Controversies in Neonatal Clinical Care

District VI Association of Neonatologists

8th District VI Neonatology Meeting

Sponsored by the AAP Section on Neonatal Perinatal Medicine and the American Academy of Pediatrics (AAP)

Hilton Chicago Magnificent Mile Suites

September 11-12, 2015
Save the Date: September 9-10, 2016
Faculty:
Gillian Brennan, MD
University of Illinois, Chicago

Patrick Brophy, MD
University of Iowa Children’s Hospital

Mark Del Monte, JD
American Academy of Pediatrics

Kristen Fickensher, MD
Children’s Mercy Hospital & Clinics

John Hartline, MD
NeoReviews Plus

Lucky Jain, MD
Emory University

Abbot Laptook, MD
Women and Infant’s Hospital of Rhode Island

Jason Newland, MD
Children’s Mercy Hospitals & Clinics

Stephen Pearlman, MD
Christiana Care Health System

Sara Ramel, MD
University of Minnesota Masonic Children’s Hospital

Ginny Ryan, MD
University of Iowa Children’s Hospital

Renate Savich, MD
University of Mississippi Medical Center

Shirley Scott, MS, RNC, APN
University of Illinois, Chicago

Robert Ward, MD
University of Utah

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Zahi Zeidan, MD
University of Nebraska
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Welcome

We welcome you to our 8th annual District VI Neonatology Conference in Chicago, Illinois. Our exciting program, “Controversies in Neonatal 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, billing and coding, and quality improvement. There will be an early reception providing abundant opportunities for networking with speakers and district providers along with an update on the activities of the District VI Association of Neonatologists.

Friday consists of two plenary sessions and a buffet lunch. Topics include current evidence based approach to management of antibiotic stewardship in the NICU, long term effects for infants exposed to drugs in utero, therapeutic hypothermia and neonatal encephalopathy, acute kidney injury, interesting radiology cases for neonatologists, optimizing growth of premature infants, and what you need to know before giving a new drug to newborns. A presentation from the AAP Department of Federal Affairs will update neonatal health care providers on relevant current hot topics that require our attention and advocacy. During lunch we will have a session on ethical issues raised by assisted reproductive technologies.

Saturday morning will begin with plenary sessions covering current outcomes for ELBW infants, updates in caring for late preterm and early term infants, disclosure of medical errors, and discussion on optimizing work-life balance for healthcare providers in the NICU. Following this session, another buffet lunch will be provided along with an update on the activities of the Section of Neonatal Perinatal Medicine (SONPM) and the District VI Association of Neonatologists.

Saturday afternoon will feature Board review and a Procedure lab workshop focusing on emergent pericardiocentesis.

We look forward to a thought provoking and exciting discussions at our District VI Neonatology meeting!

Dena K. Hubbard
President, District VI Association of Neonatologists

Program Overview:
District VI Neonatology Meeting, “Controversies in Neonatal Clinical Care”, will present topics that represent commonly encountered clinical situations in which the proper course of action is unclear or controversial and in which clinicians must use currently available evidence, recommendations based on experience or 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 the 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 those in the management of neonatal encephalopathy, neonatal outcomes after perinatal exposure to drugs of abuse, optimizing outcomes of extremely low birthweight infants, neonatal nutrition and neurodevelopment, management of acute kidney injury, strategies for performing antimicrobial stewardship in the NICU, and updates on the care of late preterm infants. Additional topics include challenges in the study of drugs in and for newborns, interesting radiology case potpourri, reproductive ethics, disclosure of medical errors, and work-life balance as a neonatologist. Back by popular demand is the NeoReviews Board review session, procedure lab,
and advocacy update from the AAP department of federal affairs on the current issues affecting neonatal and pediatric patients.

*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.*

**Statement of Need:** While guidelines in the treatment of the newborn do exist and are constantly 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 the updated 2014 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, as well as trainees with a focus in neonatology.

**Purpose and Objectives:** The Controversies in Neonatal 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 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 billing and coding, maintenance of certification, health care reform, ethical dilemmas in neonatal medicine, and practical application of quality improvement projects
- 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 be better able to increase their competency and performance in implementing the guidelines and evidence-based practice management in the areas of neonatal encephalopathy, drug exposed infants, ELBW infants, neonatal nutrition and neurodevelopmental outcomes, neonatal acute kidney injury, antimicrobial stewardship in the NICU, NICU radiology, late preterm infants, study of drugs for newborns, reproductive ethics, legal view of the healthcare landscape, and disclosure of medical errors.

**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 14.75 *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 14.75 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 14.75 hours of Category 1 credit for completing this program.

This program is accredited for 14.75 NAPNAP CE contact hours of which contain pharmacology (Rx), (0 related to psychopharmacology), (0 related to controlled substances) 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.
**Networking 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.

