiology of antibiotic use and antibiotic resistance
• List the effective antimicrobial stewardship strategies for the NICUs
**Nishant Srinivasan: “Neonatal Procedural Simulation Workshop”**

**Background:** Simulation-based learning is recognized by both education and patient safety groups as an effective tool that helps trainees learn in a safe and non-intimidating environment. Various high and low fidelity tools are now available to conduct simulation based exercises to help learners adapt to different environments and challenges and learn by repetition. However, planning simulation exercises and identifying the appropriate equipment needed for effective simulation based learning can be challenging.

**Learning Objectives:** (PC, RR, TT, IC)

- To demonstrate neonatal procedural protocols such as Ultrasound-Guided Peripherally Inserted Central Catheter Placement (PICC) insertion, Chest Tube Placement, Pericardiocentesis and Amplitude EEG lead placement through simulation based exercises.
- To demonstrate different scenarios and challenges that can be used during simulation training sessions.
- To allow participants to gain exposure to the above procedures on the neonatal model exhibits.

**Robin Ohls: “Use of Erythropoiesis Stimulating Agents to Increase Red Cell Mass and Improve Neurodevelopmental Outcomes in Preterm Infants”**

**Background:** Although neurodevelopmental morbidities such as cerebral palsy (CP), intellectual disability, and learning and attention deficits during school age are common outcomes of extremely low birth weight infants, successful neuroprotective interventions have yet to be developed. Recent studies in animals and humans evaluating the non-hematopoietic effects of erythropoiesis stimulating agents (ESAs) suggest a neuroprotective potential via mechanisms such as increased oligodendrogenesis, decreased inflammation, decreased oxidative injury, and decreased apoptosis. We previously reported 2 and 4 year outcomes of our prospective, randomized masked study of preterm infants randomized to ESAs or placebo. Preterm infants receiving Epo or Darbe had significantly higher composite cognitive scores, including higher scores on a scale of executive function. This talk will review the effects of ESAs on hematopoietic and neuronal progenitors, summarize the impact of ESAs on red cell mass during NICU hospitalization, and discuss potential neuroprotective and neuroreparative effects of ESAs in preterm infants.

**Learning Objectives:** (PC, MK, PBL, PCC, EBP)

- Summarize effects of ESAs on fetal and neonatal progenitors
- Review measures to maintain and increase red cell mass
- Discuss recent studies evaluating potential neuroprotective effects of ESAs in neonates

**Aloka Patel: “Mother’s Own Milk and Donor Milk for VLBW Infants”**

**Background:** Mother’s own milk is the optimal sources of nutrition for very low birth weight infants and has been associated with reductions in neonatal morbidities. However, mothers face many barriers to providing milk for their hospitalized infants. Quality improvement strategies have been implemented that have increased the prevalence of mother’s own milk feedings in NICUs across the country. Donor milk is increasingly used in NICUs when mother’s own milk is
Clinical studies of donor milk have demonstrated reductions in some neonatal morbidities, but the neurodevelopmental impact of donor milk remains uncertain. This talk will review disparities in mother’s own milk provision and barriers faced by mothers of premature infants. It will also review the bioactive components of mothers’ own milk and donor milk, and the effects of each on neonatal morbidities and neurodevelopmental outcomes in VLBW infants.

**Learning Objectives:** (PC, MK, PBL, ICS, SBP, PCC, EBP, QI)

- Identify mothers and infant who are at the greatest risk of not providing or receiving mother's own milk
- Describe at least 2 barriers to obtaining mother’s own milk in the NICU and at least 2 strategies to overcome these barriers
- List the major differences between mother's own milk and donor milk
- Identify the neonatal conditions for which studies demonstrate association with improved outcomes with mother’s own milk use
- Identify the neonatal conditions for which studies demonstrate improved outcomes with donor milk use

**Chris McPherson:** “Pharmacologic management of patent ductus arteriosus”

**Background:** Management of the patent ductus arteriosus (PDA) represents an ongoing challenge in the care of extremely premature neonates. Determining the optimal treatment strategy requires careful consideration of the potential risks and benefits of available therapies. Intravenous indomethacin effectively closes the ductus arteriosus and prevents pulmonary hemorrhage and severe intraventricular hemorrhage, but fails to mitigate short-term morbidities and improve long-term outcomes. Intravenous ibuprofen represents an alternative therapy with fewer renal adverse effects. However, intravenous ibuprofen does not prevent severe intraventricular hemorrhage and also has concerning adverse effects, including the potential to increase the risk of chronic lung disease. Acetaminophen represents an enticing novel therapy due to wide availability, low cost, and an appealing safety profile. This talk will review the potential risks and benefits of each therapy considering available evidence.

