



National Association of Neonatal Nurses E- News

Welcome to another edition of *NANN E-News*. This month, we have an informative article with interesting facts about the umbilical cord.

NANN E-News is for you, so we welcome your suggestions! Do you have professional news you would like to share in our Member News section? If you have received an honor or award or contributed to a publication, let us know! E-mail your item (75 words or fewer) to bhofmaier@connect2amc.com.

Don't forget to forward this newsletter to a friend or colleague. Thank you for being a member of the only nonprofit association exclusively for neonatal nurses!

Interesting Facts About the Umbilical Cord

Ruth Evans, MS RNC NNP-BC

The next time you attend a delivery, check out that fascinating umbilical cord.

- At full term the umbilical cord has an average length of 55 cm (the usual range is 30-100 cm).
- The outer layer of epithelium is from the amnion, and the Wharton's jelly is the internal mesodermal mass.
- Wharton's jelly, which consists of collagen and hyaluronic acid, some muscle fibers, and water, appears to be responsible for the strength of the umbilical cord. Having a cord with a diameter lower than that of the 10th percentile is a good predictor of perinatal complications (e.g., being small for gestational age, having intrapartum complications).
- The fetus starts with two arteries and two veins; the right vena umbilicalis usually obliterates during the second month. Gastroschisis usually occurs on the right side of the umbilical cord (De Vries, 1980).
- The absence of one umbilical artery occurs in about 1% of pregnancies and, in most cases, is an isolated abnormality.
- The helical course of the umbilical vessels is clearly visible from 7 weeks postconception in 95% of fetuses.
- An umbilical coil is defined as one complete spiral of 360 degrees of the umbilical vessels around each other. Both sinistral and dextral spirals occur. The anterior portion of the sinistral spiral will parallel the left limb of a "V," and the anterior portion of a

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In This Issue

Interesting Facts About the Umbilical Cord
 Update from NANN's September Board Meeting
 The Changing Landscape in Education and Accreditation
 Last Chance! Ask the Professor Webcast Series Offered Through December 31
 New NANN Board Member Regina Grazel
 2010 Nurse in Washington Internship
 Newest Position Statements from NANN and NANNP
 March of Dimes Releases White Paper on Premature Birth
 NANN Offers Live Recordings of 2009 Conference Sessions
 Member News: Angela Boisseau

New NANN Board Member Regina Grazel



Regina Grazel, MSN, a perinatal clinical nurse specialist for the Level 2 and Level 3 NICUs and mother-baby units at Lourdes Health

dextral spiral will parallel the right limb of a "V." It makes no difference from which side one views the cord: a sinistral course will be sinistral whether viewed from the fetal side or from the placental insertion site.

- Sinistral spiraling is four to eight times more common than dextral spiraling, and a mixed pattern of spiraling may also be seen. In 2%-5% of umbilical cords there is no spiraling at all.
- The origin of coiling is unknown.
- The umbilical coiling index (UCI) is the ratio of twists to the length of the cord, irrespective of the direction of coiling. The mean UCI identified in a group of uncomplicated pregnancies (Van Dijk et al., 2002) was 0.17 coils/cm ($SD = 0.0009$). The 10th and 90th percentiles for the UCI were 0.07 coils/cm and 0.30 coils/cm.
- The anatomy of the umbilical cord is such that blood flow is optimized by the coils in the cord.
- Hypercoiled cords are strongly associated with nuchal cords (cords wrapped 360 degrees around the neck); however, the most important problem of tight nuchal cords is probably not compression of the cord itself but compression of the fetal carotid arteries.
- Undercoiling (UCI below the 10th percentile) is associated with fetal death, spontaneous preterm delivery, trisomies, low 5-minute Apgar score, velamentous cord insertion, single umbilical artery, and dextral coiling.
- Overcoiling (UCI above the 90th percentile) is associated with asphyxia, small-for-gestational-age infants, trisomies, single umbilical artery, and sinistral coiling.

Who suspected that the umbilical cord was so intriguing? Do your own observational study and look for associations between your babies and their umbilical cords like those discussed in the two main sources for this article: De Laet, Franx, Bots, Visser, & Nikkels, 2006, and De Laet, Franx, Van Alderen, Nikkels, & Visser, 2005.

References

De Laet, M. W., Franx, A., Bots, M. L., Visser, G. H., & Nikkels, P. G. (2006). Umbilical coiling index in normal and complicated pregnancies. *Obstetrics and Gynecology*, 107(5), 1049-1055.

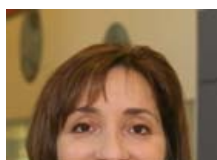
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Ruth Evans, who compiled the information for this article, is a neonatal nurse practitioner at Children's Hospital, Aurora, CO, and at North Colorado Medical Center, Greeley, CO.

