

Ingredient shortages have forced many organizations to change practices or use unfamiliar ingredients, which creates potential for error. Parenteral nutrition (PN) has been significantly affected, as every ingredient in PN has been impacted in recent years” Storey et al (2015).

#### Abstract:

Background: Ingredient shortages have forced many organizations to change practices or use unfamiliar ingredients, which creates potential for error. Parenteral nutrition (PN) has been significantly affected, as every ingredient in PN has been impacted in recent years.

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Materials and Methods: Ingredient errors involving PN that were reported to the national anonymous MedMARx database between May 2009 and April 2011 were reviewed. Errors were categorized by ingredient, node, and severity. Categorization was validated by experts in medication safety and PN. A timeline of PN ingredient shortages was developed and compared with the PN errors to determine if events correlated with an ingredient shortage. This information was used to determine the prevalence and change in harmful PN errors during periods of shortage, elucidating whether a statistically significant difference exists in errors during shortage as compared with a control period (ie, no shortage).

Results: There were 1311 errors identified. Nineteen errors were associated with harm. Fat emulsions and electrolytes were the PN ingredients most frequently associated with error. Insulin was the ingredient most often associated with patient harm. On individual error review, PN shortages were described in 13 errors, most of which were associated with intravenous fat emulsions; none were associated with harm. There was no correlation of drug shortages with the frequency of PN errors.

Conclusion: Despite the significant impact that shortages have had on the PN use system, no adverse impact on patient safety could be identified from these reported PN errors.

#### Reference:

Storey, M.A., Weber, R.J., Besco, K., Beatty, S., Aizawa, K. and Mirtallo, J.M. (2015) An Evaluation of Parenteral Nutrition Errors in an Era of Drug Shortages. *Nutrition in Clinical*



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