

**Letter from the Pediatric Section Chair**

Greetings!

Summer is often a time when life slows down a bit and we take time to relax. However, this summer some exciting things have been going on within the Pediatric Section. First of all, our microsite is up and fully operational. On this site you will find updates from CNW, A.S.P.E.N. Connect discussions, past editions of the newsletter and much more. One of my favorite aspects of the site is the listing of new articles regarding pediatric nutrition support. This feature is a simple way to stay abreast of the latest research in the field without having to peruse multiple journals/websites.



Finally, the portal to submit scientific abstracts for CNW 2016 has opened over the summer. I encourage you to submit your latest research. The Pediatric Section is a small but mighty group and we want a strong representation in Austin next year!

Keep in mind that it is not too early to start thinking of nominees for the Pediatric New Practitioner Award. This is a great opportunity for young practitioners to get further involved with A.S.P.E.N. and achieve their goals in the field. Once submissions are being accepted we will post the necessary information on our microsite. Have a wonderful remainder of your summer and make lots of vitamin D!

Another new venture that has been pursued this summer is a proposal to create a Consensus Statement regarding weaning of pediatric enteral nutrition support. This project was mentioned in the Spring edition of the newsletter, but was in its infancy at the time. The proposal has been approved by the A.S.P.E.N. Board of Directors. The Section will be collaborating with the Feeding Tube Awareness Foundation to create this much needed document. If you are interested in serving on the committee please contact me directly at [ebobo@nemours.org](mailto:ebobo@nemours.org).

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

**Inside this edition:**

- Member Spotlight: Sandra Bouma, MS, RDN, CSP
- Pediatric Enteral Nutrition Protocol Topic Survey Results
- Maternal Diet and Prematurity
- Neonatology
- General Pediatric Research Updates



### Pediatric Section Microsite

The Pediatric Section's microsite is up on the A.S.P.E.N. website! You can access the current hot topic quarterly survey, past newsletters, and other pertinent information to pediatric nutrition. Articles of interest are added quarterly so remember to keep checking back for updated information. View our new page via the link below or via the "Member Central" section of the A.S.P.E.N. website. Any suggestions for additional microsite content can be sent to Celina Scala at

[Celina M Scala@rush.edu](mailto:Celina_M_Scala@rush.edu).

[Pediatric Section Microsite](#)

## **Member Spotlight: Sandra Bouma, MS, RDN, CSP**



### **What is your current job title and work location?**

Clinical Nutrition Specialist/Dietitian Senior with the Pediatric BMT department at the University of Michigan's C.S. Mott Children's Hospital

### **What is your educational background?**

I started out with a Bachelor of Science degree in Biology and Chemistry from Calvin College and went on to earn a Bachelor of Science degree in Nutrition from Michigan State University. My dietetic internship program at the Frances Stern Nutrition Center in Boston was combined with a Master of Science degree in Nutrition from Tufts University. I was in the inaugural class of 17 students who graduated from the Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy at Tufts University. Dr. Jean Mayer handed me my diploma.

### **How did you get involved in the field of clinical nutrition?**

I love math, food, teaching and working as a part of an interdisciplinary team. It's a perfect fit for me.

### **What specifically do you do in your current position?**

For ten years, I have worked as the clinical nutrition specialist for the Pediatric Hematopoietic Cell Transplant (HCT) program doing inpatient and outpatient nutrition care. I actively participate in patient care rounds, assess nutritional status, write parenteral and enteral nutrition orders and provide nutrition education to our patients in the hospital, during the transition home and in outpatient clinic.

Nutrition is a top priority for all the members of the Pediatric HCT team, however, sometimes it is difficult within the confines of the hospital environment and the restraints of complex medical care to provide adequate nutrition. I have thrived on the challenge of being flexible and thinking outside the box to creatively provide nutrition support for our patients.

For the past four years, I have pioneered pediatric malnutrition research in our institution. This led to involvement on a wider level through interest in a diagnostic tool we developed called "MTool™: Michigan's malnutrition diagnostic tool." Most recently, I was invited by one of our attending physicians to lead a nutrition research study with our pediatric HCT patients. As of June 1<sup>st</sup>, I am on a temporary assignment with the pediatric HCT department to devise and lead this year long project.