Update from NANN's September Board Meeting



Lori Armstrong, MSN RN, NANN President

The NANN Board of Directors held its

System in Camden and Willingboro, NJ, began her 2-year term on the NANN Board of Directors following the September 2009 annual educational conference. Regina received a BSN degree from Rutgers University and obtained an MSN degree in perinatal nursing from the University of Pennsylvania. She has more than 25 years of experience in perinatal and neonatal nursing. A past president of the Delaware Valley Association of Neonatal Nurses, Regina has served NANN as a member of the Advanced Competency in Developmental Care Committee. She participated in the September board meeting and will be a valuable addition to the NANN board. Welcome, Regina!

2010 Nurse in Washington Internship

Mark your calendar for the 2010 Nurse in Washington Internship (NIWI) Program to be held March 14-16, 2010, at The Liaison Capitol Hill, Washington, DC. Early-bird registration is open until February 5, after which a late fee is applied. For more information, [click here](#).

Newest Position Statements from NANN and NANNP

Thanks to the NANN and NANNP volunteers who have been hard at work on the organizations' most recent position statements. Check them out on NANN's Web site:

[Cobedding of Twins or Higher-Order Multiples](#)

Susan Orlando, DNS APRN NNP, and Donna Ryan, MSN RN

[Educational Preparation for Nursing Practice Roles](#)

Donna Ryan, MSN RN, and Ellen Tappero, DNP RN NNP-BC

[Medication Safety in the Neonatal Intensive Care Unit](#)

Robin Clifton-Koeppel, MS RNC CPNP, Maryann Gibbons, BSN RN, and Cyndi Weiss, RNC

[Requirements for Advanced Neonatal Nursing Practice in Neonatal Intensive Care Units](#)

Sharon Glass, MS RNC NNP

[The Use of Human Milk and](#)

most recent meeting on September 22 in Austin, TX, in conjunction with NANN's 25th Annual Educational Conference.

The board discussed strategic priorities for 2010 in the areas of membership engagement and education. The strategic work plan will be further refined and prioritized during the November and December board meetings. In order to ensure consistent representation of staff nurses on the board, it was agreed that two director-at-large positions will be designated for staff nurses. One position will be filled in 2010 and one in 2011, so that a staff nurse rotates onto the board each year. The nominations committee will be tasked with developing competencies that should be represented on the board.

Other topics included a review of all NANN publications, board liaison appointments, and details surrounding the 2010 conference in Las Vegas. The July financial statements were presented and accepted.

A summary of NANN board meetings regularly appears in *NANN E-News* to help keep you informed about what's happening with your association. Please feel free to direct any questions to me at President@nann.org.

The Changing Landscape in Education and Accreditation



Steve Biddle, MEd, NANN Director of Education

NANN members need to know about upcoming changes in continuing nursing education (CNE) related to neonatal care. Recent developments in accreditation will have an impact

on the way that NANN plans, implements, and evaluates its educational programming.

Recommendations concerning evidence-based practice, resolutions of conflicts of interest, transparency of commercial support, gaps in professional practice, and outcomes measurement are now important aspects of education and the expectations of our accrediting bodies. When these concerns are added to the needs of today's learners for clinically relevant, authoritative, and immediate education, it becomes clear that NANN's educational efforts must be proactive, efficient, economic, adaptable, and responsive. Below, in lay terms, are the principles behind these changes and an assessment of their impact on neonatal care.

- **Recommendations concerning evidence-based practice**--Although recommendations concerning evidence-based practice are not a required component of CNE, organizations and faculty members are being encouraged to provide accurate, proven, and safe clinical recommendations.
- **Resolution of conflicts of interest**--The relationships between faculty and planning committee members and commercial interests are being closely scrutinized. CNE providers must ascertain the extent of these relationships and act to resolve any real or perceived conflict between

Breastfeeding in the Neonatal Intensive Care Unit

Taryn Edwards, MS RN, Nancy Hurst, PhD RN IBCLC, and Diane Spatz, PhD RNC

March of Dimes Releases White Paper on Premature Birth

On October 4, 2009, the March of Dimes released its White Paper on [Preterm Birth: The Global and Regional Toll](#), showing that more than 1 million babies around the world die each year because they are born prematurely, out of an estimated 13 million babies born prematurely (a global preterm rate of nearly 10 percent). According to the white paper, the highest preterm birth rates in the world are found in Africa, followed by North America (United States and Canada combined).

The white paper was presented at the 4th International Conference on Birth Defects and Disabilities in the Developing World, held October 4-7 in New Delhi, India, and sponsored by the March of Dimes.

[Click here](#) for an announcement of the paper's release.

