News of The Academy of Neonatal Nursing

Farewell and Thanks

A fond farewell and thanks to Shirley Brott, RN, BSN, MEd, who has completed her term as editor of the *Academy News*. Shirley will continue in her role as editor of the *Academy Connection,* the Academy's electronic newsletter. Shirley, we thank you and appreciate your many contributions to the *Academy News*!

Is There a Hidden Author in You?

There has never been a better time to begin writing. The Academy of Neonatal Nursing™ announces our new *Writing for Publication Resource Center*. This online tool kit provides everything you need to get started writing that prize-winning manuscript. Yes, prize winning! A PowerPoint presentation outlines the steps and strategies to write an article for publication. In addition there are great online resources, and fabulous links to get you motivated. The *Writing for Publication Resource Center* is available in the "Members Only" section of the Academy website. December 31, 2011, is the deadline for entries for this year's Excellence in Writing Award sponsored by *Neonatal Network*.® *The Journal of Neonatal Nursing*. For more information on the award, visit www.neonatalnetwork.com.

Is Your Unit into PDSA?

Plan-Do-Study-Act (PDSA), first conceived by Shewhart in 1939 and developed by his student W. Edwards Deming, is a systematic approach to problem solving that has been adopted by many healthcare organizations. It is a continuous improvement cycle comprising the four titular actions: planning how to improve, carrying out the plan on a small scale, studying the results in order to ameliorate the plan, and acting to carry out the reviewed plan at scale or to conceive of a new plan.

Plan: Develop a plan for improving a current practice and evaluating the success of the change (literature review, team consultations, benchmarking).

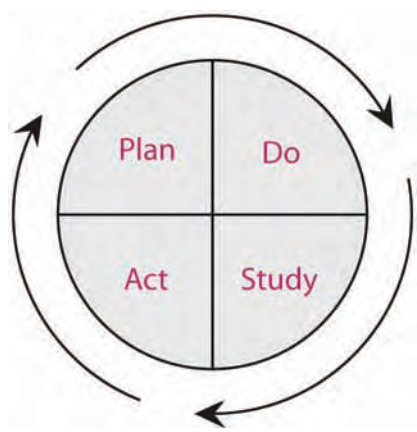
Do: Execute the plan, first on a small scale (small trials, staff education).

Study: Evaluate feedback to confirm or to adjust the plan.

Act: Make the plan permanent or study the adjustments.

Detractors suggest that PDSA oversimplifies the process of progress, uses confusing terminology (given that Act and Do have similar definitions), demands top-down change, and is not usable on a large scale or in complicated situations. Proponents argue that PDSA improves efficiency, allows for ready evaluation of the costs and benefits of a practice change, and affirms that a change will result in improvement.

The Institute for Healthcare Improvement (IHI) provides a PDSA worksheet for use by healthcare providers: http://www.ihi.org/IHI/Topics/Improvement/ImprovementMethods/Tools/Plan-Do-Study-Act%20%28PDSA%29%20Worksheet.



The PSDA approach.

New Orleans' famous balconies.

We're Going Back to New Orleans!

Let the good times roll! The next Advanced Practice Neonatal Nurses Conference will be held April 19–21, 2012, at the newly refurbished New Orleans Hyatt Regency hotel. Located next to the Superdome and a short carriage ride from the Riverfront and the French Quarter, it is an ideal location for exploring this unique city.

New Orleans is charming and beautiful, with a rich cultural history for visitors to explore. Here are some things to do during your visit:

- **Eat**. New Orleans is well known for its fabulous cuisine. Whether you prefer Cajun, Creole, ethnic, Southern, or French, you can find it here. Try its famous Creole gumbo or po'boy sandwich.

Enjoy great music everywhere in New Orleans.

Jackson Square.

- **Dance**. New Orleans is considered one of the birthplaces of jazz and blues music. Visit Frenchmen Street for live jazz performances every day. Get free Cajun dance lessons in the Arts District. Dance the night away in one of the many jazz nightclubs.
- **Learn**. The city has 45 museums open to the public, including the Audubon Nature Institute, which includes the Audubon Aquarium, Zoo, and Insectarium; the Backstreet Cultural Museum; the National World War II Museum; and the New Orleans Jazz National Historical Park. You can even pick up old medical knowledge at the Pharmacy Museum, site of America's first licensed pharmacy.
- **Pray**. Whether you're interested in the Voodoo Temple, the largest voodoo place of worship in the city, or the Cathedral-Basilica of St. Louis King of France, the oldest continually used Catholic cathedral in the U.S., New Orleans has many spiritual sites of interest.
- **Tour**. Tour everything from the French Quarter to local cemeteries with one of New Orleans' local tour companies. Try the Ghost and Vampire tour! You can travel by foot, bike, bus, riverboat, or horse and carriage.