### **Why did you become involved in A.S.P.E.N. and what are the benefits of being involved?**

I love interdisciplinary work and I wanted contribute on a wider level by working with others on addressing pediatric malnutrition. Having been to several CNW conferences, I had heard the sales pitch to be involved and spoke with A.S.P.E.N. volunteers who told me that one of the reasons they volunteered was because the atmosphere was so collaborative. That has certainly been my experience. I have met such great people, some of whom have become good friends.

### **What recommendations would you give to someone just starting out in your field?**

Pay attention to details. Think outside the box. Learn from other disciplines. Figure out how nutrition interfaces with the big picture and speak up. Connect with people. Laugh often. Always keep learning. Stay humble. In my experience, a humble person is not self-deprecating; rather a humble person is teachable. Some of the most influential and wisest people I know are humble (teachable).

## **Results from the Pediatric Enteral Nutrition Protocol Topic of the Quarter Survey**

Note: Not all response percentages add up to 100% as not all questions were answered by all respondents

### **1. Does your institution have a pediatric enteral nutrition protocol?**

- Yes 57%
- No: 43%

### **2. If yes, did your institution create this protocol or was it adapted from another pre-existing protocol? If it was an adaptation please reference the original source**

- Institution created protocol: 60%
- No original sources were provided

### **3. What patients does your protocol pertain to?**

- NICU 18%
- PICU 52%
- General Pediatrics 9%
- Pediatric bone marrow transplant 4%

### **4. Is your protocol age or weight based?**

- Age based 8%
- Weight based 35%
- Both 9%

### **5. If you have one, please provide details of your protocol.**

- For BMT patients: feeding tubes are placed between day 0 and day 2 (unless the child has a G tube prior to admission)
- PICU Protocol includes guidelines on formula selection, initiation, advancement, and starting goal, as well as guidelines for holding feeds and a bowel regimen.
- PICU Protocol:
  - i. For patients less than 25 kg: Start feeds at 1 ml/kg/hr and advance by 1 ml/kg/hr every 4 hours until at goal volume. Once at goal volume increase caloric density and/or add protein supplements once daily until goal nutrition is achieved.
  - ii. For patients greater than 25 kg: Start at 25 ml/hr and advance by 25 ml/hr every 4 hours, following the same protocol.
- Children's Hospital of Philadelphia: PICU/PCU Inpatient Pathway for Initiation and Advancement of Nutrition <http://www.chop.edu/clinical-pathway/nutrition-picu-initiation-and-advancement-clinical-pathway-inpatient>
- Gurgueira G, Leite H, Augusto de Aguiar Carrazedo Taddei J, Brunow de Carvalho W. Outcomes in a Pediatric Intensive Care Unit Before and After the Implementation of a Nutrition Support Team. *JPEN*. 2005;29(3):176-185. <http://pen.sagepub.com/content/29/3/176.abstract>

### **6. What are some helpful resources you have used in creating a pediatric enteral nutrition protocol or that you think would be helpful in creating one?**

- Literature reviews
- Pediatric Nutrition Reference Guide- Texas Children's Hospital

### **7. What are some challenges to enterally feeding pediatric patients?**

- Issues with feeding intolerance and lack of well-defined measures of intolerance
- Fluid restrictions, NPO for extubation or tests/procedures delaying enteral nutrition
- Insurance coverage restraints
- Achieving macro and micronutrients goals in the short time frame of admission to the PICU
- Multiple disease states, ages, etc.
- Mix up in enteral product names and challenges with formula preparation
- Delays in enteral feeding initiation due to the number of medical services from which approval is needed

### **8. Do you think a pediatric enteral nutrition protocol would improve success of enteral nutrition and why?**

- Yes 87%
- Unsure 4%

## **New Hot Topic of the Quarter Survey: Indirect Calorimetry and Predictive Equations**

Please complete the new hot topic survey by Friday September 25<sup>th</sup>.

[Indirect Calorimetry and Predictive Equations](#)

## **Research Updates-Call for Volunteers!**

If you are interested in providing research updates for any pediatric specialty area, such as oncology, neurology, nephrology, etc., to be included in the quarterly newsletters please contact Celina Scala at [Celina\\_M\\_Scala@rush.edu](mailto:Celina_M_Scala@rush.edu).

