JUNE 2013, Vol. 24, No. 2

FANNP NEWS

HIGHLIGHTED: THE SUBSTANCE ABUSE EPIDEMIC

PLUS: POCKET NOTEBOOK • EDUCATIONAL OFFERINGS • BRING IT ON LETTER FROM THE PRESIDENT • BRAG BOARD • LEGISLATIVE UPDATE FANNP'S KIM NOLAN SPIRIT AWARD • OFFICER POSITIONS AVAILABLE

The Publication of the Florida Association of Neonatal Nurse Practitioners

The Conference Planning Committee has been working diligently to create another great conference! **Debra Sansoucie** has been confirmed as our keynote speaker this year. Debra is the Vice President of Advanced Practice Nursing for Pediatrix Medical Group. She will open the conference with a poignant discussion titled, "Health Care Reform and the Role of the Advanced Practice Nurse". In addition, we have confirmed many other speakers who will be focusing on current issues affecting our practices. We are also pleased to inform you that many of our previous, "tried and true" speakers for the review track will be returning to the conference this year. The party planning is looking VERY interesting. Hint: bring your sleuthing skills for a fun time of solving mysteries! This year, we are elated to try something different for poster presentations. We will be hosting a "Cocktail Hour and Poster Session" to display the tremendous materials many of you have been busily preparing! The conference brochure will be mailed soon and will provide further exciting details! As more information and planning is confirmed, we will post details on our website, www.FANNP.org. I hope to see you all at the conference in October!

Marylee Kraus, MSN, NNP-BC

Save the date! FANNP's 24th Neonatal Nurse Practitioners Symposium: Clinical Update and Review

October 15-19, 2013

Sheraton Sand Key Resort, Clearwater Beach, Florida

Nominate someone you know today!

FANNP Members and NNP students eligible!

Characteristics:
Can-do attitude; Service to family, work, & community

Purpose:
• To honor the contribution that Kim Nolan, founding member, made to FANNP and her community.
• To recognize an NNP who exemplifies the characteristics of Kim.

Eligibility Requirements:
• A nominee must be a member of FANNP.
• A nominee may be a practicing NNP, a retired NNP, or a NNP student.

Selection Criteria:
• A nominee should demonstrate service to his/her community or professional organization.
• A nominee should possess excellent communication skills.
• A nominee should demonstrate positive "can-do" behavior in daily activities.

Nominee Characteristics:
• Enthusiastic;
• Family oriented;
• Role model/mentor;
• Caring, nonjudgmental, respectful.

Selection Process:
• Nominations will be accepted from any FANNP member.
• Blinded applications will be reviewed by the Spirit Award Committee members.
• Once selected, the award recipient will receive written notification of selection.

Award Recognition:
The recipient will receive the following:
• Complimentary conference registration and accommodations for this or next year's NNP Symposium in

"KIM NOLAN AWARD" continues on page 6

Letter from the President

Greetings FANNP members!

I hope everyone has plans for a fun-filled and memorable Summer! Hopefully, your plans include family, friends and not working too hard this season!

Rest assured that your FANNP Board of Directors (BOD) and Conference Planning Committee will be diligently working during the coming months, organizing our 24th Annual National NNP Symposium—but, it's FUN work! Conference brochures will be mailed soon, so please make plans now to attend October 15-19, 2013, in warm, beautiful, Clearwater Beach, FL!

I have several updates to pass along to our members. Earlier this year, Kim Irvine, NNP-BC, resigned as the FANNP Secretary. Kim devoted 10 years of extraordinary service to our organization in this capacity as she consistently exceeded the expectations of her assigned duties. During her tenure, Kim was the backbone of our organization through membership maintenance, distribution of annual NNP Week gifts, and her consistent presence at all BOD and Conference Planning Committee meetings. She often hosted these meetings in her home, willingly and without hesitation! She offered undeniable support through innovative idea exchange and implementation of new ventures. On behalf of the FANNP BOD, I would like to extend my utmost and gracious appreciation for Kim's hard work over the past decade in bringing FANNP to the level of success we all share today!

