

## O.S.P.E.N. Leadership Continues!

O.S.P.E.N. continues to be an extremely productive chapter of A.S.P.E.N. This is evident by the strong leadership that O.S.P.E.N. members hold within A.S.P.E.N. It is unheard of that one chapter leads to multiple A.S.P.E.N. presidents, but, in our case, we have had five presidents with three of them being in the last six years! The O.S.P.E.N. presence began in 1984 by Dr. Ezra Steiger from the Cleveland Clinic. About 15 years later, Phil Schneider, MS, FASHP became A.S.P.E. N. president in 2001. This was followed by Dr. Vince Vanek from St. Elizabeth's in Youngstown, Ohio in 2006, Jay Mirtallo, MS, RPh, BCNSP, FASHP, in 2011 and soon to be our fifth president, Ainsley Malone, MS, RD, LD, CNSD, from Mount Carmel Hospital in Columbus, Ohio! O.S.P.E.N. members are proud of the accomplishments that their colleagues have made and are encouraged to continue the journey as leaders of tomorrow!

## Mark Your Calendar for the Upcoming Spring O.S.P.E.N. Conference!

It is that time of year again when the O.S.P.E.N. program planning committee begins to announce plans for the Spring 2012 O.S.P.E.N. conference. This year in April, Cincinnati will be hosting the conference. Although the final date is unknown at this time, we have secured some excellent speakers to deliver cutting-edge nutrition topics to our group. Among these speakers are renowned nutrition support physicians, Steve McClave and Donald Kirby. Make sure to check the O.S.P.E.N. website and *Facebook* page for conference updates.

## If You Missed an A.S.P.E.N. Teleseminar Program, It's Not Too Late!

For more information on reviewing previous teleseminars, visit [www.nutritioncare.org](http://www.nutritioncare.org) and follow the links for continuing education. All webinars continue to be available for purchase.

## Thank You for Attending the Fall Dinner Conference!

The O.S.P.E.N. fall dinner conference was a success! Thank you to our wonderful speaker, Jay Mirtallo, MS, RPh, BCNSP, FASHP, who spoke on parenteral drug shortages. Jay discussed why these problems have occurred and what clinicians can do to decrease the burden that these shortages have on the patients. This talk was not only informative, but inspiring to continue the fight on drug shortages for our patients. For more information on President Obama's plan for correcting these drug shortages, and the steps that A.S.P.E.N. is taking to prevent patient harm, visit the A.S.P.E.N. website at [www.nutritioncare.org](http://www.nutritioncare.org).

## O.S.P.E.N. is on Facebook!

If you have not done so yet, please make sure to check us out at [www.facebook.com](http://www.facebook.com) and send us a friend request! Also, feel free to contact us directly via our O.S.P.E.N. email address at [ospennwebsite@gmail.com](mailto:ospennwebsite@gmail.com) if you do not have a Facebook account. We are looking forward to hearing from you!



# O.S.P.E.N. Access News

## Going to Orlando for Clinical Nutrition Week (CNW)?

Please join fellow O.S.P.E.N. members as we once again gather for our annual social event at CNW. We will convene at 7:30 pm on Monday, January 23rd (immediately following the Section meetings) at the BlueZoo in the Disney Swan and Dolphin Hotels. We look forward to seeing you!

## News from the Scholarship Committee

Please help us in congratulating the 2011 recipient of the O.S.P.E.N. CNW Scholarship Award, Tiffany Neal, RD, LD, CNSC, Nutrition Support Dietitian from the Cleveland Clinic. Tiffany will receive a \$1000 scholarship to attend CNW in Orlando. Look for Tiffany's summary of the meeting in a future issue of O.S.P.E.N. Access.



***Will you be presenting a poster or oral abstract at Clinical Nutrition Week in Orlando?***

***Have you completed a quality improvement project that you'd like to share with others?***

If you answered yes to either of the above, please consider submitting an abstract for the annual O.S.P.E.N. scholarship awards. As in previous years, abstracts will be displayed as posters at the Spring Conference. Monetary awards will be provided for the top three award recipients. The deadline for abstract submission and additional details will be provided in the next O.S.P.E.N. *Access* issue.