### **Pediatric GI Research Updates**

Provided by Marisa Dzarnoski Riley, RD, CNSC

#### **Intestinal Inflammation and Impact on Growth in Children with Cystic Fibrosis**

Capsule endoscopy has proven CF patients have intestinal inflammation. More specifically, pancreatic insufficient CF patients (PI CF) have been reported to have increased levels of inflammatory biomarkers in gut lavage. Expression of intestinal inflammatory biomarkers in CF may be different than that seen in IBD, and these variances in expression may be helpful in further understanding the intestinal inflammation commonly seen in CF. It was hypothesized that the intestinal inflammation seen in CF is different than that seen in IBD, but still negatively effects clinical status. The purpose of this study was to compare intestinal inflammatory marker levels (faecal calprotectin, S100A12 and osteoprotegerin) in CF patients, healthy controls, and patients with Crohn's disease. An additional arm of the study aimed to assess the relationship between faecal biomarker levels and nutritional status of CF children.

Twenty-eight patients with confirmed CF, 47 healthy controls (HC), and 30 patients with confirmed Crohn's disease (CD), all aged 0-18 years, were enrolled in the study. CF patients were further differentiated into PI CF and PS CF (pancreatic sufficient) categories. Age and sex-specific z-scores for weight and height were obtained for all groups. Faecal samples of calprotectin, S100A12, and osteoprotegerin were obtained for CF and HC patients, while previously published data on stool amounts of these biomarkers were used in the CD patients.

Mean faecal calprotectin levels were significantly higher in CF patients compared to HC, but significantly lower when compared to CD patients. PI CF patients expressed greater levels of faecal calprotectin than PS CF patients. The CD cohort was the only group with significantly different and elevated levels of S100A12 and osteoprotegerin. There were significant correlations between faecal calprotectin levels and both weight and height z-scores in the CF cohort, with no difference in PI or PS CF patients. Findings suggest the intestinal inflammation seen in CF is distinct from CD. Although CF patients have underlying growth issues, and results of this study do not specifically point to growth differences between PI CF and PS CF patients, it is speculated that the PI CF patients may have a different degree of malabsorption due to their additional level of gut inflammation.

*Dhaliwal J, Leach S, Katz T, et al. Intestinal Inflammation and Impact on Growth in Children with Cystic Fibrosis. JPGN. 2015; 60: 521-526.*

#### **Comparative Effectiveness of Nutritional and Biological Therapy in North American Children with Active Crohn's Disease**

Mucosal healing, improvement in symptoms, and improvements in quality of life (QOL) have been identified as important outcomes in Crohn's disease management. Immunosuppressive therapies, such as anti-tumor necrosis factor alpha (anti-TNF) therapy, are primarily used in the United States whereas many other countries choose to use enteral nutrition (EN) therapy to induce remission in children. Both forms of therapy have been shown to induce remission. EN therapy can be broken into two categories consisting of exclusive enteral therapy (EEN) and partial enteral therapy (PEN) with unrestricted diet. Clinical outcomes, mucosal healing and QOL were assessed in this study, as a part of a larger study assessing gut microbiota in EEN, PEN, and anti-TNF treated children.

Children and adolescents less than 22 years of age, were enrolled in the study with decisions for type of therapy (EN vs anti-TNF) made by the treating physician. Each participant was assessed at baseline, 1, 4 and 8 weeks into therapy with assessments including: Pediatric Crohn's Disease Activity Index (PCDAI) measurement, fecal calprotectin concentration (FCP), scores of the IMPACT-III questionnaire to measure QOL, and three separate 24-hour dietary recalls. A disease risk score was created using logistic regression, in order to best compare clinical response rates and mucosal healing between treatment groups.

Sixteen patients in the PEN category, 22 in the EEN category, and 52 in the anti-TNF category were enrolled for the study. Baseline steroid requirement was present in 10 patients starting PEN, 0 patients starting EEN, and 23 patients starting anti-TNF therapy. PCDAI scores at the baseline were lowest in the anti-TNF group, and both EN groups had similar scores. Baseline FCP levels and IMPACT III scores were similar amongst all three groups.

By week eight, steroid requirements decreased in only the anti-TNF group (44% - 25%). Caloric intake did not differ amongst the groups at the start of the study, however by week 4 the PEN group consumed significantly more calories from table food when compared to highly restrictive intake of the EEN group. All study groups expressed a decrease in PCDAI scores by the end of study but, after adjusting data using disease risk score, with greatest clinical response in the anti-TNF group followed by the EEN group. FCP concentration significantly decreased for all three groups, again with greatest success in the anti-TNF group followed by the EEN group. For each group, there was a significant improvement in IMPACT III scores, although it is noted that subjects in remission on PEN and EEN did not have a statistically significant increase in scores. While all methods of treatment achieved improvements in symptoms, EEN and anti-TNF therapies were better for mucosal healing and EEN was best for improving QOL.

