

Letter from the Pediatric Section Chair

Greetings and welcome to the second installment of the Pediatric Section Newsletter. This summer is excruciatingly hot, particularly given that I work in Florida. Thus, hydration has been a topic of much discussion between me and the caregivers of the little ones that I work with. It is humbling to stop and ponder the special considerations that our families have to deal with on a day to day basis. A trip to the zoo on a hot summer day is so much more involved for a child on nutrition support. When I think about the additional things that a parent of a child on nutrition support must incorporate into their lives to help their child have a safe and playful day I am reminded of why I chose to work in pediatrics. For me, it is about doing what I can so that kids can be “just kids” and have a fun day doing what they imagine.

One way we can help families is by promoting awareness regarding nutrition support. Home Parenteral Nutrition (HPN) Awareness Week was August 3<sup>rd</sup>-9<sup>th</sup>. Did your institution do anything to promote this special week? If so, please send in a description and/or photos of how you celebrated and they will be included in the next newsletter.

In this edition of the newsletter, you will find reviews of recent pediatric nutrition support literature, an update on the NOVEL project as well as information regarding the impact that the change in infant formula concentration has on clinical practice. Also included in this edition is a link to a survey to determine what direction you, as a Pediatric Section member, would like to see the Section take in the future. For example, would you like to see the Section become more involved in research or perhaps in the development of clinical tools? Your opinion is very important so please take a moment to complete the survey. I look forward to reading your input and reporting on it in the fall. Until then, have a wonderful summer, make lots of vitamin D and remember to stay hydrated!

Regards,

Elizabeth Bobo, MS, RD, LD/N, CNSC

Member Updates and Spotlight

We want to hear from you! The A.S.P.E.N. Pediatric Section group is proud of the many accomplishments of our members and we'd like to highlight what you're doing. If you have any noteworthy awards, presentations, published research, or projects that you'd like to share with our members please let us know by contacting the section group newsletter editor Celina Scala at [Celina\\_M\\_Scala@rush.edu](mailto:Celina_M_Scala@rush.edu).

### NOVEL Project Update from Beth Lyman, RN, MSN, CNSC

Here is a quick update on what is happening with the New Opportunities for Verification of Enteral tube Location (NOVEL) Project:

1. NG tube prevalence study is now closed to data collection with ~60 hospitals and 8000 subjects. A manuscript will be submitted to JPEN and a paper will be submitted for CNW.
2. We have a homecare NG tube prevalence and population demographic study coming out. It will be done via survey monkey for home care companies and families. We are definitely in need of the pediatric section group's help to get the word out about this study to homecare companies and families. This should roll out in the Fall.
3. We are working on a NICU pH study and are in the workgroup formative phase of that study.
4. One of the concepts for NG tube placement verification invented by biomedical engineering students at the University of Cincinnati got an award and has a patent pending for its prototype.
5. An article was co-published in NCP and Critical Care Nurse on the current status of NG tube placement verification. Sharon Irving PhD, RN (member of our section) is first author. I would call our section's attention to the Invited Commentary that prefaces the article. It suggests hospitals form Enteral Access Teams.

### Parenteral Nutrition Competencies

The A.S.P.E.N. Parenteral Nutrition Safety Task Force is interested in generating resources to assist clinicians in developing competencies for those who provide parenteral nutrition therapy. We are interested in competencies for all aspects of the parenteral (PN) process-PN order writing/prescribing, PN order review, PN order verification, compounding PN admixtures, supervising PN admixture compounding, administering PN, etc. Please send any PN-related competencies used in your healthcare organization. Send to Beverly Holcombe ([beverlyh@nutritioncare.org](mailto:beverlyh@nutritioncare.org)).

Your contributions will assist the Task Force and other clinicians that provide PN therapy.

### Pediatric Section Committee Survey!

The pediatric section committee would like to know how we can best support you over the next year. Complete this very brief survey and tell us what you think. Your opinion really matters! Thank you in advance for your valuable input!

[Pediatric Section Group Survey](#)

### A.S.P.E.N. Mentoring Program

Are you interested in sharing your experience and expertise with another A.S.P.E.N. member? Would you like to learn from a fellow A.S.P.E.N. clinician? If so A.S.P.E.N.'s new mentoring program is right for you! Set up a profile as either a mentor or mentee at the link below to be paired with another A.S.P.E.N. clinician. Don't miss this great opportunity to network and grow both personally and professionally.

[A.S.P.E.N. Mentoring Program](#)

**Early Enteral Nutrition is Associated with Lower Mortality in Critically Ill Children**

Researchers conducted a retrospective review of 12 pediatric intensive care units (PICUs), including patients from 1 month to 18 years old. Delivery of 25% of cumulative goal calories within the first 48 hours after PICU admission was considered early enteral nutrition (EEN). EEN was found to be associated with decreased mortality in PICU patients with a length of stay (LOS) greater than 96 hours. This finding was statistically significant. Duration of mechanical ventilation and LOS were found to be slightly longer in patients receiving EEN compared to those patients not receiving EEN, though these results were not statistically significant.

[JPEN-Early Enteral Nutrition is Associated with Lower Mortality in Critically Ill Children](#)

Mikhailov T, Kuhn E, Manzi J, et al. Early Enteral Nutrition is Associated with Lower Mortality in Critically Ill Children. *Journal of Parenteral and Enteral Nutrition*.2014 (38)4:459-466.