Following Kim's vacancy of the Secretary position, Ashley Darcy-Mahoney, PhD, NNP-BC volunteered to fill this role. In accordance with the FANNP Bylaws, the Board of Directors voted and unanimously approved Ashley for the Secretary position in February 2013, in a permanent capacity, for the existing term. Therefore, I would like to formally congratulate Ashley on this appointment, and thank her for accepting the challenge! Ashley has approached her new role aggressively, and with her vast knowledge of technology, she has revamped our membership into an online format. With these changes, it is vital that FANNP members are accessible via email. Therefore, please continue to keep your contact information current in order to receive ongoing news regarding FANNP issues and conference updates. Member contact information updates may be emailed to memberinfo@fannp.org.

This brings me to my last announcement...elections are this year!! I would like each of you to take a moment to seriously consider the opportunity to become actively involved in FANNP, as a member of the Executive Committee or the Board of Directors. The professional compensation for this involvement is limitless... you will become a recognized National NNP leader, have numerous and instant networking connections throughout the NNP profession, and have a direct impact on organizational outcomes and conference preparation. The opportunities for professional advancement are enormous with this network connection! Personally speaking, my FANNP involvement at this level has made opportunities available to me that would have NEVER been accessible previously. So, I strongly encourage each of you to consider these opportunities for active involvement. If I can answer any questions for anyone, please email me directly at tmarin@emory.edu, and I will be very happy to assist in any way necessary!

Blessings to all, and see you in October!

Terri Marin, PhD, NNP-BC
President, FANNP

Call for Nominations

This is an election year and positions are open for the Board of Directors for FANNP! The term of office is January 1, 2014 through December 31, 2015. All positions are a two-year commitment except for President-Elect. Responsibilities include attendance at Board of Director meetings, participation at FANNP sponsored Symposium, and participation on established committees.

The Officer positions are:

President-Elect: Responsibilities include filling in as designated for the President in their absence, chairing the Bylaws Committee, functioning as successor to the President upon completion of the Presidential term, and continuing as Past-President following completion of the Presidential term (6 year commitment).

Secretary: Records minutes of all meetings, provides notices for all meetings, maintains bylaws and membership records, sends mass emails and functions as Chair of Communication Committee.

Treasurer: Maintains charge and full knowledge of all Association funds, renders the statement of financial condition of the Association for all meetings, and chairs the Finance Committee.

"NOMINATIONS" continues on page 6

Pulseless Electrical Activity

Leigh Ann Cates, MSN, NNP-BC

Pulseless electrical activity (PEA) is a clinical condition distinguished by unresponsiveness and lack of a palpable pulse, in the presence of structured cardiac electrical activity such as sinus rhythm, sinus bradycardia, sinus tachycardia, supraventricular tachycardia (SVT), or atrial fibrillation (Shah, 2011). The heart functions through both mechanical (pumping) and electrical activity (signaling of muscular contraction via electrical conduction). While essential, electrical activity alone is not enough to ensure mechanical activity. There are a number of causes of PEA, each of which occur in the NICU population.

Once PEA is diagnosed, treatment begins with basic resuscitative measures including establishing a patent airway, providing adequate assistance in breathing, and supporting circulation. Following initial resuscitative steps, IV access must be established via central or peripheral IV, or interosseous (IO) access for administration of epinephrine.

In determining the right course of treatment to follow resuscitation, the Neonatologist or Practitioner must consider possible causes of PEA. The reversible causes of PEA are hypovolemia, hypoxemia, hypothermia, hydrogen-ion acidosis, hyperkalemia or hypokalemia, hypoglycemia, toxins, tamponade, tension pneumothorax, thrombosis (coronary or pulmonary), and trauma (Chameides et al., 2011).