*Lee D, Baldassano RN, Otley AR, Albenberg L, et al. Comparative Effectiveness of Nutritional and Biological Therapy in North American Children with Active Crohn's Disease. Inflamm Bowel Dis. May 12, 2015, DOI 10.1097/MIB.0000000000000426.*

### **Predictors of Enteral Autonomy in Children with Intestinal Failure: A Multicenter Cohort Study**

Significant morbidity remains in the pediatric intestinal failure population, despite improvements in care. Chronic parenteral nutrition (PN) requirement is correlated with multiple significant complications and morbidities, therefore reaching enteral autonomy is a primary goal in the treatment of these patients. A multicenter retrospective cohort study was conducted through 14 sites with established pediatric intestinal failure programs, to determine the cumulative incidence of enteral autonomy and particular patient or institutional features that may be associated with achieving autonomy. The authors used bivariate analysis to identify potential factors associated with achieving enteral autonomy.

A total of 272 infants were enrolled in the study spanning over seven years. Complete enteral autonomy, defined as greater than 3 consecutive months without requirement of PN, was achieved in 43% of the population. Thirteen percent remained PN dependent while another 43% of patients either died or underwent transplant. Children who achieved enteral autonomy tended to be older at time of enrollment, were more likely to have diagnosis of necrotizing enterocolitis (NEC), have a preserved ileocecal valve (ICV) and longer residual small bowel (RSB). In fact, infants with NEC diagnosis and intact ICV were more than two times likely to achieve autonomy than infants with other diagnoses or removal of ICV. Patients with  $\geq 41$ cm of RSB had the greatest combined sensitivity and specificity to predict reaching autonomy. Additionally, for every 1cm of RSB there was a 4% increase in odds of achieving enteral autonomy. Those who were cared for at a site which included a transplant program, or who suffered from advanced liver disease, were less likely to achieve autonomy.

While this retrospective review has its limitations, and care for patients with intestinal failure likely varies amongst centers, it has similar findings to previous studies suggesting that length of RSB and presence of ICV are major factors in achieving enteral autonomy. Additionally, care centers with a transplant program have the tendency to receive referrals for some of the sickest patients and further investigation towards the variation in practice between transplant and non-transplant centers is required. The treatment of intestinal failure continues to evolve and ongoing study of outcomes in this population is necessary.

*Khan FA, Squires RH, Litman HJ, et al. Predictors of Enteral Autonomy in Children with Intestinal Failure: A Multicenter Cohort Study. J Pediatr. 2015; 167: 29-34.*

*Maternal Diet and Prematurity*

**Maternal dietary patterns during the second trimester are associated with preterm birth**

This prospective cohort study used data from the PIN study (Pregnancy, Infection, and Nutrition) which had an n=3143. Four very interesting dietary patterns were noted and analyzed. Diet quality during pregnancy appeared to affect the incidence of preterm birth. Greater adherence to the DASH diet was associated with decreased odds of preterm birth. Diet quality during pregnancy in this study appeared to be associated with preterm birth; preconceptional and early prenatal dietary counseling might (if the diet was followed) improve pregnancy outcomes.

*Martin CL, Sotres-Alvarez D, Siega-Riz AM. Maternal dietary patterns during the second trimester are associated with preterm birth. J Nutr; June 17, 2015, doi: 10.3945/jn.115.212019.*

*Neonatology*

**Biological impact of recent guidelines on parenteral nutrition in preterms: A systematic review**

This article is similar to the article by Francesco Bonsante, et al in PLOS One volume 8 e72880, 2013 (Bonsante F, Iacobelli S, Latorre G, et al. Initial Amino Acid Intake Influences Phosphorus and Calcium Homeostasis in Preterm Infants- Is It Time to Change the Composition of the Early Parenteral Nutrition. *PLOS ONE*. 2013;8(8):1-9. DOI: 10.1371/journal.pone.0072880) with similar concerns. Using the newer guidelines with high intake of amino acids after birth could induce hypophosphatemia and hypercalcemia simulating a "re-feeding like syndrome". This could be prevented by the early intake of phosphorus. Early amino acids are well tolerated in regards to renal function, but may induce other metabolic problems.