NANN Offers Live Recordings of 2009 Conference Sessions



Educational sessions from NANN's 2009 conference are now available for viewing in your home or office 24/7. You can also earn CNE hours! NANN offers individual sessions or the entire conference on compact disc for purchase on the NANN Web site.

The synchronized multimedia CD-ROM features audio of every session fully synchronized with speaker slides and presentation video, exactly as it happened during the conference.

For information and prices, [click here](#).

Member News: Angela Boisseau

NANNP member **Angela**

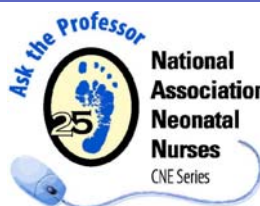
them and the subject matter being taught; it is no longer acceptable simply to disclose these relationships. The planning committee may have to replace faculty members, limit the content of their presentations, or conduct a peer review of their material during the planning process.

- **Transparency of commercial support**--Financial and in-kind support of CNE is an effective means by which NANN can provide more cost-efficient education. However, commercial contributions are highly restricted and tightly governed, and they must be reported to learners. An independent relationship among the provider, the learners, and the commercial interest must be maintained.
- **Gaps in professional practice**--Practice gaps are the differences between existing and best practices, between what is and what should be. CNE must now be linked to the health of the individual, community, or population. Planning committee and faculty members for educational activities are being asked to clearly articulate why this activity is considered necessary and important and how it will improve learners' delivery of care.
- **Outcomes measurement**--Changes in learners' competence and performance and in patient outcomes as a result of CNE must now be measured. These measurements are directly linked to the identification of gaps in care.

What changes will NANN members see? NANN will be offering more detailed and evidence-based presentations. We will ask for your assistance in identifying gaps in the care that you or your organization provide. We will ask you to participate in pre- and posttests, to respond to case studies, and to explain how NANN's education programs and products have affected the care you provide or the research you conduct. Evaluation questions will be changing, and you will notice more follow-up surveys, which NANN will use to improve the quality and topics of CNE offerings available to you. You will also likely hear more about commercial support, an ever-evolving aspect of today's CNE. Your assistance in these efforts is invaluable.

This higher level of educational accountability will translate into better, more needs-driven programming for neonatal care professionals, which ultimately benefits patients. (Look for a longer article on these changes to CNE in the fall issue of *NANN Central*, which will be mailed in late November.)

Last Chance! Ask the Professor Webcast Series Offered Through December 31



NANN's Ask the Professor series features engaging presentations on care-centered topics that will increase your knowledge and understanding of the neonate. The series is available **only through December 31, 2009**. These Webcasts are delivered by experts whose presentations were the best-attended and most highly rated at NANN's 2008 conference. To fit your demanding schedule, **the 1-hour presentations are available on demand 24/7 through the NANN Web site--**

Boisseau, NNP-BC, has recently been recognized by Cambridge Who's Who for demonstrating dedication, leadership, and excellence in family-centered care, health promotion, disease prevention, and clinical management. Cambridge Who's Who is an exclusive membership organization that recognizes and empowers executives, professionals, and entrepreneurs throughout the world.

As an advanced practice registered nurse for the Connecticut Children's Medical Center, based in Hartford, CT, Angela is responsible for overseeing ventilatory support and parameter settings, managing nutrition and intravenous fluids, conducting clinical work, including resuscitation of newborns, and performing, monitoring, and interpreting laboratory investigations. She received her master of science in nursing from Northeastern University and is a member of Sigma Theta Tau International.

We congratulate Angela on this recognition of her contributions to the field of neonatal nursing.

anytime, day or night! For a sample of the series [click here](#).

Topics and Faculty

- Appropriate Use of Antimicrobial Agents, *Susan Coffin, MD MPH*
- Infant Feeding Practices, *Susan Ludwig, OTR, and Kara Ann Waitzman, OTR/L*
- Necrotizing Enterocolitis, *Leslie Parker, MSN NNP RNC*
- Palliative Care, *David Munson, MD*

Moderator, *Andrea C. Morris, MSN RNC CCRN*

Keep your skills sharp and learn new ones! Each Webcast includes a comprehensive presentation, answers to commonly asked questions, and immediate access to your continuing nursing education (CNE) certificate.

The National Association of Neonatal Nurses (NANN) is accredited as a provider of CNE by the American Nurses Credentialing Center's Commission on Accreditation (ANCC-COA). Each presentation is eligible for 1 CNE credit. The fee for each Webcast is \$15 per person. [A poster](#) is available for downloading and printing.



Supported through an educational grant from Abbott Nutrition, a division of Abbott Laboratories, Inc.

Please contact NANN Member Services at 800/451-3795 with any questions.