Reversible Causes of Pulseless Electrical Activity

"H's"	"T's"
• Hypovolemia	• Toxins
• Hypoxia	• Tamponade
• Hypothermia	• Tension pneumothorax
• Hydrogen-ion (acidosis)	• Thrombosis (coronary or pulmonary)
• Hyper/Hypokalemia	• Trauma
• Hypoglycemia	

Adapted from American Heart Association book of Pediatric Advanced Life Support

Hypoxemia, defined as a PaO2 less than 60mmHg on an arterial blood gas, is considered one of the most common causes of PEA (Shah, 2011). Hypoxemia can occur in tandem with a number of neonatal conditions such as pneumonia, congenital heart disease, or persistent pulmonary hypertension of the neonate (PPHN). Hypoxemia can be treated by maintaining a patent airway, providing adequate oxygenation, and considering the addition of inhaled nitric oxide or prostaglandin, if clinically indicated.

In hypovolemia, another reversible cause of PEA, the electrical conduction of the heart remains, yet there is not enough intravascular volume to detect a pulse or blood pressure. Hypovolemia can be seen in neonates with failure to thrive, excessive vomiting or diarrhea, internal bleeding such as intraventricular hemorrhage (IVH), subgaleal bleeding, or trauma. Hypovolemia can be treated with a normal saline bolus or transfusion with packed red blood cells (Gomella, Cunningham, Eyal, & Zenk, 2004, p. 19).

Hypothermia is defined as a core temperature less than 97.7° F (Gomella et al., 2004, p. 39). Hypothermia most often occurs following transport, delivery in suboptimal temperatures, and post-operatively. Proper warming under a radiant warmer, addition of warming mattress, and considering warmed IV fluids will effectively treat hypothermia.

Hydrogen-ion acidosis is defined as a pH less than 7.35 with a normal PCO2, and base deficit greater than 5 (Gomella et al., 2004, p. 203). Hydrogen-ion acidosis is typically seen in septic neonates, those with metabolic disorders, a history of vomiting or gastric suctioning, diarrhea, or asphyxia. A normal saline or sodium bicarbonate bolus can be utilized to treat hydrogen-ion acidosis (Zenk et al., 2003, p. 521).

Hyperkalemia, defined in neonates as a serum potassium level greater than 6mEq/L typically occurs in infants with sepsis, renal disease or those whom are receiving potassium supplementation (Zenk et al., 2003, p. 254 & 267). Hypokalemia, defined as a serum potassium level less than 4mEq/L, occurs in infants with malabsorption, excessive vomiting or gastric suctioning, chronic diuretic dependence, or those in need of potassium supplementation. Hyperkalemia is treated initially with calcium chloride to soothe cardiac irritability, followed by a sodium bicarbonate bolus to force the extracellular potassium back into the cell (Zenk et al., 2003, p. 484). Additionally, insulin, glucose, Lasix, and Albuterol can be added to combat refractory hyperkalemia (Zenk et al., 2003, p. 482).

Hypoglycemia is defined as glucose of less than 40mg/dl (Gomella et al., 2004, p. 262). Etiologies of hypoglycemia include prematurity, intrauterine growth restriction, sepsis, chronic intrauterine stress or asphyxia, hypothermia, heart failure, erythroblastosis fetalis, and polycythemia. Treatment of symptomatic hypoglycemia resulting in PEA in neonates includes a 10% dextrose in water bolus followed by a continuous dextrose infusion (Zenk et al., 2003, p. 185).

Toxins can include any substances or medication that results in an adverse reaction, or are given unintentionally. A thorough history and rapid investigation should be conducted in the event that exposure to toxins has occurred. A history is often provided by the mother or current caregiver. Treatment is dependent upon the toxin(s) involved.

Tamponade is the accumulation of air or fluid in the pericardial space, causing decreased right ventricular filling and critically decreased cardiac output. Tamponade can occur

"ELECTRICAL ACTIVITY" continues on page 4

ELECTRICAL ACTIVITY from page 3

spontaneously, through the migration of internal catheters, or with any trauma. Tamponade can be diagnosed via auscultation of heart sounds, or obtaining a chest x-ray and/or an echocardiogram. Treatment includes rapid evacuation of the air or fluid from the pericardial space via pericardialcentesis.

