

# ASSESSMENT OF ERROR AND PHARMACEUTICAL INTERVENTION IN PARENTERAL NUTRITION PRESCRIBING IN NEONATOLOGY

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## BACKGROUND

Parenteral Nutrition (PN) prescriptions are not free from error. To validate a PN prescription the pharmacist is responsible for assessing the prescribed intake of nutrients, based on the information regarding the newborn (NB), such as gestational age (GA), weight, medical record and analytical values, in order to reduce medication errors.

## PURPOSE

Evaluation of errors detected during validation of the PN prescriptions from Neonatology and the acceptancy by the physicians of the pharmaceutical interventions.

## MATERIAL AND METHODS

Retrospective study of pharmaceutical interventions, in PN prescriptions from Neonatology:  
July 2012 until August 2014 (26 months)

## PARAMETERS

- > Number of PN prescriptions
- > Number of errors detected
- > **Type of errors detected**
- > Number of pharmaceutical interventions accepted by the physician

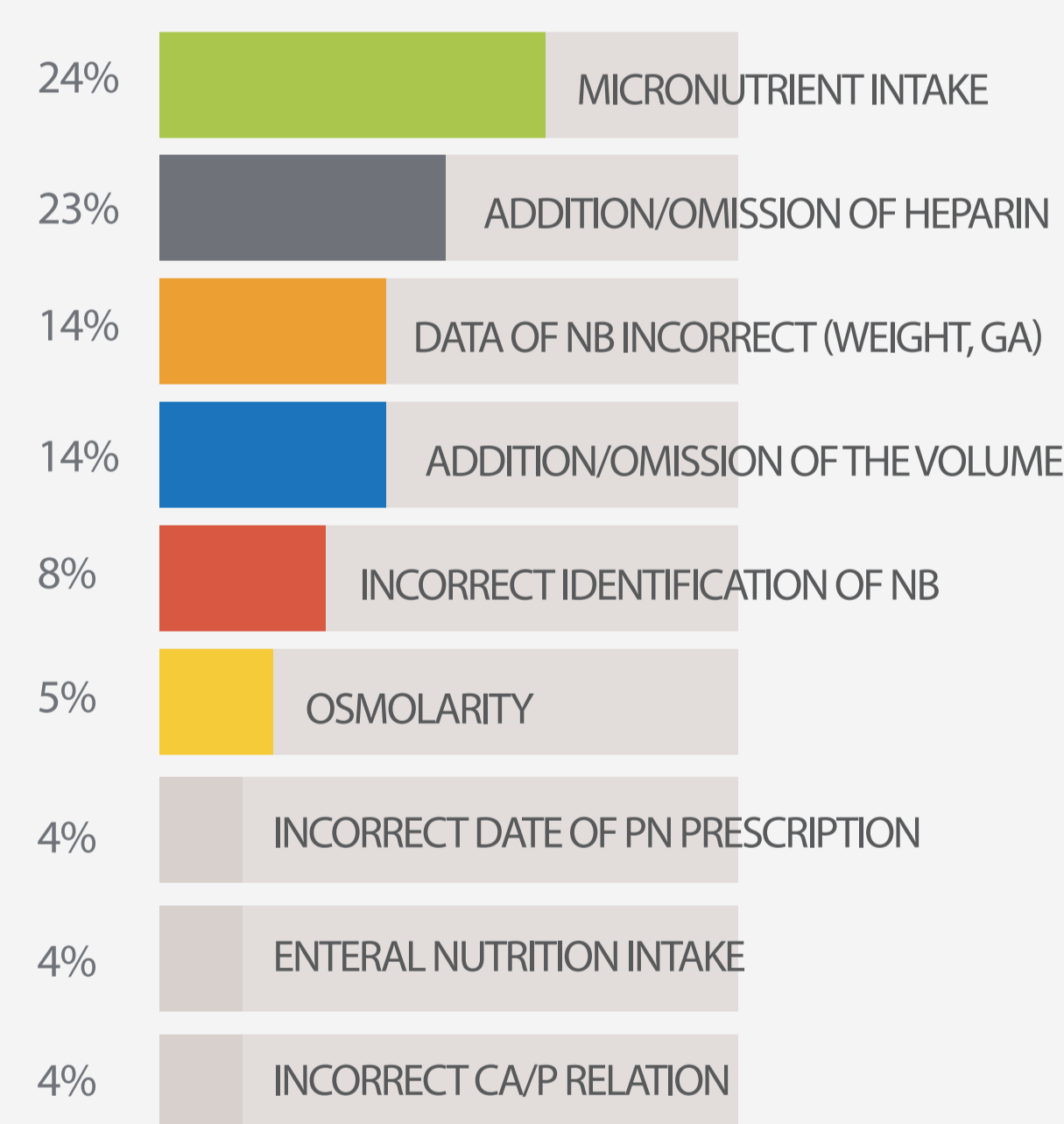
- > Date of PN prescription
- > NB identification
- > NB data (weight, GA, birth date)
- > Enteral nutrition intake
- > Micronutrients intake
- > Ca/P relation
- > Addition/omission of heparina
- > Osmolarity
- > Addition/omission of the volume and type of serum used in drugs's perfusion

Statistical analysis performed in MS Excel 2007

## RESULTS

Table 1.  
Number of Pharmaceutical Interventions and Prescriptions.

TIME	JULY/AUG 2012	JAN/DEC 2013	JAN/AUG 2014	TOTAL	% INTERVENTIONS
NO. INTERVENTIONS	11	39	28	78	8%
NO. PRESCRIPTIONS	201	465	287	953	



Graphic 1.  
Type of pharmaceutical interventions made.

**10%**  
NOT ACCEPTED

**90%**  
ACCEPTED

Graphic 2.  
Acceptance of pharmaceutical interventions

## CONCLUSION

The amount of errors detected was relatively low, being the main errors found in micronutrient intake and in addition/omission of heparin. To reduce this type of error, some changes were made at the PN prescriptions program. The pharmaceutical interventions were accepted by the physicians in the majority of the cases. Therefore, the Pharmacist has an indispensable role in the PN prescription validation, in order to reduce medication errors and increase the efficacy and safety of drugs.

## REFERENCES

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