**Learning Objectives:** (PC, MK, PBL, PCC)

- Identify the risks and benefits of prophylactic pharmacotherapy targeting the ductus arteriosus
- Contrast the relative efficacy and potential toxicities of indomethacin and ibuprofen therapy for patent ductus arteriosus
- Describe available data to support acetaminophen as a treatment option for patent ductus arteriosus

**TeCAN, MidCAN representatives, and Julie Lindower:** Section on Neonatal Perinatal Medicine (SoNPM) and District Six Association of Neonatologists (DSAN) updates

**Learning Objectives:**

- To describe the function and activities of the "Early Career and Mid-Career Neonatologists, of the Section on Neonatal Perinatal Medicine"
Patrick McNamara: "Role of the Hemodynamic Consultation and TnECHO in the Modern NICU"

**Background:** The approach to cardiovascular monitoring and treatment decision making is oftentimes based on a single point estimate in blood pressure which represents a physiologic simplification and fails to consider patient specific developmental factors and active pathophysiology. Targeted Neonatal Echocardiography (TnECHO) refers to the use of comprehensive and standardized echocardiography by trained neonatologists to obtain physiologic information to provide a more holistic appraisal of hemodynamic stability. The value of TnECHO/Hemodynamic consultation in the management of patients with PDA, pulmonary hypertension, or disorders of systemic perfusion will be discussed. An overview of standards for training will be presented.

**Learning Objectives:** (PC, MK, PBL, SBP, ID, EBP, UI, TT, IC)

- Discuss the limitations of current methods of clinical cardiovascular assessment in sick neonates
- Review importance of understanding cardiovascular physiology in guiding neonatal ICU treatment decision-making
- Understand how Targeted Neonatal Echocardiography as part of a Hemodynamic Consultation aids in enhancing diagnostic precision and refining the clinical decision making process
- Discuss standards for establishment of a Hemodynamic Consultation Model and TnECHO training program

Kara Gill: "Bowel Ultrasound: A powerful, yet underutilized imaging modality in the NICU"

**Background:** Use of ultrasound to evaluate bowel has recently been gaining attention, especially in light of concerns regarding radiation reduction. This is especially important in neonates and small children who are more susceptible to the potential deleterious effects of ionizing radiation. In addition to identifying pneumatosis and portal venous gas in neonates with necrotizing enterocolitis, ultrasound can be used to evaluate bowel wall thickness and perfusion, identify small amounts of pneumoperitoneum, and characterize intraabdominal fluid. This additional information to what is provided by radiographs can result in timely surgical intervention and improved outcomes. Classically, ultrasound has been used in infants to evaluate for obstruction secondary to pyloric stenosis or intussusception, but it can also be useful in the evaluation of other etiologies of vomiting in infants including malrotation and midgut volvulus, congenital bowel obstruction, and anastomotic or post inflammatory strictures.

**Learning Objectives:** (PC, MK, PBL, ID, EBP, UI)

- Identify indications for bowel ultrasound in the NICU
• Describe at least 3 reasons why US can be useful in the evaluation of necrotizing enterocolitis
• List at least 3 potential etiologies of vomiting that can be more clearly identified with ultrasound than with abdominal radiographs

Kara Gill: "Advanced Cranial US: How mastoid views and ACA Doppler imaging can affect patient care"

Background: Due to advances in ultrasound technology, radiologists have the opportunity to evaluate for more than intraventricular hemorrhage. Mastoid views allow for evaluation of cerebellar germinal matrix hemorrhage, fourth ventricular size, and congenital abnormalities of the posterior fossa. Color and spectral Doppler imaging can be used to evaluate for sagittal sinus thrombosis, to identify increased intracranial pressure in the setting of hydrocephalus, and can aid in prognostication for patients suspected of having hypoxic ischemic encephalopathy. Lastly, increased attention must be paid to subtle parenchymal changes that can now be seen in the setting of ischemia.

Learning Objectives: (PC, MK, PBL, UI, IC)

• Identify additional pathology than can be identified on mastoid views of the posterior fossa.
• Understand the two main indications for performing ACA doppler
• Identify parenchymal abnormalities that can be seen on gray-scale images indicating ischemia

Ann Anderson Berry: "Midwest State Perinatal Quality Improvement Collaboratives: From Getting Started to New Innovations"

Background: In this session we will review the activities, accomplishments, and opportunities for continued improvement of state perinatal quality improvement collaboratives across District VI. Individual states will have an opportunity to discuss their successes and challenges in an interactive session. Whether you are a founder or participant in a well-established collaborative, forming a new collaborative, or interested in how a collaborative might impact your practice or state, there will be many opportunities to engage in active conversation and learning.

Learning Objectives: (PBL, SBP, QI)

• Participants will describe ways to interact with state perinatal quality improvement structures in their area.
• Participants will identify projects within their units that can be implemented by collaborating with their state quality improvement organization.
• Participants without a state quality collaborative will be able to list three steps to begin to form their own collaborative.
District VI Association of Neonatologists
Section on Neonatal Perinatal Medicine
11th Annual District VI Neonatology Meeting

2018 CONTROVERSIES IN NEONATAL AND
PERINATAL CLINICAL CARE
Chicago, IL

September 7 & 8, 2018

Hotel Information: Hilton Suites Chicago/Magnificent Mile, 198 Delaware Place, Chicago, Illinois;
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Room rates: King Suite: $229 Parking: 10% discount
Deadline for booking: Reserve before August 7th to secure the conference rate