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District VI Neonatology Meeting

Controversies in Neonatal Clinical Care

Program
September 11–12, 2015
Hilton Chicago Magnificent Mile Suites, Chicago, Illinois
Lakeshore Ballroom

Friday, September 11, 2015
7:00 am – 8:00 am  Continental Breakfast – Foyer Lakeshore Ballroom
8:00 am – 8:15 am  Introduction: Dena K. Hubbard
8:15 am – 9:00 am  Strategies for Performing Antimicrobial Stewardship in the NICU
                    Jason Newland
9:00 am – 9:45 am   Long Term Effects of Early Exposure to Substances of Abuse
                    Robert Ward
9:45 am – 10:00 am  Break – Foyer
10:00 am – 10:45 am Therapeutic Hypothermia for Neonatal Encephalopathy: Can Outcomes be Optimized
                    Abbot Laptook
10:45 am – 11:30 am Neonatal Acute Kidney Injury: Defining the Issue and Moving Ahead
                    Patrick Brophy
11:30 am – 12:15 pm Legal View of the Healthcare Landscape
                    Mark Del Monte
12:15 pm – 12:30 pm Break – Foyer
12:30 pm – 1:30 pm  Lunch
                    From Bourn Hall to the Nobel Prize to the Late Show: the Wonderful and
                    Ethically Challenging World of Assisted Reproductive Technologies
                    Ginny Ryan
                    Lakeshore Ballroom
1:30 pm – 1:45 pm   Break – Foyer
1:45 pm – 2:30 pm   NICU Radiology Potpourri: Interesting Learning Cases
                    Kristen Fickenscher
2:30 pm – 3:15 pm   Neonatal Nutrition, Growth, and Neurodevelopment: It’s Not All About Weight Gain!
                    Sara Ramel
3:15 pm – 4:00 pm   What You Should Know Before Giving a Drug to a Neonate: Where are the Answers
                    Robert Ward
4:00 pm             Adjourn
4:30 pm – 6:30 pm   Reception – Avenue Cafe
Saturday, September 12, 2015
7:00 am – 8:00 am  Continental Breakfast – Avenue Cafe
8:00 am – 8:15 am  Introduction and Announcements
                    Lakeshore B/C
8:15 am – 9:00 am  Current Outcomes of ELBW: Are We Making Progress?
                    Renate Savich
9:00 am – 9:45 am  The Pediatrician’s Role in Caring for Late Preterm and Early Term
                    Neonates
                    Lucky Jain
9:45 am – 10:00 am Break – Foyer
10:00 am – 10:45 am They Can Handle the Truth: Disclosure of Medical Errors
                    Stephen Pearlman
10:45 am – 11:30 am Work Life Balance, Burnout, and the Pursuit of Happiness...
                    Lucky Jain
11:30 am – 11:45 am Break – Foyer
11:45 am – 1:00 pm  Lunch with SONPM Update
                    Renate Savich and Dena K. Hubbard
                    Lakeshore Ballroom
1:00 pm – 3:00 pm  NeoReviews Plus Board Review
                    John V. Hartline
1:00 pm – 3:00 pm  Procedure Lab: Recognizing Cardiac Tamponade and Performing
                    Emergent Pericardiocentesis
                    Gillian Brennan and Shirley Scott
3:00 pm            Adjourn
**Activity Purpose and Objectives 2015**
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 billing and coding, maintenance of certification, health care reform, and ethical dilemmas in neonatal medicine
- Create networking opportunities for neonatologists and other pediatric professionals responsible for the delivery of care to the fetus and newborn.

**Session Objectives and Content**

**Strategies for Performing Antimicrobial Stewardship in the NICU**
*Jason Newland*

Learning Objectives:
- List the reasons for performing antimicrobial stewardship
- List the effective antimicrobial stewardship strategies to be used in the NICU

Antibiotic resistance is increasing at a rapid rate making some of our common antibiotics less useful. The CDC recently reported 23,000 Americans die annually from antibiotic resistant infections. A method to help curb the rate of resistance is to improve our use of antibiotics through antimicrobial stewardship. This didactic lecture will discuss the reasons for performing antimicrobial stewardship and illustrate the effective strategies that have been used in the NICU and hospital setting.

**Long Term Effects of Early Exposure to Substances of Abuse**
*Robert Ward*

Learning Objectives:
- Be able to discuss the historical and cultural changes in what is regarded as a substance of abuse
- Consider the complex factors in an infant’s environment that may impact developmental outcome following fetal exposure to cocaine compared to its perinatal legal status
- Be able to recognize physical features of the fetal alcohol syndrome at birth and CNS malformations that may contribute to long-term developmental delay compared to its legal status

What society has regarded as a substance of abuse for the fetus has varied widely over time and among different societies. Careful studies of some legally defined substances of abuse show limited toxic effects of the substance/drug when the environment in which the child is raised is improved. In contrast, some legal substances of abuse produce long term significant neurologic deficits, although even these may improve over time in nurturing households. In balance, nurture is often more important than the nature of the pharmacologic exposure in determining a child’s long term outcome.