## President's Message

I hope that the holiday season has been successful for all of our members and that the new year will be even better. As we move into 2012, O.S.P.E.N. member Jay Mirtallo MS, RPh, BCNSP, FASHP, continues his Presidency with A.S.P.E.N. Jay continues the tradition of having an O.S.P.E.N. member in a position of leadership and participation at the national level. In 2006-2007, Dr. Vince Vanek was president of A.S.P.E.N. Prior to this in 2001, Phil Schneider was A.S.P.E.N. president and Dr. Ezra Steiger in 1984. In 2013-2014, our own Ainsley Malone will be serving in that capacity. O.S.P.E.N. has had several members on the Board of Directors for A.S.P.E.N., as well as on various committees. This past year, I have had the pleasure of serving on the Clinical Practice Committee, the Drug Shortage Subcommittee, the Malnutrition Taskforce, the Pediatric Malnutrition Working Group, and the Clinical Nutrition Week Program Planning Committee for the 2012 conference scheduled to be held in Orlando, Florida on January 21<sup>st</sup> through 24<sup>th</sup>. I also had the honor of being invited to A.S.P.E.N.'s Parenteral Nutrition Safety Summit which was held in Baltimore, MD, in September 2011. None of this would have happened had it not been for my involvement within O.S.P.E.N. in some capacity. I would like to encourage all O.S.P.E.N. members to consider becoming more involved within our chapter. O.S.P.E.N. is one of the most active chapters within A.S.P.E.N. and we would like to continue to excel and become the model for all other A.S.P.E.N. state chapters. Each year O.S.P.E.N. sponsors or co-sponsors two major meetings, one in the Spring and another in the fall.

For those members who can't make it to Orlando for Clinical Nutrition Week (CNW) 2012, start your planning for 2013 when CNW will land in Phoenix, Arizona or for 2014 in Savannah, Georgia. O.S.P.E.N.'s Spring meeting is scheduled to be held in Cincinnati in April so we hope to see everybody then

*Steve Plogsted, PharmD, BCNSP, CNSC*

# O.S.P.E.N. Access News

## CNW is Now Virtual!!

Can't attend CNW in 2012? Don't worry because A.S.P.E.N. is now offering 11 seminars and one preconference course as a live webcast. Not only are these sessions offered at a discounted rate, but you can also earn continuing education credit. A.S.P.E.N. is offering these sessions to be purchased individually or as a package. Subscribers will be able to ask questions to the presenters just as if they were actually attending the sessions. Visit [www.nutritioncare.org/ClinicalNutritionWeek](http://www.nutritioncare.org/ClinicalNutritionWeek) for more information on registration. Below is a list of the selected sessions A.S.P.E.N. will be offering as a virtual session.

### Saturday, January 21, 2012

#### Preconference Course

7 - 11 a.m. (ET)

*Post Graduate Course: Fluids, Electrolytes, Acid-Base Disorders, and Laboratory Assessment*

4:30 - 6 p.m. (ET)

A.S.P.E.N. President's Address and Awards Ceremony

*Parenteral Nutrition (PN) Evidence and Safety:*

*Can PN Outcomes be Improved?*

### Sunday, July 22, 2012

8 - 9:30 a.m. (ET)

Keynote Address with Albert Bothe, Jr., MD, FACS

10:30 a.m. - 12:30 p.m. (ET)

Late Breaking Symposium

*Late Breaking Studies in Clinical Nutrition*

4 - 6 p.m. (ET)

*Dilemmas in Transitioning from Pediatrics to Adults:*

*Special Populations in Nutrition*

### Monday, July 23, 2012

8 - 9:30 a.m. (ET)

Dudrick Research Symposium

*Omega 3 Fatty Acids: History, Metabolism, and Function*

10:30 a.m. - 12:30 p.m. (ET)

Premier Paper Session and Live VARS Award Competition

1:30 - 3 p.m. (ET)

*PN Contamination: How to Identify an Outbreak*

4 - 5:30 p.m. (ET)

*Compensatory Anti-Inflammatory Response Syndrome (CARS) and Immunonutrition*

### Tuesday, July 24, 2012

8 - 9:30 a.m. (ET)

Rhoads Research Lecture and Awards Ceremony

*Improving Patient Care with Practice-Based Research*

10:30 a.m. - 12 p.m. (ET)

*Underfeeding the ICU Patient*

1 - 2:30 p.m. (ET)

*Nutrition Therapy in Acute Renal Failure*

## O.S.P.E.N. Members Continue to Have Excellent Representation at CNW!

This is just another reason to get involved in O.S.P.E.N.! Each year at CNW, O.S.P.E.N. members are sought out to present on nutrition support topics in which they specialize. This year, in addition to the O.S.P.E.N. members who will be speaking, many other O.S.P.E.N. members will be presenting posters (listed below-not comprehensive). Members from the Cleveland Clinic will be displaying two posters (see below) this year. One of the posters will provide outcomes on the use of ethanol lock in home nutrition support (HPN) patients and the other poster focuses on preventing hospital admissions for dehydration in HPN patients. Make sure to check the program schedule in Orlando so you don't miss these excellent speakers and posters!