A tension pneumothorax is an accumulation of air in the pleural space around the lung(s). The pressure applied to the lung tissue by the air accumulation causes the lung tissue to collapse, preventing ventilation, oxygenation, and adequate cardiac output. Mechanical ventilation can result in spontaneous pneumothoraces. Diagnoses of a pneumothorax can be confirmed via chest auscultation, transilluminating the chest wall, or by obtaining a chest x-ray. Treatment of a tension pneumothorax includes emergent needle thoracentesis, and placement of a chest tube or pigtail catheter.

Thrombosis, either cardiac or pulmonary, is the development of thrombi that occludes blood flow to critical areas within the cardiac or pulmonary circulatory systems. Circulation of oxygenated blood becomes obstructed, resulting in severe hypoxemia to all vital organs. Thrombosis can occur in neonates receiving extracorporeal membrane oxygenation (ECMO), infants with clotting disorders, long-term indwelling intravenous catheters, or as result of operative complications (Gomella et al., 2004). Although it is rare that complete cardiac arrest occurs from thrombi, if severe enough to result in PEA, a thrombosis can be fatal.

Trauma can result from a variety of scenarios including intraoperative, non-accidental injury (i.e. CPR), delivery with shoulder dystocia presentation, and forceps or vacuum assisted vaginal deliveries. Treatment is dependent upon the type of trauma encountered.

In conclusion, PEA is a high-acuity, low-volume type of medical emergency that is unpredictable and sometimes difficult to recognize. Diagnosis can be difficult if the Neonatologist or Nurse Practitioner focuses on the current cardiac rhythm without performing a thorough physical assessment of the infant. It is imperative for all healthcare professionals to familiarize themselves with the process of rapidly diagnosing PEA, initiating effective resuscitation measures while obtaining IV access, and completing a comprehensive evaluation to determine appropriate treatment of any and all underlying causes.

References

Chameides, L., Schexnayder, S., Samson, R., & Hazinski, M. (Eds.). (2011). Cardiac core cases. Pediatric advanced life support (Part 10). USA: First American Heart Association Printing.

Gomella, T., Cunningham, M., Eyal, F., & Zenk, K. (2004). Neonatology management, procedures, on-call problems, diseases, and drugs (5th ed.). New York, NY: Lange Medical Books/McGraw-Hill.

Martin, L. (1992). All you need to know to interpret arterial blood gases (2nd ed.).

Shah, S. (2011). Pulseless electrical activity. Retrieved August 26, 2012, from http://emedicine.medscape.com/article/161080-overview

Zenk, K., Sills, J., & Koeppel, R. (2003). Neonatal medications & nutrition: a comprehensive guide (3rd ed.). Santa Rosa, CA: NICU INK.

FANNP Brag Board

FANNP is very fortunate to be associated with and supported by a multitude of talented and professional Practitioners who continually grow and develop themselves. The purpose of the "Brag Board" is to call attention to achievements such as acceptance by a professional organization for poster presentations, completing an MSN, DNP or PhD program, passing the NCC exam, acceptance to be published in a professional publication, or even survival of one's dissertation defense. The FANNP would like to recognize the following individuals for their recent accomplishments:

Leslie Parker, PhD, NNP-BC, recently received the following research grants from the National Institutes of Health (NIH): $1.4 million for her research titled "Routine aspiration of residual gastric contents in very low birth weight infants" (RO1), and $800,000 for her research titled "Adequate breast milk for improved health of very low birth weight preterm infants" (R15).

Stacy Stanford, MSN, graduated from Stony Brook University with her MSN degree on May 23, 2013. She is currently studying for the NCC exam. She has recently accepted a position at All Children's Hospital, located in St. Petersburg, FL. Stacy attended the FANNP conference in 2012, and found it to be a great resource.

Congratulations and strong work to all of our recent graduates and Stacy Stanford, MSN. Congratulations to those who have been published recently and Dr. Leslie Parker! Do YOU have an exciting professional accomplishment you would like to share with us? If so, please email TiffanyGwartney@gmail.com with submissions. Thank you!

FANNP Scholarship Funds Available!

FANNP was founded to support the educational advancement of Neonatal Nurse Practitioners and remains committed to promoting education for NNPs.

Each year on December 31st, at least 10% of the available monies in the FANNP general operating budget are put in a scholarship fund.