*Guellec J, Gascoin G, Beauchee A, et al. Biological impact of recent guidelines on parenteral nutrition in preterms: A systematic review. J Pediatr Gastroenterol Nutr. July 2, 2015, doi: 10.1097/MPG.0000000000000898.*

**Electrolyte and mineral homeostasis after optimizing early macronutrient intakes in VLBW infants on parenteral nutrition**

This is very similar to the above article, discussing the prevalence of hypophosphatemia at 37.3% of 102 infants with birth weights < 1250 grams. This paper describes in depth the plasma biochemical values during the first 2 weeks of life. Again they are calling for PN guidelines for the first week of life to be revised to avoid hypophosphatemia and a refeeding like syndrome. These articles are important for neonatal nutrition focused professionals to read.

*Senterre T, Zahirah IA, Pieltain C, de Halleaux V, Rigo J. Electrolyte and mineral homeostasis after optimizing early macronutrient intakes in VLBW infants on parenteral nutrition. J Pediatr Gastroenterol Nutr. May 20, 2015, DOI : 10.1097/MPG.0000000000000854.*

**Low dose parenteral soybean oil for the prevention of parenteral nutrition associated liver disease in neonates with gastrointestinal disorders: a multicenter randomized controlled pilot study**

This study's aim was to see if a lower dose @ 1 gm/kg as compared to a higher dose @ 3 gm/kg of soy lipid would prevent cholestasis without compromising growth. The conclusion was that the infants receiving a lower dose had direct bilirubins that increased at a slower rate in comparison to those infants on a higher dose. Growth was comparable between the 2 groups.

[Low dose parenteral soybean oil for the prevention of parenteral nutrition associated liver disease in neonates with gastrointestinal disorders: a multicenter randomized controlled pilot study](#)

*Calkins KL, Havanek T, Kelley-Quon LI, Low dose parenteral soybean oil for the prevention of parenteral nutrition associated liver disease in neonates with gastrointestinal disorders: a multicenter randomized controlled pilot study. JPEN. May 29, 2015, doi: 10.1177/0148607115588334.*

**Impact for Neonatal Gastrointestinal Diseases on Weight and Fat Mass**

This article compared growth, fat mass, and fat free mass in surgical infants as compared to age matched controls with similar post conceptual age. 21 infants and 21 controls were studied with measurements and air displacement plethysmography (Pea Pod, Body Composition System). Neonates having GI surgery were shorter, had lower weight, and lower fat mass than their peers.

*DeCunto A, Paviotti G, Travan L, et al. Impact for neonatal gastrointestinal diseases on weight and fat mass. J Pediatr. July 3, 2015, doi:10.1016/j.jpeds.2015.06.013.*

## **High Protein Intake does not Prevent Low Plasma Levels of Conditionally Essential Amino Acids in Very Preterm Infants Receiving Parenteral Nutrition**

A previous study showed that increasing the protein intake using a standardized parenteral nutrition regimen with added macronutrients (SCAMP) improved head circumference growth in very preterm infants compared to a control parenteral nutrition regimen. Amino acid profiles were obtained with the thought that the SCAMP regimen would improve plasma amino acid levels. Essential amino acid levels were higher in both groups than the reference population mean; however conditionally essential amino acids were lower even though a neonatal parenteral amino acid formulation was being used. [High Protein Intake does not Prevent Low Plasma Levels of Conditionally Essential Amino Acids in Very Preterm Infants Receiving Parenteral Nutrition](#)

*Morgan C, Burgess L. High protein intake does not prevent low plasma levels of conditionally essential amino acids in very preterm infants receiving parenteral nutrition. JPEN. July 6, 2015, doi: 10.1177/0148607115594009.*

## **Early Discharge with Home Nutrition Support of Gavage Feeding for Stable Preterm Infants who have not Established Full Oral Feeds**