Online registration for the 2012 Advanced Practice Neonatal Nurses Conference opens this Fall. Watch for the complete brochure in *Neonatal Network*®: *The Journal of Neonatal Nursing* and the Academy of Neonatal Nursing™ website for details.

New from the Cochrane Collaboration

Delayed Introduction and Slow Advancement of Progressive Enteral Feedings to Prevent Necrotizing Enterocolitis in Very Low Birth Weight Infants

For many years it has been postulated that there is a link between the introduction of enteral feedings and the development of necrotizing enterocolitis (NEC). As a result, many clinicians have delayed the initiation and progression of enteral feedings as a strategy to reduce the risk of NEC. In March of this year, a Cochrane review was published on this subject. The review was designed to determine whether or not delayed progression of enteral feedings affected the incidence of NEC and other morbidities in very low birth weight (VLBW) infants.

Morgan and colleagues reviewed five randomized, controlled trials (RCTs) with a total enrollment of 600 infants.[1] Delayed introduction of feeding was defined as enteral feedings beginning at 5 to 7 days of life or later, and early feeding was defined as enteral feedings beginning at less than four days of life. Two of the included trials only enrolled growth-restricted infants. The analysis of the five trials did not show any significant increase in the incidence of NEC in those infants fed early; however, infants in the delayed feeding groups took an average of three days longer to reach full feedings.

In the second review, the same authors examined the relationship between slow advancement of enteral feedings and the incidence of NEC and other morbidities in VLBW infants.[2] Four RCTs with a total enrollment of 496 infants were reviewed. Slow advancement of feedings was defined as increments of 15–20 mL/kg/day while the faster increment groups were advanced by 30–35 mL/kg/day. Again, no significant difference in the incidence of NEC between the two groups was noted. Infants whose feedings were advanced slowly took 2 to 6 days longer to regain birth weight and 2 to 5 days longer to reach full enteral feedings.

1. Morgan J, Young L, McGuire W. Delayed introduction of progressive enteral feeds to prevent necrotising enterocolitis in very low birth weight infants. *Cochrane Database of Systematic Reviews* 2011, Issue 3. Art. No.: CD001970. DOI:10.1002/14651858.CD001970.pub3.

2. Morgan J, Young L, McGuire W. Slow advancement of enteral feed volumes to prevent necrotising enterocolitis in very low birth weight infants. *Cochrane Database of Systematic Reviews* 2011, Issue 3. Art. No.: CD001241. DOI: 10.1002/14651858.CD001241.pub3.

Other Research News

Following a prenatal diagnosis of fetal myelomeningocele, eligible women in this trial, published in the *New England Journal of Medicine,* were randomized to either fetal surgical repair prior to 26 weeks gestation or standard postnatal surgical repair.[1] The trial was stopped after 183 of 200 patients were enrolled because of the demonstrated efficacy of prenatal repair. Myelomeningocele repair prior to 26 weeks gestation resulted in a decreased risk of death or the need for a shunt at 12 months of age and also improved mental and motor functions at 30 months of age. The prenatal surgery group had a 13 percent incidence of preterm delivery (prior to 30 weeks) and also higher rates of uterine dehiscence and maternal blood transfusions at delivery.

1. Adzick NS, Thom EA, Spong CY, Brock JW 3rd, Burrows PK, Johnson MP, Howell LJ, Farrell JA, Dabrowiak ME, Sutton LN, Gupta N, Tulipan NB, D'Alton ME, Farmer DL; MOMS Investigators. 2011. A randomized trial of prenatal versus postnatal repair of myelomeningocele. *New England Journal of Medicine* 17:364(11):993–1004.

Sepsis Primer

The importance of infection as a marker for poor outcomes in low birth weight infants, along with the recognition that infection results in prolonged hospital stays, has resulted in increased attention to strategies to prevent infection in the NICU. Many educational programs are available that focus on infection control practices, but what might be missing is some basic microbiology. To help refresh your memory, we present the first installment in ANN's Microbiology Basics:

How are Microorganisms Identified and Described?

Bacteria: unicellular organisms containing DNA, but no nucleus.

