

# Introducing a preformatted medical order sheet and giving a course to decrease prescription errors in newborns

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## Background

Prescription errors are common in neonatal intensive care units (NICU). Computerized physician order entry (CPOE) is one of the most effective interventions to decrease these errors but its implementation is expensive and time consuming. Completion of CPOE in our NICU is expected within a few years. Meanwhile, alternative options are necessary in order to improve the quality of prescriptions and to decrease medication errors.

## Objectives

The aim of this study was to assess whether a preformatted medical order sheet (PMOS) and an education teaching programme (ETP) made an impact on the quality of prescriptions and on the frequency of errors during the prescription stage.

## Method

A two-phase observational study was conducted in an 11-bed NICU. This study consisted in two four-month consecutive phases, a pre-intervention Phase 0 and a post-intervention Phase 1.

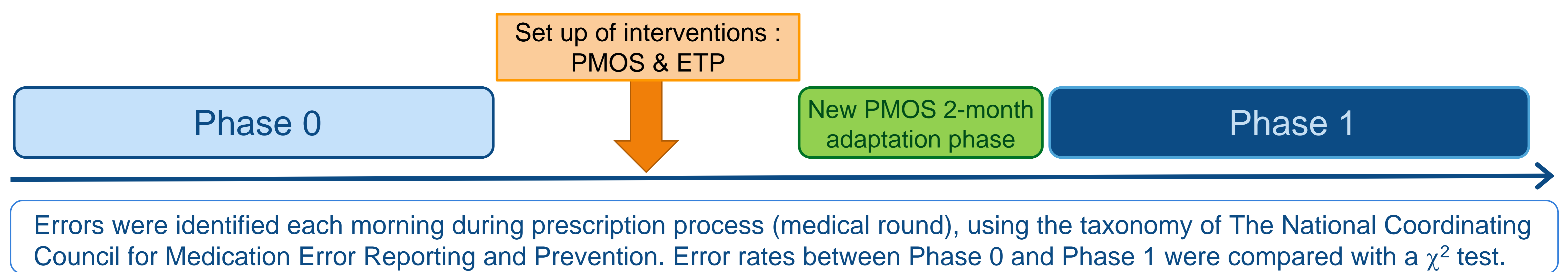


Fig. 1: Old medical order sheet (no information supplied)

Date-Heure-Signature	TRAITEMENT	
	Médicaments I.V.	

Fig. 2: New PMOS (explicit information supplied)

MÉDICAMENTS I.V.											
ANTI-INFECTIEUX											
Début Date/heure	Temps	Médicaments	Dose	Fréquence	Via	Temp. perf.	Durée	Déclassement (µg)	Stop Date/heure	Stop Temps	
		<input type="checkbox"/> Clamoxyl 250mg (50mg/ml)	.....mg (=.....mg/kg/dose)	e.....n		3-6 min	J...J...	.....ml			
		<input type="checkbox"/> Gentamicin 40mg/ml (1mg/ml)*	.....mg (=.....mg/kg/dose)	e.....n		30 min	J...J...	.....ml			
		<input type="checkbox"/> Fortam 1g (100mg/ml)	.....mg (=.....mg/kg/dose)	e.....n		3-6 min	J...J...	.....ml			
		<input type="checkbox"/> Vanococin 500mg (5mg/ml)	.....mg (=.....mg/kg/dose)	e.....n		60 min	J...J...	.....ml			
		<input type="checkbox"/> Impipenem Cilastatin 500mg (5mg/ml)*	.....mg (=.....mg/kg/dose)	e.....n		30 min	J...J...	.....ml			
		<input type="checkbox"/>						.....ml			
		<input type="checkbox"/>						.....ml			

## Results

83 patients were included in Phase 0 and 81 in Phase 1. 505 prescriptions were analyzed in Phase 0 and 523 in Phase 1.

