

# ADDED VALUE FROM AN INFORMATION AND COMMUNICATION TECHNOLOGY- ASSISTED INTERVENTION IN A TOTAL PARENTERAL UNIT OF A PAEDIATRIC HOSPITAL PHARMACY

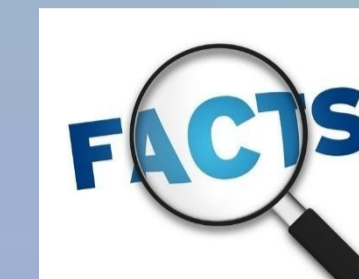
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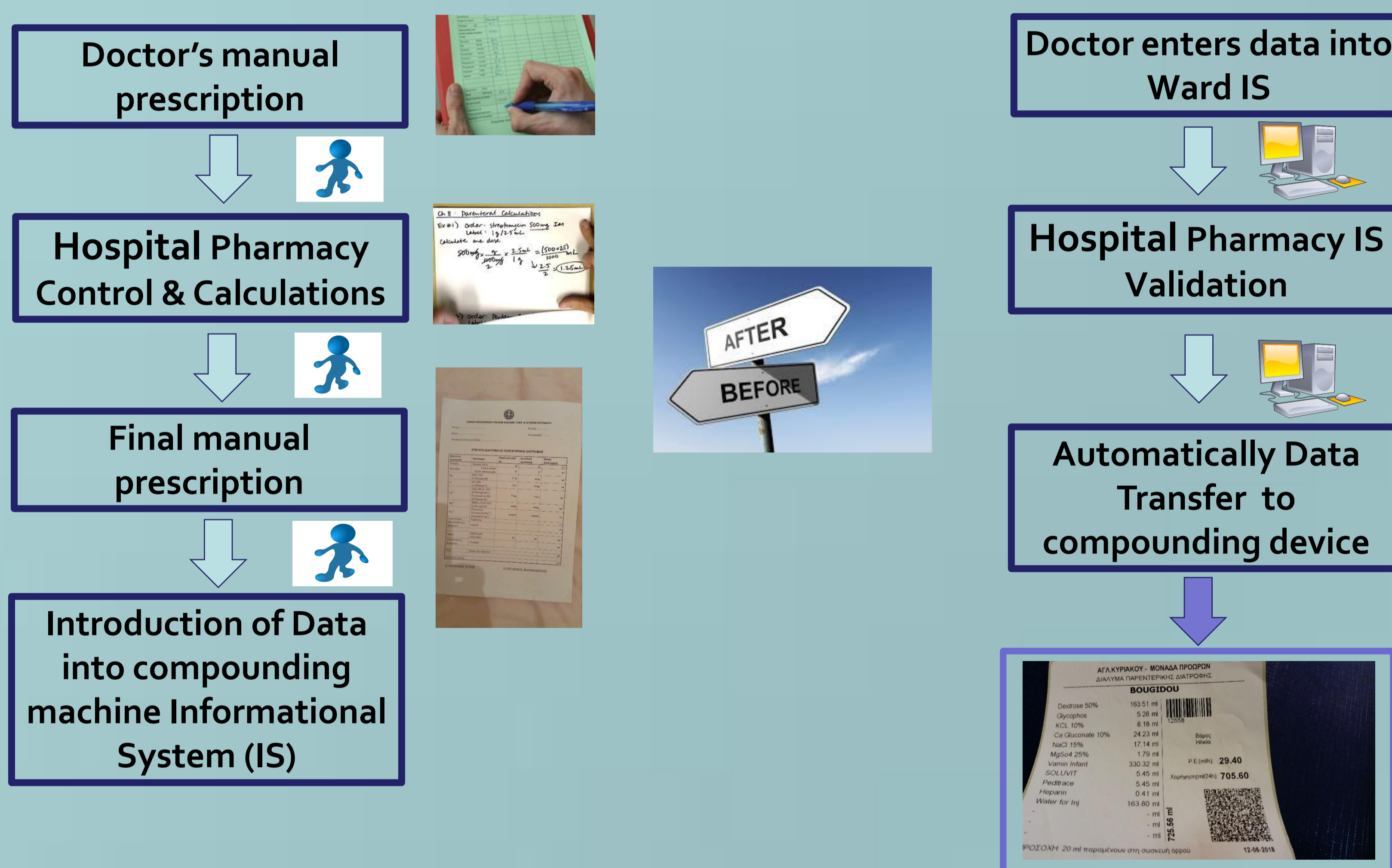
## Introduction:

- ✓ Ready-to-use parenteral nutrition formulations are not available for preterm infants
- ✓ Need arises for customized parenteral nutrition formulations addressing infants and children
- ✓ Preparation of Total Parenteral Nutrition (TPN) formulations is an everyday practice for pharmacy departments of Pediatric Hospitals
- ✓ Ordering and Preparation of these formulations consist a *time-consuming, complex and error-prone* procedure



**Aim:** Identification of consequent benefits from integration of a new computerized method of ordering TPN formulations in combination with an automated (no touch) compounding device.

**Method:** Comparison of Previous vs Present procedure of prescribing, ordering and preparation of 12 per day (365 days/year) TPN formulations, in a 400-bed pediatric hospital.



## Results:

- ✓ 35%↓ in pharmacist's implementation time for controlling and finalizing TPN prescriptions
- ✓ 80%↓ in total preparation time spent at the compounding device
- ✓ Elimination of transcription step of the procedure
- ✓ Elimination/Reduction of transcription & calculation errors
- ✓ Legible doctor's prescriptions are automatically transferred to the hospital pharmacy's IS
- ✓ Doctors enter prescriptions at patients' bedside
- ✓ Prescriptions available even on mobile phones through Quick Response Codes (QR)
- ✓ Production of appropriate labels identified by linear barcodes
- ✓ Integration of pharmaceutical patient record (kept at the hospital pharmacy's IS) with the TPN record (kept at the compounding device's IS)



## Conclusions:

Application of computer technologies:

- ❑ Reassures faster and safer preparation of TPN formulations for neonates and pediatric patients
- ❑ Facilitates healthcare professionals to promptly review prescriptions
- ❑ Eliminates unnecessary and error-prone steps in the preparation procedure
- ❑ Establishes a more immediate and feasible communication between the hospital pharmacy and the actual point of care
- ❑ Saves crucial time for healthcare professionals
- ❑ Supports a more efficient reorganization of all tasks taking place in the hospital pharmacy
- ❑ Enables the essential information exchange since all the available information is incorporated into pharmaceutical patient record



## References:

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