FANNP members who attend an educational program leading to a degree related to the health care field between September 15, 2012 and September 15, 2013 are eligible for a 2013 scholarship. The completed scholarship application packet must be postmarked by September 15, 2013.

For questions, more information or to obtain an application please contact FANNP via email at: scholarships@fannp.org. See eligibility requirements on our website, fannp.org.

POCKET NOTEBOOK

Diane McNerney DNP, NNP-BC

Blood Abnormalities – Part 2
Rh Incompatibility

1. Definition:

- The Rh factor (Rhesus factor) is a red blood cell surface antigen. Rh incompatibility ranges from mild to severe, and typically occurs only in second or subsequent pregnancies of Rh-negative women, when the fetus is Rh-positive. Other mechanisms for RH incompatibility are when maternal Rh-negative blood is exposed to fetal Rh-positive blood due to fetal-maternal hemorrhage during pregnancy. Rh incompatibility can also occur when an Rh-negative individual receives a transfusion of Rh-positive blood. To avoid the risk of Rh incompatibility, O negative blood is used as the universal donor blood type in emergent situations, when there is little or no time to type and crossmatch blood.
- When the mother is exposed to fetal blood, antibodies are produced which may affect the health of subsequent Rh-positive pregnancies. In mild cases, the fetus may have mild anemia with reticulocytosis. In moderate or severe cases, the fetus may have a more marked anemia and erythroblastosis (erythroblastosis fetalis). When the disease is very severe, it may cause hemolytic disease of the newborn (HDN), hydrops fetalis or stillbirth.
- Once produced, maternal Rh immunoglobulin G (IgG) antibodies may cross the placenta freely into fetal circulation. The maternal IgG antibodies then form antigen-antibody complexes with Rh-positive fetal erythrocytes eventually destroying them, resulting in a fetal alloimmune-induced hemolytic anemia. The D antigen is the most immunogenic and the most commonly involved in Rh incompatibility.

2. Pathophysiology:

- Sensitization occurs during delivery in most cases. Therefore, most firstborn infants with Rh-positive blood types are not affected because there is a short period of exposure to the Rh-negative maternal blood and insufficient time to produce a significant maternal IgG antibody response.
- The risk and severity of the sensitization response increases with each subsequent pregnancy involving a fetus with Rh-positive blood. In women with a history of Rh incompatibility, the second pregnancy with an Rh-positive fetus often produces a mildly anemic infant, whereas subsequent pregnancies produce more seriously affected infants who ultimately may die in utero from massive antibody-induced hemolytic anemia.
- An estimated 15-20% of Caucasians, and 5-10% of African Americans have Rh-negative blood.

3. Morbidity and Mortality:

- Rh incompatibility primarily affects the fetus. The binding of maternal Rh antibodies produced after sensitization with fetal Rh-positive erythrocytes results in fetal autoimmune hemolysis. Large amounts of bilirubin are produced from the breakdown of fetal hemoglobin. The bilirubin is then transferred through the placenta to the maternal circulation where they are subsequently conjugated and excreted by the mother. Once delivered, low levels of glucuronyl transferase in the infant preclude the conjugation of large amounts of bilirubin, and may result in dangerously elevated levels of serum bilirubin and severe jaundice.
- Mildly affected infants may have little or no anemia, and may exhibit only hyperbilirubinemia secondary to the continuing hemolytic effect of Rh antibodies that have crossed the placenta.
- Moderately affected infants may have a combination of anemia and hyperbilirubinemia.
- In severe cases of fetal hyperbilirubinemia, kernicterus develops. Kernicterus usually occurs several days after delivery and is characterized by loss of the Moro reflex, posturing, poor feeding, inactivity, a bulging fontanelle, a high-pitched shrill cry, and seizures. Infants who survive kernicterus may go on to develop hypotonia, hearing loss, and mental retardation.
- Another serious life-threatening condition observed in infants affected by Rh incompatibility is erythroblastosis fetalis, which is characterized by severe hemolytic anemia and jaundice. The most severe form of erythroblastosis fetalis is hydrops fetalis.