Jay Mirtallo, MS, RPh, BCNSP, FASHP  
Steven Plogsted, PharmD, BCNSP, CNSC  
Gail Cresci, PhD, RD, CNSD, LD  
Antoinette Neal, RN, CRNI, CNSC  
Ainsley Malone, MS, RD, LD, CNSD  
Ezra Steiger, MD, CNSP  
Mandy Corrigan, MPH, RD, LD, CNSD  
Mary K. Sharrett, MS, RD, LD, CDS

*See posters on pages 5-6.*

The *O.S.P.E.N. Access* is produced by the Ohio Society for Parenteral and Enteral Nutrition

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# Identification and Early Treatment of Dehydration in HPN and Home IVF Patients Prevents Hospital Admissions

Mandy Corrigan, MPH, RD, LD, CNSC • Denise Konrad, RD • Cindy Hamilton MS, RD, LD, CNSD • Ezra Steiger, MD, FACS • Donald F. Kirby, MD, CNSC  
Cleveland Clinic, Cleveland, OH



## Background

- Early identification and treatment of dehydration is prudent in patients requiring HPN or home IVF (HWF).
- A protocol was developed to provide additional bags of HWF for immediate use in the home to avoid emergency room (ER) treatment or hospital admissions. High risk patients are those with:
  - High output enterostomies
  - Fistulas
  - Drains
- Prior to discharge patients are instructed on signs and symptoms of dehydration and when to contact the HNS service if present.

## Objective

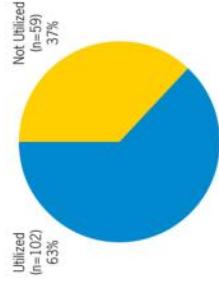
To evaluate the frequency and patient characteristics associated with dehydration, and the effectiveness of treatment in the home setting in HPN and HWF patients.

## Methods

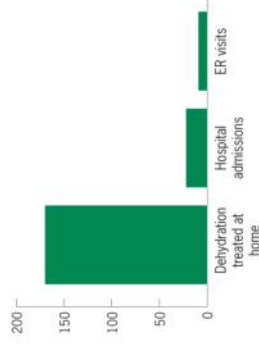
- A retrospective review was performed on all HPN and HWF patients from a clinical database who received additional HWF during 2010.
- Data collected included
  - Demographics
  - Primary diagnoses
  - HPN/HWF indication
  - Presence of a fistula, enterostomy, drain
  - Labs (Na, Cl, BUN, Cr)
  - Patient or clinician identification of dehydration
  - Vital signs
  - Physical signs (weight decrease, lightheadedness, decreased/ darker color urine, increased enterostomy output, excessive thirst, cramping in extremities - see Table 1)
  - I/O data
  - Dates of ER visits or hospital admission
- Dehydration defined as:
  - Negative fluid balance per I/O records with at least one physical symptom and/or alteration in labs compared to baseline
- Standard treatment of dehydration was 1 L HWF daily for 3 days, plus prescribed infusions
- Dehydration considered resolved per labs and/or resolution of physical symptoms

## Results

### Utilization of Home IVF - 2010



### Treatment of dehydration - 2010



**Figure 1:** Of the 161 patients that had HWF ordered during 2010, 102 patients (63%) utilized HWF and 59 patients (37%) did not.

**Figure 2:** Treatment of Dehydration by Setting

## Results

- 308 HNS patients managed during 2010
- HWF's were ordered in 161 patients per protocol to prevent hospital admissions for dehydration
- Most common diagnoses were Crohn's disease and cancer with malabsorption, fistula, or obstruction.
- 100% of HWF and 65% of HPN patients had an enterostomy.
- Of the 161 patients, 63% (n=102) required additional HWF (see figure 1).
- 201 episodes of dehydration were recorded
- Patients had 1 - 8 episodes of dehydration; 52% had 1 episode
- For every 5 year increase in age, the odds of having more than 1 dehydration episode increased 20% (OR 1.2)
- **Increased enterostomy output (p=0.021), negative I/O data (p=0.014), and age (0.021) were predictors of multiple dehydration episodes**
- HWF patients were more likely than HPN patients to have increased enterostomy output (73% vs. 32%, p=0.008) and become hypotensive (27% vs. 7%, p=0.022).
- I/O data was consistent with signs and symptoms of dehydration 80% of the time.
- Treatment Setting (see figure 2)
  - 170 episodes (84.5%) of dehydration were successfully treated at home
  - 22 hospital admissions for dehydration (11%)
  - 9 ER admissions (4.5%)
- Sixteen patients had 22 admissions for dehydration; 1 with 4 admissions due to non-compliance