There was only 1 quasi-randomized trial with 88 infants from 75 families included in this review. In this one study the early discharge with gavage group had a mean hospital stay that was 9.3 days shorter than the infants in the control group. The early group infants also had a lower risk of clinical infection during the home gavage period as compared with the control group still in the hospital. No significant differences were found between the groups in parenteral satisfaction, overall health service use, duration and extent of breastfeeding, weight gain, and re-admission in the 12 months after discharge. *Collins CT, Makrides M, McPhee AJ. Early discharge with home nutrition support of gavage feeding for stable preterm infants who have not established full oral feeds. Cochrane Database System Rev. July 8, 2015, DOI: 10.1002/14651858.CD003743.*

## **Effect of Maternal Cigarette Smoking on Newborn Iron Stores**

This article details a prospective cohort study involving 144 mothers, half smokers and half non-smokers, and their infants. Women who smoked in this study had a higher body iron and higher ferritin than the non-smoking women. In addition there was a negative correlation between smoking and infants' ferritin and total body iron. Lower birth weight was also seen in the infants of smoking mothers. The more packs per day smoked, and the more days smoked in pregnancy led to lower total body iron in their babies. Total body iron (TBI) was calculated using the serum transferrin receptor/ferritin ratio previously described by Cook in 2033. (Cook JD, Flowers CH, Skikne BS. The quantitative assessment of body iron. *Blood*. 2003;101:3359-3364.)

*Pateva IB, Kerling EH, Reddy M, et al. Effect of maternal cigarette smoking on newborn iron stores. Clin Res Trials.2015;1(1):4-7.*

## **Anthropometric Characterization of Impaired Fetal Growth: Risk Factors for and Prognosis of Newborns with Stunting or Wasting**

This was a cross sectional study conducted at the international sites for the INTERGROWTH 21<sup>st</sup> Project. Neonatal stunting was defined as birth length below the 3<sup>rd</sup> centile and wasting defined as BMI for gestational age below the 3<sup>rd</sup> centiles of the INTERGROWTH 21<sup>st</sup> standards. Stunting using these criteria affected 3.8% and wasting 3.4% of newborns and 0.7% for both. The infants included were from 33 to 42 weeks 6/7 days gestation at birth. Twenty six conditions were studied with five more associated with stunting than wasting: Short maternal height, younger maternal age, smoking, illicit drug use, and clinically suspected intrauterine growth restriction. Wasting was more strongly associated with NICU stay, RDS, transient tachypnea, and no oral feeding > 24 hours. The recommendations are that we classify newborns using the 2 phenotypes of stunting and wasting to provide for better preventative interventions and management of fetal undernutrition.

*Vistoria CG, Villar J, Barros FC, et al. Anthropometric characterization of impaired fetal growth: risk factors for and prognosis of newborns with stunting or wasting. JAMA Pediatrics. July 6, 2015;169(7):e151431. doi: 10.1001/jamapediatrics.2015.1431.*

## **Biomarkers of Nutrition for Development- Folate Review**

This is an indepth review of folate in human health and development.

*Bailey LB, Stover PJ, McNulty H et al. Biomarkers of nutrition for development- Folate Review. J Nutr. 2015;145 (7): 1636S-1680S.*

**Prenatal Supplementation with Docosahexaenoic Acid has no Effect on Growth Through 60 Months of Age**  
This study looked at the infants of mothers who participated in a randomized trial of 400 mg/day of DHA or a placebo from gestational week 18-22 through delivery. Prenatal supplementation did not affect height, weight, or BMI through 60 months of age.

Gonzalez-Casanova I, Stein AD, Hao W, et al. Prenatal supplementation with Docosahexaenoic Acid has no effect on growth through 60 months of age. *J Nutr.* 2015;145(6):1330-4.

### **Prenatal Risk Factors and Outcomes in Gastroschisis: a Meta-Analysis**

This is an in-depth analysis of gastroschisis risk factors and their relationship to outcome.

D'Antonio F, Virgone V, Rizzo G, et al. Prenatal risk factors and outcomes in gastroschisis: a Meta-Analysis. *Pediatrics.* 2015;136(1): e159-e169.

### **Mid Upper Arm Circumference for Detection of Severe Acute Malnutrition in Infants Aged Between One and Six Months**

This study of 302 infants looked at mid arm circumference values to see what was the most suitable cut off to diagnose severe acute malnutrition in infants between 1 and 6 months. The cut off was determined to be 11.0 cm. This is important as previously there were no cut offs for infants less than 6 months old.

Chand S, Shah D. Mid upper arm circumference for detection of severe acute malnutrition in infants aged between one and six months. *Indian Pediatr.* 2015;52(6):528-532.