4. Risk of sensitization:

- Risk factors depend largely upon the following 3 factors:
  1) Volume of transplacental hemorrhage
  2) Extent of the maternal immune response
  3) Concurrent presence of ABO incompatibility
- Birth order is not considered a risk factor.
- A1 antigen in the infant has greatest risk of symptomatic disease.
- Elevated iso-hemagglutinins: Maternal intestinal parasitism and tetanus toxoid or pneumococcal vaccines during the 3rd trimester or at birth may stimulate iso-antibodies.

"POCKET NOTEBOOK" continues on page 6

Legislative Update

Diana Morgan-Fuchs, ARNP, NNP-BC

In this month's legislative update, our focus is directed toward Senate Bill 612, the "Doctor" title bill. In our previous newsletter, we reviewed the legislative process from drafting, to passing a bill. Readers were also encouraged to remain informed regarding the progress of Senate Bill 612 by monitoring websites such as The Florida Nurses Association (FNA) and The American Nurses Association (ANA). These professional nursing organizations posted valuable, detailed web updates and ways to get involved to assist in defeating Senate Bill 612. Citizens were encouraged to correspond with or phone their local representatives discussing the rights of nurses who have earned and preserved their doctoral degree.

The FNA said it best when they stated: "WE DID IT!". A unified body of nurses and other concerned citizens were able to defeat the bill mandating that doctorally prepared nurses identify themselves as a nurse practitioner or doctor of nursing practice. In addition, part of Senate Bill 612 proposed that utilization of the title of "Doctor" should be accompanied by a disclosure statement indicating that he or she was not a medical or osteopathic physician. If Senate Bill 612 passed into law, the omission of such a disclosure statement would have resulted in third degree felony charges. A conviction of such degree would effect a doctorally prepared nurse's licensure, credentialing and employment. The medical community generated and strongly supported Senate Bill 612. Most likely, this bill will resurface with different verbiage and campaign.

The FNA news release stated that in opposition of SB612, Senator Grimsley filed an amendment to eliminate the third degree penalty and for continued identification as a nurse practitioner or a doctor of nursing practice. The FNA continues to urge nurses to remain involved in this issue and email a personal note of thanks to Senator Grimsley at grimsley.denise@flsenate.gov for her support. The FANNP encourages each one of its members to continue to remain informed and actively participate in pertinent legislation. ■

POCKET NOTEBOOK from page 5

5. Treatment:
- Phototherapy
- Exchange transfusion
- Intravenous Immunoglobulin (IVIG)

6. Prevention:
- Rh disease is generally preventable by treating the mother during pregnancy or soon after via administration of an intramuscular injection of anti-RhD immunoglobulin (Rho (D) immune globulin). The RhD protein is coded by the RHD gene. Rh incompatibility, also known as Rh disease, is a condition that occurs when a woman with Rh-negative blood type is exposed to Rh-positive blood cells, leading to the development of Rh antibodies.
- ABO incompatibility is present in about 15% of pregnancies. Positive Coombs is found in only 3-4% of infants.

7. Prognosis: Early diagnosis and appropriate management may avoid severe hemolytic anemia and secondary hyperbilirubinemia.

References

Murray, N.A., Roberts, A.G., (2007). ABO incompatibility and hemolytic disease of the newborn. Archives of Diseases in Childhood: Fetal & Neonatal; March; 92(2): F83–F88.

Wagel.S., Rosenkrantz, T., (2011). Hemolytic disease of the newborn. Retrieved on-line 2/6/2013. emedicine.medscape.com

NOMINATIONS from page 2

Additional Board of Director Positions:

At-Large Members (4): Serve on committees as assigned.
**Please see website for a complete description of At-Large Member positions.*

To be eligible to run as an Officer, you must be a current member who has served on the Board of Directors or any FANNP committee. To be eligible to run for an At-Large Member position, you must be a current member with an interest in continuing the mission of FANNP.

Please consider running for one of these positions! We need your help to carry on!