**Table 1: Dehydration Parameters Used to Instruct Patients to Administer HWF**

Objective Signs	Physical Signs
Decrease in Weight by 2 Kg in 24 hours	Lightheadedness
Negative I/O Data (O > I x 48 hours)	Dark urine color
Increased drain, enterostomy, fistula output compared to baseline	Excessive thirst
Urine volume <1 L in 24 hours	Cramping in extremities
Change in lab values (Na, Cl, BUN)	
Altered vital signs (if available)	

## Conclusions

- Dehydration is common in HPN/HWF patients, especially those with malabsorption & an enterostomy
- 84.5% of dehydration episodes were successfully treated at home
- A protocol to identify HPN/HWF at risk of dehydration with provision of additional HWF on-hand in the home can reduce ER treatment or hospitalization and potentially save health care costs

# Impact of a National Shortage of Sterile Ethanol on Catheter Sepsis in HPN Patients

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## Background

- Catheter related blood stream infection (CRBSI) is a common and life threatening infectious complication of HPN
- CRBSI is associated with hospital admissions, morbidity, mortality, loss of venous access, and healthcare costs
- Ethanol has bacteriocidal and fungicidal properties making it an ideal catheter locking solution for prevention of CRBSI
- We report 6 patients with a recurrence of CRBSI when ethanol lock (ETL) was withheld due to a national shortage of sterile ethanol



## Case Studies

Case*	Age, Sex	Diagnosis	HPN Indication	# Catheter Lumens	Days to CRBSI after ETL Withheld	Causative Bacteria	Past CRBSI Causative Bacteria	After ETL Restarted
1	63 F	CD	Malabsorption	1	12	<i>Escherichia coli</i>	<i>Enterococcus sp.</i>	Infection Free
2	63 M	CD	SBS	1	20	<b>Enterobacter aerogenes</b>	<b>Enterobacter aerogenes</b> <i>Malassezia furfur</i>	Infection Free
3	54 F	CD	SBS	2	23	<b>Methicillin resistant staphylococcus aureus</b>	<b>Methicillin resistant staphylococcus aureus</b> <i>Candida sp.</i> <i>Escherichia coli</i> Coagulase negative staphylococcus, <i>Enterococcus</i> , <i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i>	Infection Free
4	30 F	CD	SBS	2	26	<b>Staphylococcus epidermidis</b>	<b>Staphylococcus epidermidis</b> Coagulase negative staphylococcus	Infection Free
5	37 M	Ruptured Appendix	SBS	1	24	<i>Escherichia coli</i>	<i>Clostridium perfringens</i>	Infection Free
6	56 M	CD	SBS	1	89	<i>Corynebacteria sp</i>	<i>Acinetobacter lwoffii</i> , Gram negative bacilli	Infection Free

\*All cases received 3 mL of 70% ETL daily prior to shortage that dwelled for 10-2 hours daily, infused PN or fluids daily, had an enterostomy & had positive blood cultures. CRBSI was not treated with antibiotics. SBS=short bowel syndrome, CD=Crohn's Disease, SBS=short bowel syndrome

## Results

- 5 cases had no episodes of CRBSI after initially starting on ETL therapy
- Compliance may have been a factor in Case 3
- After discontinuation of ETL, 5 of 6 patients developed CRBSI within 1 month (overall average of 32 days, range 12 to 89 days)
- All cases were hospitalized for treatment of CRBSI (average length of stay of 7.1 days)
- 3 cases "relapsed" with a CRBSI from the same causative bacteria they had in a past episode of CRBSI prior to use of ETL

## Conclusions

- This is the first known report of the ramifications of a national ethanol shortage on re-development of CRBSI in HPN patients with a history of CRBSI.
- The impact of an ethanol shortage due to a sole source manufacturer supports the need for the FDA to regulate pharmaceutical products to avoid shortages.
- This series further supports the existing literature showing that ETL is a viable therapy for prevention of CRBSI warranting prospective research.