### **How Close Are We to Achieving Energy and Nutrient Goals for Very Low Birthweight Infants in the First Week?**

This article details the first week practices similarly to other prior articles. In contrast to the prior articles, this did not show a relationship between week 1 nutrient intakes and anthropometrics at discharge. It did point out that despite early more aggressive parenteral nutrition protocols, many VLBW infants are below nutrition goals during the first week of life.

[How Close Are We to Achieving Energy and Nutrient Goals for Very Low Birthweight Infants in the First Week?](#)

## **General Pediatric Research Updates**

### **Computer-Based Malnutrition Risk Calculation May Enhance the Ability to Identify Pediatric Patients at Malnutrition-Related Risk for Unfavorable Outcome**

This prospective cohort study tested the Pediatric Digital Scaled Malnutrition Risk screening tool's (PeDiSMART) ability to identify pediatric patient's risk for malnutrition-related outcomes (weight loss/nutrition support and hospital length of stay). The sample consisted of 500 pediatric patients ranging in age from 1 month to 17 years. In addition to PeDiSMART, Pediatric Yorkhill Malnutrition Score (PYMS), Screening Tool Risk on Nutritional Status and Growth (STRONGkids), and Screening Tool for the Assessment of Malnutrition in Pediatrics (STAMP) were also completed upon admission. The PeDiSMART tool was included in the electronic medical record and consisted of 4 components: 1. Weight-for-age z score, 2. Nutrition Intake, 3. Symptoms affecting nutrition intake, and 4. Overall disease impact. The researchers found the PeDiSMART tool to be effective and reproducible in identifying patients at nutrition risk and the score was associated with malnutrition-related clinical outcomes.

[Computer-Based Malnutrition Risk Calculation May Enhance the Ability to Identify Pediatric Patients at Malnutrition-Related Risk for Unfavorable Outcome](#)

Karagiozoglou-Lampoudi T, Daskalou E, Lampoudis D, Apostolou A, Agakidis C. Computer-Based Malnutrition Risk Calculation May Enhance the Ability to Identify Pediatric Patients at Malnutrition-Related Risk for Unfavorable Outcome. *JPEN.* 2015;39(4):418-425.

### **Survey Study Assessing Attitudes and Experiences of Pediatric Registered Dietitians Regarding Blended Food by Gastrostomy Tube Feeding**

This study utilized a 16 question survey that was sent to 2448 members of the Pediatric Nutrition Practice Group of the Academy of Nutrition and Dietetics. The survey inquired about knowledge of and experience with blenderized tube feedings. Response rate was 10% (n=236) and 57.6% of respondents reported experience using blenderized tube feedings. The most common reasons for not using blenderized tube feedings were potential risk of infection (5.7%) and lack of resources and time (5.3%). The most common follow up schedule was quarterly follow up (60.3%) followed by every six months (16.2%) and only when contacted by family (15.4%). Overall, those who had used blenderized tube feedings reported a positive experience.

[Survey Study Assessing Attitudes and Experiences of Pediatric Registered Dietitians Regarding Blended Food by Gastrostomy Tube Feeding](#)

Johnson T, Spurlock A, Pierce L. Survey Study Assessing Attitudes and Experiences of Pediatric Registered Dietitians Regarding Blended Food by Gastrostomy Tube Feeding. *Nutrition in Clinical Practice.* 2015;30(3):402-405.



**A.S.P.E.N.'s Malnutrition Awareness Week™ : September 28-October 2, 2015**

Take advantage of the educational programming and tools available during A.S.P.E.N.'s annual malnutrition awareness week. Malnutrition is a huge issue facing health care patients across the country, including pediatric patients. Use the link below to access more information about the week's events, tools, resources, and other valuable malnutrition related materials.

[A.S.P.E.N.'s Malnutrition Awareness Week™](#)



**A.S.P.E.N. Connect: Joining a discussion or listserv**

There are so many great discussions happening on A.S.P.E.N. Connect, it's time to get involved! On the A.S.P.E.N. Connect home page click on "Browse" to view discussion posts. On your A.S.P.E.N. Connect account select "My Account" and then "Community Notifications" to change your e-mail preferences.

[A.S.P.E.N. Connect: Joining a discussion or listserv](#)

**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](#)

**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 feedback or ideas, 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).