

How to Improve Parenteral Nutrition (PN) Safety in Your Institution Checklist

Here are key steps for identifying and recommending PN safety changes to your institution or agency. It starts with comparing your institution's PN processes with the ASPEN PN safety documents which can be found at nutritioncare.org/PNResources.

Form a PN Safety Team

- Recruit key members in your institution to help with the data collection and analysis.
 - Members from the pharmacy and therapeutics (P&T) committee and nutrition committee.
 - Key individuals from medicine, pharmacy, nutrition, nursing, and information technology with an interest in PN and/or medication safety.
 - Members of the formal or informal nutrition support team (adults and pediatrics).
 - Clinicians in your institution with nutrition support certifications such as CNSC, BCNSP.
- Identify and recruit PN Safety champions who can assist with the evaluation and change process.

Collect Data

- Organize your data by the PN use process: prescribing, order review, compounding and dispensing, administration, and monitoring.
- Determine if your institution has a Medical Safety Officer or equivalent.
- Learn if PN errors are collected, analyzed, and reported in your institution.
- Describe your institution's procedure for coping with drug shortages.
 - How is this communicated with prescribers, nutrition support team, and the P&T committee?
 - Which of the PN component items are unavailable? For how long? Have alternate sources been evaluated?
 - Do you have management protocols such as those provided by ASPEN at nutritioncare.org/drugshortages?

Review Institution's PN Use

- Learn which patient groups in your institution get PN admixtures and how the admixtures are compounded.

Patient Group	In-house Compounded		Outsource Compound*	Commercial Multi-chamber Bags
	Customized	Standardized		
Adult				
Pediatric				
Neonate				

* If outsourcing is utilized, have compounding pharmacies been visited and inspected?

Review PN Order Process

- Evaluate PN order forms. Compare your electronic and/or paper PN order forms with the ASPEN PN order templates and safety recommendations. Note: areas where your forms differ are opportunities for safety improvements.

Electronic Order Entry (or Computerized Provider Order Entry [CPOE])

- Is the entry process standardized as per ASPEN PN order templates?
- Are dosing guidelines and decision support tools built into the system?
- Can the order be submitted before all required fields are complete?
- Are check boxes used instead of free text?
- If free text is used, is the space limited?
- Does the program auto-populate as many fields as possible?
- Does the order interface with the automated compounding device on which PN is prepared?

Review PN Order Process *Continued*

Paper Order Form

- Are the forms standardized as per ASPEN PN order templates?
 - Are they handwritten or can they be completed using word processing?
 - Do they match the order entry sequence when transcribed onto the computer?
- Evaluate the order review process. Who is the pharmacist dedicated to review the daily PN orders? Are they board-certified? Do they perform both a clinical review and a pharmaceutical review of each patient's PN order?
- Compare the PN bag labels with the ASPEN PN label templates. Example: Are component sequence and units of measure the same between the order form and label?
- Identify safety improvement opportunities in the PN order process.

Recommend Safety Changes

- Write a report on your findings and recommendations for safety improvements.
- Work with Champions to schedule a meeting with the right audience to present findings and recommendations.
- Work with Champions to implement approved recommendations.

Follow Up to Show Impact of Your Recommendations

- It's important to collect data before and after changes are made to assess the impact of your recommendations.

References and Resources:

- Boullata JI, Salman G, Mirtallo JM, et al. Parenteral nutrition compatibility and stability: Practical considerations. *Nutr Clin Pract.* 2024;39(5):1150-63.
- Boullata JI, Holcombe B, Sacks G, et al. Standardized competencies for parenteral nutrition order review and parenteral nutrition preparation, including compounding: the ASPEN model. *Nutr Clin Pract.* 2016 Aug;31(4):548-55.
- Ayers P, Adams S, Boullata J, et al. ASPEN parenteral nutrition safety consensus recommendations. *JPEN J Parenter Enteral Nutr.* 2014;38(3):296 - 333.
- Boullata JI, Gilbert K, Sacks S, et al. ASPEN clinical guidelines: Parenteral nutrition ordering, order review, compounding, labeling, and dispensing. *JPEN J Parenter Enteral Nutr.* 2014;38(3):334-377.

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