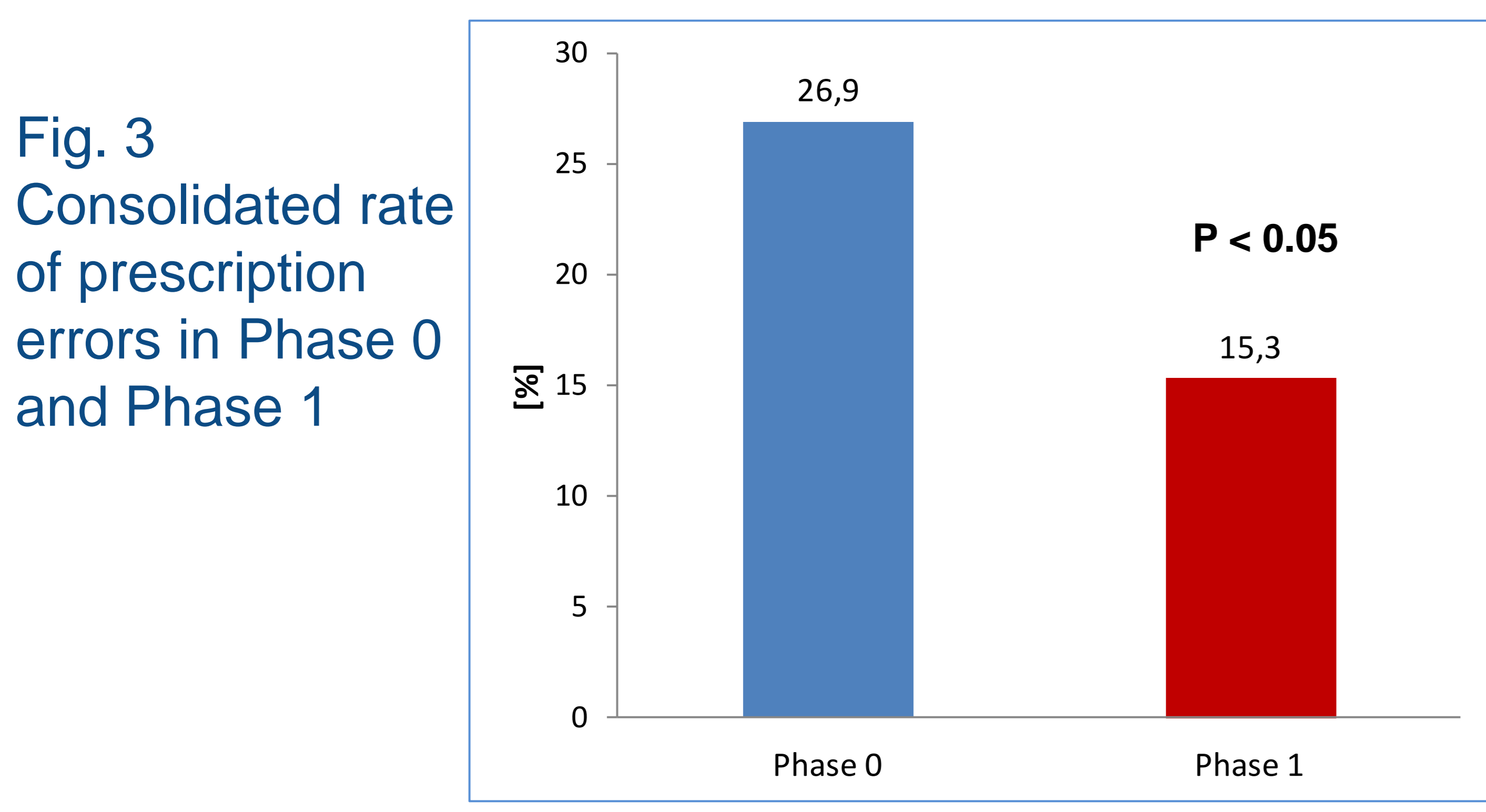
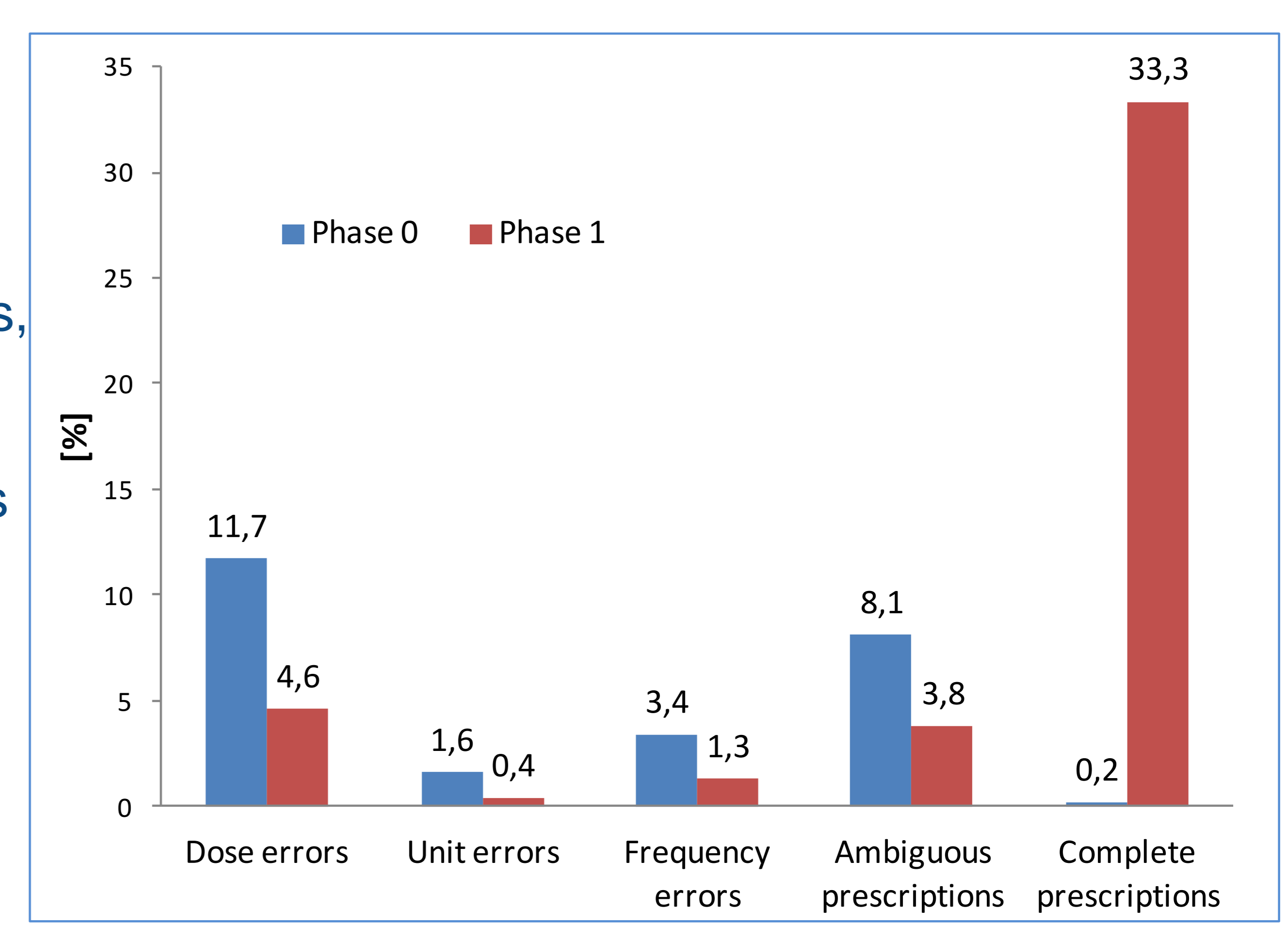


Fig. 4 Type of prescription errors, ambiguity and completeness of medication orders in Phase 0 and Phase 1



## Discussion - Conclusion

This cheap and simple method to implement interventions can improve the completeness and the intelligibility of prescriptions and decrease medication errors. This method has the advantage that it can be adapted to any medical care unit and should provide either a transitional improvement phase before the expensive and time consuming CPOE, or a promising alternative to the latter.