**Therapeutic Hypothermia for Neonatal Encephalopathy: Can Outcomes be Optimized?**
*Abbot Laptook*

Learning Objectives:
- The participant will be familiar with the pathogenesis of hypoxic-ischemic brain injury
• The participant will be familiar with the supporting evidence for the use of therapeutic hypothermia for neonatal encephalopathy
• The participant will be familiar with the rationale for other trials involving therapeutic hypothermia
• The participant will be familiar with potential neuroprotective strategies of the future

Neonatal Acute Kidney Injury: Defining the Issue and Moving Ahead
Patrick Brophy

Learning Objectives:
• Identify the risk factors associated with neonatal renal injury
• Identify the barriers to defining neonatal acute kidney injury
• Take away strategies to minimize neonatal renal injury
• Realize the role multicenter collaborations play in investigating neonatal AKI

Neonatal AKI is an under-appreciated diagnosis particularly in premature infants. Mounting evidence suggests that early life events—specifically leading to AKI—may predispose an individual to chronic kidney disease and hypertension later in life. A large number of barriers exist in approaching AKI in the neonate. This presentation will outline the current state of neonatal AKI, put forth a definition and provide a new framework in which to consider the development, identification, and treatment of AKI. It will also outline the importance of multi-center collaborative groups in terms of studying AKI in the neonatal period.

Legal View of the Healthcare Landscape
Mark Del Monte

Learning Objectives:
• Understand the current legislative issues that need pediatrician awareness and advocacy
• Identify AAP resources to assist providers in navigating the legal hurdles of the changing healthcare landscape

Director of the AAP Federal Affairs office will give the latest information on federal legislation relating to current health care issues and its impact on children and neonatologists. Learners will consider the role of neonatologists in implementing health care reform, as well as discuss grassroots steps that can be taken to advocate for health care priorities for children and young adults. This will be a presentation with time for audience comments and questions.

From Bourn Hall to the Nobel Prize to the Late Show: The Wonderful and Ethically Challenging World of Assisted Reproductive Technologies
Ginny Ryan

Learning Objectives:
• Describe a brief history of IVF
• Review evidence of positive and undesired outcomes
• Educate regarding new Emerging technologies and indications
• Initiate discussion on ethical challenges in IVF

This presentation will include a brief background regarding the history of IVF and pertinent definitions. It will also cover the current state of knowledge regarding utilization of the treatment, numbers of children born, and any undesired treatment trends and medical outcomes. From there, discussion will move to update the audience regarding emerging technologies and uses of this treatment, including increasing genetic screening and surrogacy. Finally, several ethical challenges that arise with this treatment will be presented, including embryonic sex selection, choices regarding genetic enhancement and adult-onset diseases, and decisions regarding parenting ability. The goal will be to update and educate the audience while engaging them in the complex considerations that have arisen thanks to the treatment.
NICU Radiology Popourri: Interesting Learning Cases for the Neonatologist

Kristen Fickenscher

Learning Objectives:
- Review commonly ordered neonatal radiologic exams
- Understand when and how these exams are best utilized in the NICU
- Discuss new techniques and technology for imaging neonates

Using a case based format, we will discuss commonly ordered neonatal radiologic studies and understand when these studies are best utilized based on evidence in the literature. Emphasis will be placed on new techniques and technology as well as commonly ordered but often misunderstood exams.

Neonatal Nutrition, Growth and Neurodevelopment: It’s Not all About Weight Gain!

Sara Ramel

Learning Objectives:
- The participant will be familiar with the various methods of growth measurement available for neonates and the importance of following length and body composition in addition to weight gain.
- The participant will be familiar with the impact of both caloric and protein intake on later growth and developmental outcomes, as well as the methods of fortification available to assist in achieving optimal outcomes.

Despite improvements in nutritional care, preterm infants continue to exhibit disproportionate growth, specifically diminished linear growth and fat free mass gains leading to increased relative adiposity. Early nutrition and growth patterns have a lasting impact on long-term neurodevelopmental and metabolic outcomes. Aggressive nutritional strategies have become standard of care, however concerns have been raised about the long-term impact of rapid growth and/or excessive nutritional provision on later obesity and cardiometabolic health. This talk will discuss methods of neonatal growth measurement and the impact of gains in various parameters on long-term health and neurodevelopment. Additionally, the influence of various macronutrients and methods of fortification on later outcomes will be discussed.

What You Should Know Before Giving a New Drug to a Neonate: Where are the Answers?