Nominations are due by July 15, 2013, send them to nominations@fannp.org. Ballots will be emailed to active members for voting by October 1, 2013. The newly elected candidates will be announced at the 24th NNP Symposium Annual Member Brunch.

Thank you,
Ruth Bartelson, ARNP, NNP-BC
Past President, Chair: Nominations Committee

KIM NOLAN AWARD from page 1

October;
- One year waiver of FANNP dues;
- Recognition in the newsletter and on the Website;
- A certificate suitable for framing;
- A Lladro statue

Previous Recipients:
2002 Pam Laferriere
2003 Madge Buus-Frank
2004 Leslie Parker
2005 Kim Irvine
2006 Karen Theobald
2007 Ruth Bartelson
2008 Cheryl Robinson
2009 Gail Harris
2011 Mary lee Kraus
2012 Terri Marin

NOMINATIONS DUE BY JULY 1, 2013

CLASSIFIEDS

Newsletter Advertising

Acceptance of Advertising

- Classified ads only
- Link on website for direct submission
- All advertisements are subject to review and approval by the Editor

Ad Options

May run ad in one newsletter or all year- 4 total newsletters, December, March, June, and September issues

Cost

- $50.00/ad each newsletter or $150.00 for all 4 newsletters. No cash discounts.
- Payment must be received in full prior to the scheduled close date for the quarterly issue.
- Payments can be made though the PayPal link on the FANNP website

Format

- The classified ad section of the newsletter will be limited to 1 page only with approximately 30 ads per page
- Ads will be processed on a first come first serve basis

Closing Dates for Space and Advertising Materials

- September, 2013-ads must be received by August 9, 2013, and paid in full
- December 2013-ads must be received by November 8, 2013, and paid in full
- March, 2014-ads must be received by February 14, 2014, and paid in full
- June, 2014-ads must be received by May 9, 2014, and paid in full

– FANNP BOD

EDUCATIONAL OFFERINGS

13th National Neonatal Nurses Conference
September 8-11, 2013
Ceasar's Palace
Las Vegas, NV
www.academyonline.org

Current Concepts in Neonatal Care
September 25-28, 2013
Napa Valley Marriott Hotel & Spa
Napa, CA
www.symposiamedicus.org

National Association of Neonatal Nurses
29th Annual Educational Conference
October 2-5, 2013
Nashville Renaissance Hotel
Nashville, TN
www.NANN.org

The 24th FANNP Neonatal Nurse Practitioners Symposium: Clinical Update and Review
October 15-19, 2013
Sheraton Sand Key Resort
Clearwater Beach, Florida

The 27th Annual Gravens Conference on the Physical and Developmental Environment of the High Risk Infant
February 5-8, 2014
Sheraton Sand Key Resort
Clearwater Beach, FL

Bring It ON... Answers *(questions on page 8)*

1. Answer is B; During the last 3 months of gestation, the bone marrow is the chief source of blood cell production, with extramedullary sources of hematopoesis ceasing by the first postnatal month.
2. Answer is C; It is the free portion of unconjugated bilirubin that can migrate into brain cells, causing damage known as kernicterus.
3. Answer is C; Vitamin K deficiency.

Clinical status	Platelets	PT	PTT	Differential Diagnosis
Healthy	↑	WNL	WNL	ITP
Healthy	WNL	↑	↑	Vitamin K deficiency
Healthy	WNL	WNL	↑	Hereditary clotting factor deficiencies
Healthy	WNL	WNL	WNL	Local bleeding (trauma)

Bring it On...

Practice Questions to Prepare for the NNP Certification Exam

1. What is the chief source of blood cell production in a 36-week old fetus?

   A. Liver
   B. Bone marrow
   C. Thymus

2. Which form of bilirubin is able to migrate into brain cells?

   A. Unconjugated (indirect)
   B. Conjugated (direct)
   C. Free

3. An infant that appears healthy has excessive bleeding from his circumcision site. Laboratory data reveals increased PT, increased PTT, and a normal (WNL) platelet count. The most likely diagnosis is:

   A. Disseminated intravascular coagulation (DIC)
   B. Hemophilia A
   C. Vitamin K deficiency

Answers on page 7

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