2014

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A.S.P.E.N. Parenteral Nutrition Safety Consensus
Recommendations: Translation Into Practice

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Parenteral nutrition (PN) serves as an important therapeutic modality that is used in adults, children, and infants for a variety of indications. The appropriate use of this complex therapy aims to maximize clinical benefit while minimizing the potential risk for adverse events. Despite being classified and acknowledged as a high-alert medication, only 58% of organizations have precautions in place to prevent errors and patient harm associated with PN. Complications can occur as a result of the therapy and as the result of the PN process. The American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) Parenteral Nutrition Safety Consensus Recommendations are based on practices that are generally accepted to minimize errors with PN therapy. However, the broad range of healthcare settings in which PN administration occurs—from critical care to home care—raises the potential for disparities to exist in the knowledge and skills of the healthcare professionals responsible for PN prescribing, review, preparation (including compounding, labeling, and dispensing), and administration. Regardless of the setting or the number of patients treated in a given facility, the classification of PN as a high-alert medication requires all healthcare organizations to develop evidence-based policies and procedures related to PN. With these concepts in mind, the A.S.P.E.N. Parenteral Nutrition Safety Task Force developed the A.S.P.E.N. Parenteral Nutrition Safety Consensus Recommendations, available online in the *Journal of Parenteral and Enteral Nutrition* (JPEN) in late 2013 and published in March 2014.

The last version of the A.S.P.E.N. Safe Practices for Parenteral Nutrition document was published in 2004. At that time, a survey was conducted on current practices for PN and published in 2005. This survey of current practice was repeated in 2011, and despite what the authors of the Safe Practices document thought was wide dissemination of their recommendations, not much had actually improved in practice over those 8 years. With this in mind, the Consensus Recommendations task force put into place a wider dissemination protocol using a variety of promotional techniques and tool development that will be described in this article.

**Dissemination of the Article**

The A.S.P.E.N. Parenteral Nutrition Safety Consensus Recommendations were published in *JPEN* online using an open-access option such that the paper did not require a subscription or A.S.P.E.N. membership for readers to access it. This allowed the A.S.P.E.N. staff to send the link to the article to over 30 clinical, safety, regulatory, and accrediting organizations representing many disciplines and clinicians in a variety of healthcare settings. Since the online release of the article, over 10,340 full-text downloads of the paper have occurred. The task force also strategized on ways the paper could be translated into educational offerings for members and nonmembers of A.S.P.E.N. This has resulted in actual or planned presentations at the American Society of Health-System Pharmacists (ASHP) meetings, CNW13 and 14, Infusion Nurses Society, and multiple chapter and section meetings. A.S.P.E.N. held a 4-part series of training webinars on the topic in March 2014 to educate all members of the healthcare team who work with PN in order to optimize their knowledge base of safe PN practices. Attendants received a Certificate of Training in Parenteral Nutrition Safety if they participated in all 4 parts and claimed continuing education credit.

**Development of a Toolkit and Customizable Tools**
Another effort to help translate the PN safety recommendations was the development of a PN safety toolkit (www.nutritioncare.org/pnsafety). The purpose of this toolkit was to bring together helpful tools and resources clinicians need to bring optimal PN therapy to patients. This toolkit offers the Consensus Recommendations and a series of tools and checklists that will be described below. It also includes related publications, educational offerings, drug shortages information, and connections to the Parenteral Nutrition Adverse Event/Error Reporting Program developed in conjunction with the Institute of Safe Medication Practices (ISMP). A short overview of the Consensus recommendations was provided to attendees at the 2013 ASHP Midyear meeting in order to communicate the essential points of the document (see Figure 1).
Safety Checklists

In 2009, surgeon and journalist Dr Atul Gawande published the simple idea of the checklist as a tool to help deal with the complexities of healthcare. He felt that errors occur due to the volume and complexity of knowledge and how it has exceeded the ability of clinicians to properly deliver consistent and safe care to patients. He makes a compelling argument that we can do better by using the simplest of methods: the checklist. He revealed what checklists can do, what they can’t, and how they could bring about striking improvements in a variety of fields, from medicine and disaster recovery to professions and businesses of all kinds. A simple surgical checklist from the World Health Organization has been adopted in more than 20 countries as a standard for care. With this in mind, the task force created a series of checklists to assist in communication, protocol development, and delivery of safe care around PN prescribing, order review, compounding, and administration. These 4 checklists are available at www.nutritioncare.org/pnsafety. An example of the order review and verification and administration checklists can be found in Figures 2 and 3. Documentation at each step of the PN process may include checking each box and signing off on the checklist, which can then be maintained as part of the permanent record.
Convincing Your Organization to Make Changes

Another step in translating recommendations to practice includes convincing your institution to make improvements to policies, protocols, and practices. Another set of tools to help with this process can be found at www.nutritioncare.org/pnsafety and are called How to Make Changes in Your Institution. These tools will help to prepare a presentation to your institution’s Pharmacy and Therapeutics and/or Nutrition Committees. It starts off with a checklist of questions you should answer prior to the presentation, as seen in Figure 4.

Once these data are gathered through the checklist, you are ready to prepare a presentation. Another helpful tool here is a customizable PowerPoint program entitled “Improving Parenteral Nutrition (PN) Safety: Prescribing and Labeling in Our Facility.” You can insert your data, the name of your institution, and the gaps you have identified as compared with best practices, and then present this program to your administrators, encouraging your care teams to make changes. Finally in this toolkit are the order and labeling templates in Word that will again allow you to customize your order and labeling system to be in compliance with the A.S.P.E.N. recommended methods. A description of another institution’s quality improvement initiatives around the PN process can also be instructive.8,9
Conclusion

The PN Safety Consensus Recommendations have set the best practices and the author group has now provided tools to make these recommendations as easy as possible to understand, communicate with others, and implement in your institutions.
References