Robert Ward

Learning Objectives:
Before treating newborns with a drug that is new to their care, they will check the:
- published studies of safety and effectiveness;
- pathways of drug disposition/metabolism;
- pharmacokinetics relative to development;
- data about bilirubin displacement;
- presence of excipients that may be harmful in the newborn.

The audience will know how: legislation has increased the study of drugs in pediatrics; efforts to increase the study of drugs in newborns; and how they can assist those efforts.

New drugs for treatment of newborns are often introduced into the NICU based on treatment of older children or adults without adequate study until problems are recognized. Those who introduce new drug therapy in the NICU should know for a new drug: 1. the pathways of drug disposition/metabolism; 2. pharmacokinetics relative to developmental maturation of premature newborns; 3. published studies of safety and effectiveness; 4. bilirubin displacement; 5. actions of excipients in neonates that may cause adverse effects in the newborn. Although laws have increased the study of drugs in children, the newborn continues to be left out. Recognition of this
continued deficit is leading to new efforts to study relevant drugs in all gestational ages of newborns, led by the AAP, FDA, PHRMA, and the Critical Path Institute.

**Current Outcomes of the ELBW: Are We Making Progress?**

*Renate Savich*

Learning Objectives:
- Know current mortality of ELBW infants in the US
- Know current morbidities and outcomes of the ELBW in the US
- Know upcoming interventions that may improve mortality and morbidity outcomes of the US ELBW infants

ELBW infants are a small percentage of annual births in the US (less than 1%), yet constitute almost 50% of neonatal mortality in the US. This talk will present current outcomes and trends of ELBW births, and identify current morbidities associated with ELBW survivors. This talk will also present current interventions to improve these outcomes.

**The Pediatricians’ Role in Caring for Late Preterm/Early Term Neonates**

*Lucky Jain*

Learning Objectives:
- Review trends in early term and late preterm births
- Understand the impact of early birth on short- and long-term outcomes
- Discuss a pediatrician’s role in management of late preterm infants after discharge
- Review QI programs that are impacting birthing patterns

**They Can Handle the Truth: Disclosure of Medical Errors**

*Stephen Pearlman*

Learning Objectives:
- Increase learner’s awareness of disclosure of medical errors
- Improve understanding of the potential benefits of disclosure
- Develop skills to implement a disclosure program

Disclosure of medical errors is supported by many organizations including Joint Commission. Benefits include that it supports “culture of safety”, respects patients’ right to be informed, and strengthen the patient/provider relationship. However, there are many barriers to disclosure based on fears, views, and beliefs, rather real or projected. Dr Pearlman will give didactic presentation on a current project to increase disclosure of medical error with a sustainable implementation model which includes a new perspective and initiative of “caring for the caregiver.” Audience response system and participation will be included.

**Work-Life Balance, Burnout, and Pursuit of Happiness**

*Lucky Jain*

Learning Objectives:
- Review challenges health care providers face with their personal wellness
- Highlight issues related to the burnout and work-life balance
- Discuss approaches to improving job satisfaction and personal happiness

**SONPM and DSAN Updates**

*Renate Savich and Dena Hubbard*

Learning Objectives:
- Describe the function and activities of the Section on Neonatal Perinatal Medicine
- Describe the function and activities of the District VI Association of Neonatologists
Dr Savich will provide an update on the activities of the former Section on Perinatal Pediatrics (SoPPe), now with new name and attitude as the Section on Neonatal Perinatal Medicine. This will include an update on activities of SONPM and how the section can support neonatal providers. Emphasis will be placed on the importance of communicating concerns with the district SONPM Board members. Dr Hubbard will provide an update on the activities of the DSAN board and annual meeting plans.

**NeoReviews Plus Board Review**

*John Hartline*

Learning objectives:

- Review pathophysiology, evaluation, and treatment of common neonatal diagnoses.

In an audience-response session, participants will respond to vignettes of cases and problems that may confront neonatologists in their day-to-day practice using material from among the 20 knowledge content areas recognized by the Neonatology Sub-board of the American Board of Pediatrics. From their responses and discussions of preferred responses, participants will have areas of strength reinforced, recognize knowledge areas needing more study, and from this information on their areas of relative strength and weakness enhance their preparations for examinations for primary or maintenance of certification.

**Recognizing Cardiac Tamponade and Performing Emergent Pericardiocentesis**

*Gillian Brennan and Shirley Scott*

Learning objectives:

- Recognize the signs and symptoms of cardiac tamponade
- Know the equipment required to perform emergent pericardiocentesis
- Know the correct after-care following emergent pericardiocentesis

This workshop will identify learning gaps through review of an uncommon but life-saving procedure of pericardiocentesis. Through didactic as well as hands-on simulation, the diagnosis, treatment, and after-care of cardiac tamponade will be reviewed and mastered.
Save the Date: September 9-10, 2016