Morphology:

Three shapes:

- round—cocci
- rod-shaped—bacilli
- curved—spirochetes

Staining:

Two major groups of bacteria that respond differently to stains applied to the cell wall:

- Gram-positive bacteria have thick cell walls that retain the violet stain applied in the laboratory
- Gram-negative bacteria have thin walls that don't hold the violet stain and appear red on a slide

Oxygen Use:

- aerobes are bacteria that require oxygen to grow
- anaerobes are bacteria that grow without oxygen
- most bacteria can grow with or without oxygen (facultative anaerobes)

Metabolic Activities:

- some bacteria contain enzymes that break down red blood cells: these are coagulase-positive organisms (e.g., *Staphylococcus aureus)*
- bacteria without these enzymes are coagulase-negative (e.g., *Staphylococcus epidermidis)*

Growth:

- The *shape* of a bacterial colony growing on a plate can help to distinguish the bacteria
- Gram-positive cocci can grow in pairs—diplococcic
- chains (e.g., streptococci) or
- clusters (e.g., staphylococci)

TABLE 1 ■ Examples of Various Bacteria

Gram Positive Cocci	Gram Positive Rods
• *Staphylococcus aureus*—a coagulase-positive organism that grows in clusters • *Staphylococcus epidermidis*—a coagulase-negative organism that grows in clusters • Streptococcus Group A—grows in chains • Streptococcus Group B • Pneumococcus or *Streptococcus pneumoniae* • Enterococcus	• *Listeria monocytogenes* • Clostridium • *Bacillus cereus*
Gram Negative Cocci	**Gram Negative Rods**

• *Neisseriagonorrhoeae*
• *Neisseria meningitides*
• *Moraxellacatarrhalis*
	• *Haemophilus influenza*
	• Pseudomonas
	• Acinetobacter
	• Campylobacter
	• *Kingellakingii*
	• Bacteroides
	• Enteric bacteria
	  ▪ *Escherichia coli*
	  ▪ Enterobacter
	  ▪ Citrobacter
	  ▪ Klebsiella
	  ▪ Proteus
	  ▪ Salmonella
	  ▪ Serratia
	  ▪ Shigella
	  ▪ Yersinia

Other Bacteria	

• *Spirochete*
  ▪ *Treponemapallidum*
• *Mycobacterium*
  ▪ *Mycobacterium tuberculosis*
• *Chlamydia*
• *Mycoplasma*
  ▪ *Mycoplasma hominis*
  ▪ *Ureaplasmaurealyticum*	

New in Continuing Nursing Education (CNE)

Check out the Academy website for the latest continuing education offerings. The newly posted presentation, *Birth Injuries: Prevention, Recognition, and Treatment*, has great photos, and the latest information on etiology and management. Also newly released, is the second edition of *Neonatal Radiology Basics*, edited by Carol Trotter, PhD, RN, NNP-BC. This continuing nursing education CD reviews the basic concepts essential for interpreting neonatal chest and abdominal x-rays. Included is a test that offers 25 contact hours of continuing nursing education credit. *Neonatal Radiology Basics, 2nd edition* is available for purchase in the Academy Bookstore for the low price of $50 for members and $100 for non-members. The continuing education course is included in the price. Visit the Academy Booth at the National Conference in Washington, DC, for a sneak preview of this great resource!

Conference Loyalty Program

Do you want to come to a National Neonatal Nurses Conference for free? Thirty-four of your colleagues have just become eligible for free tuition to the 11th National Neonatal Nurses Conference, this year in Washington, DC. To join the ranks of neonatal nurses with free tuition to one of the Academy's great conferences, attend three Academy-sponsored conferences in three consecutive years, and the fourth is free! (Free conference must also be in a consecutive year and membership cannot have lapsed.)

Fun Things from the Academy

Just in—**New** ANN full-zip sweatshirts in blue, only $32! Get the newest release while stock lasts. Also available as part of our Star Benefits, discounted scrubs from Scrubs & Beyond. Check out the link under Star Benefits in the Member Tools Section on the Academy website!

Members in the News

This place is reserved for your stories. Have you recently worked internationally or volunteered to teach in a developing country? Share your experiences here. Perhaps you have a great colleague who deserves recognition from his or her peers, or maybe your unit has launched a successful new initiative or program that you think your colleagues across North America and beyond should know about. Send your stories to uberman@academyofneonatalnursing.org. We want to hear from you!