**Nutrition Intervention to Optimize Pediatric Wound Healing: An Evidence-Based Clinical Pathway**

After completing a review of current wound care literature, researchers developed evidence and consensus based guidelines for treatment of pediatric wound patients. The developed recommendations were applied to the care of 49 patients spanning 1 year. Recommendations include 1. Completion of a nutrition assessment on all wound patients, 2. Offer a multivitamin and when appropriate, oral enteral supplements, for patients at nutrition risk or with inadequate enteral intake, 3. Increase in protein by 20-25% above current prescription for non-healing wounds, 4. Test and supplement Vit C and Zinc, and 5. Complete an assessment of energy needs with indirect calorimetry. After utilization of the compiled recommendations the researchers reported increased diagnosis of nutrient deficiencies and better monitoring or nutrition intake and status.

[NCP-Nutrition Intervention to Optimize Pediatric Wound Healing: An Evidenced-Based Clinical Pathway](#)

Thompson K, Leu M, Drummond K, Popalisky J, Spencer S, Lenssen P. Early Enteral Nutrition is Associated with Lower Mortality in Critically Ill Children. *Nutrition in Clinical Practice*. published online May, 28, 2014. DOI: 10.1177/0884533614533350.

**Incidence of Nutrition Deterioration in Nonseriously Ill Hospitalized Children Younger Than 5 Years**

A prospective cohort study examined the incidence of nutrition deterioration (ND) in 200 patients ages 1 month to 5 years with a hospital admission of more than 48 hours. The study defined ND as significant weight loss of > 2% or > 0.25 standard deviations in body mass compared to hospital admission weight. Exclusion criteria included nutrition support prior to hospitalization, severe or moderate malnutrition upon admission and need for an evaluation by a nutritionist at any point during hospitalization. Results showed that 28.5% of subjects demonstrated ND identified by at least 1 of the 2 methods of detection. Nutrition deterioration detected by both methods of evaluation was 20%. Subjects with high GI losses (greater than 5 of more stools/day), lower respiratory tract diseases, and those hospitalized for more than 5 days were found to have a statically significant increase in incident of ND.

[NCP-Incidence of Nutrition Deterioration in Nonseriously Ill Hospitalized Children Younger Than 5 Years](#)

Pacheco-Asosta J, Gomez-Correa A, Florez I et al. Incidence of Nutrition Deterioration in Nonseriously Ill Hospitalized Children Younger Than 5 Years. *Nutrition in Clinical Practice*. published online May, 28, 2014. DOI: 10.1177/0884533614533122.

## Similac Term Formula Update

Similac has changed the calorie content of some of their term formulas to 19 kcal/oz instead of the previous 20 kcal/oz. Abbott states the motivation for this change was to better mimic the calorie content of term breast milk. One article cited by Abbott in reference to this change is "Macronutrient Analysis of a Nationwide Sample of Donor Breast Milk". This study analyzed 415 samples from 273 different donors using a midrange infrared instrument. The analysis was completed prior to pasteurization. Results showed that mean total energy was  $19.2 \pm 3.1$  kcal/oz with a range of 11.1 to 32.5 kcal/oz.

Wojcik KY, Rechtman DJ, Lee ML, et al. Macronutrient analysis of a nationwide sample of donor breast milk. *J Am Diet Assoc.* 2009;109(1):137-140.

Other articles cited by Abbott as evidence supporting this formula calorie change include the following:

- Hester S, Hustead D, Macheky A, Singhal A, Marriage B. Is the Macronutrient Intake of Formula-Fed Infants Greater Than Breast-Fed Infants in Early Infancy?. *Journal of Nutrition and Metabolism.* 2012; 2012: 891201. Published online Sep 27, 2012. doi: 10.1155/2012/891201.
- Hosol S, Honma K, Daimatsu T, et al. Lower energy content of human milk than calculated using conversion factors. *Pediatr. Int.* 2005;47(1):7-9.
- Reilly JJ, Ashworth S, Wells JC. Metabolisable energy consumption in the exclusively breast-fed infant aged 3-6 months from the developed world: a systematic review. *Br J Nutr.* 2005;94(1):56-63.

An article regarding these low calorie/low protein formulas was recently published in AAP News from The American Academy of Pediatrics.

- Greer F, Abrams S. What pediatricians need to know about new low calorie/low protein formulas. *AAP News*, originally published online March 28, 2014.

This change may require alteration of recipes for mixing concentrated formula since some of the powders are now 19 kcal/oz instead of 20 kcal/oz.

Products Changing to 19 kcal/oz	Products with no calorie change
Similac® Advance® 1.45 lb Powder 2 FI oz ready to feed (RTF)	Similac® Advance® 12.4 oz Powder 13 FI oz Concentrate 32 FI oz ready to feed (RTF)
Similac® for Supplementation 1.45 lb Powder 2 FI oz ready to feed (RTF)	Similac® Advance® Organic 1.45 lb Powder 12 oz Powder 2 FI oz ready to feed (RTF)
Similac® Soy Isomil® 1.45 lb Powder 2 FI oz ready to feed (RTF)	Similac® Soy Isomil® 12.4 oz Powder 13 FI oz Concentrate 32 FI oz ready to feed (RTF)
Similac Total Comfort™ 1.45 lb Powder 12 oz Powder 2 FI oz ready to feed (RTF)	Similac Sensitive® 13 FI oz Concentrate
Similac Sensitive® 1.45 lb Powder 12 oz Powder 2 FI oz ready to feed (RTF)	Similac Expert Care® Alimentum® 16 oz Powder 32 FI oz ready to feed (RTF) 2 FI oz ready to feed (RTF)
Similac for Spit-Up® 1.45 lb Powder 12 oz Powder 32 FI oz ready to feed (RTF) 2 FI oz ready to feed (RTF)	Preterm Formulas: Similac® Speical Care Similac® Human milk fortifiers Similac Expert Care® Neosure®

For more information about these formula changes please contact your Abbott Representative.

Only Abbott products have been discussed as to our knowledge at the time of newsletter publication Abbott is the only company making this change to their product line.