

IMPACT OF A CENTRALIZED INTRAVENOUS ADDITIVE SERVICE IN PATIENTS AND HEALTHCARE WORKERS RISK REDUCTION

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Background and objectives

Parenteral drug compounding and its administration carries potential risks for patients. Safe handling procedures avoid healthcare workers exposure to hazardous drugs. Compounding preparations in a Centralized IntraVenous Additive Service (CIVAS) could minimize both risks¹.

We conducted this study to assess **patients and healthcare workers risk reduction by centralizing parenteral preparations** in a CIVAS compared to clinical areas (CA).

¹Resolution CM/Res(2016) on good reconstitution practices in health care establishments for medicinal products for parenteral use

Methods



Observational retrospective study in a 460-bed hospital **January-2017 to December-2017**.



Inclusion criteria

- **Inpatient** parenteral preparations for CA (except Critical Care, Emergency Room and Neonatal Unit)
- **Outpatient** preparations

Variables

- Compounding area (CIVAS/CA)
- Number and type of preparation [fluid (F), parenteral nutrition (PN) or parenteral drug (PD)]
- Type of admixture (standardized/individualized)
- Risk level for patients (high/medium/low)²
- Hazardous level for healthcare workers (hazardous/non-hazardous)³.

²Guía de Buenas Prácticas de preparación de medicamentos en servicios de farmacia hospitalaria; ³NIOSH 2016

Results

Total number of preparations 322.693

CIVAS coverage 248.254 (77%)

By type of preparation

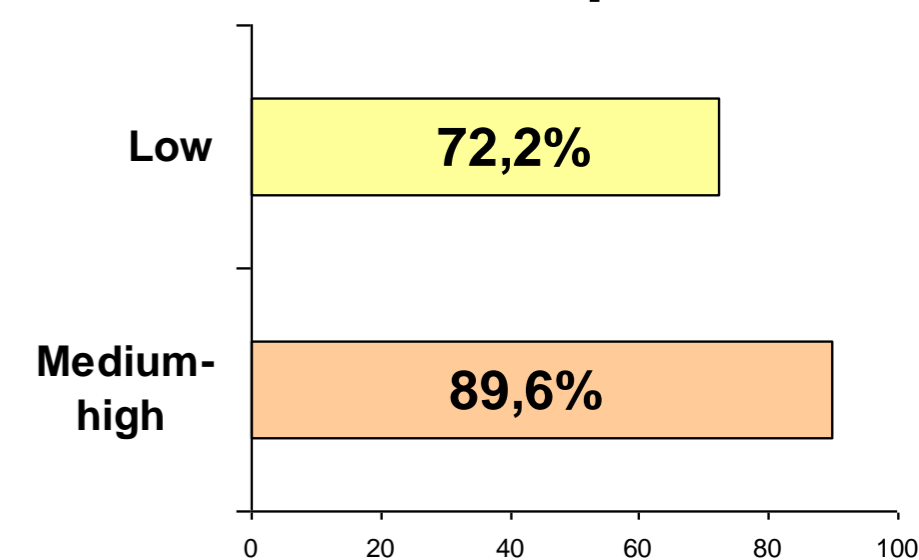
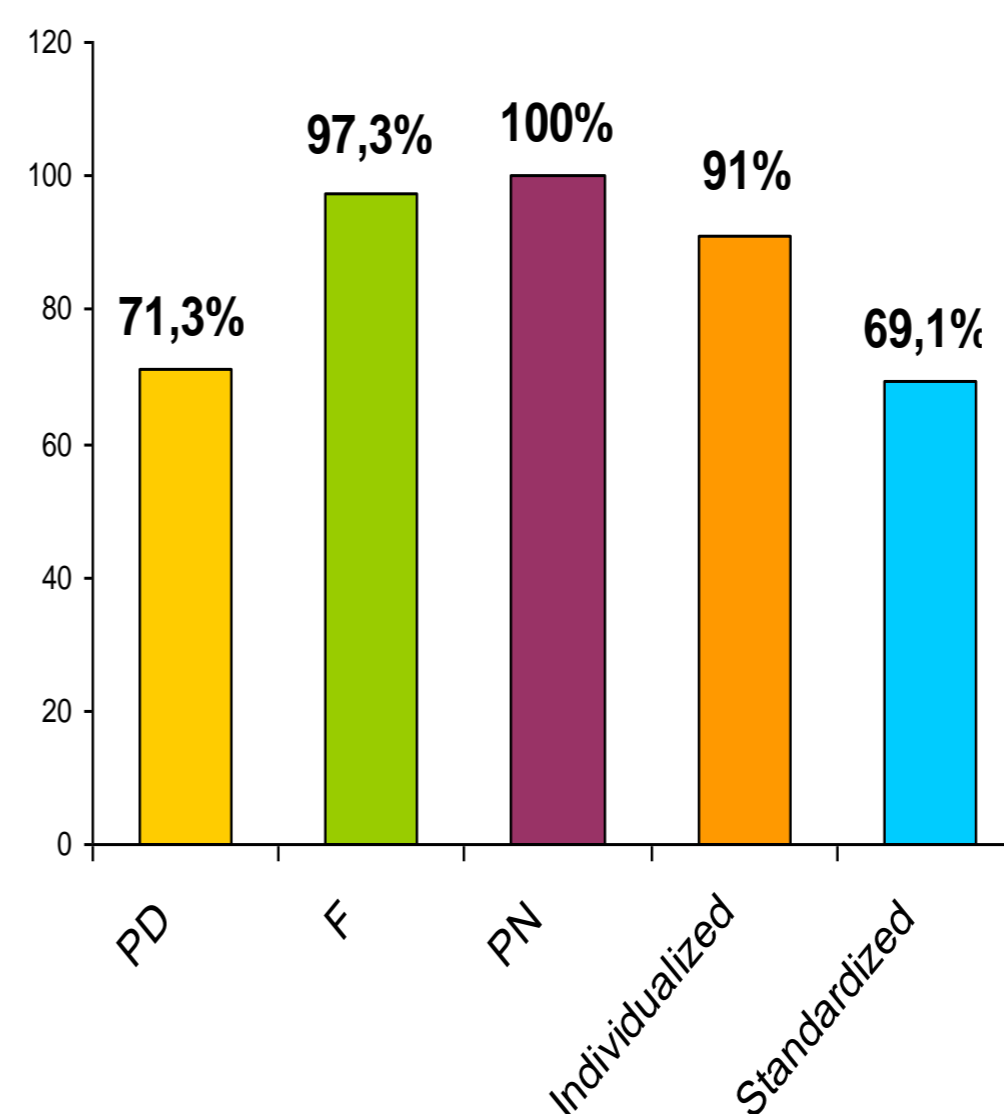
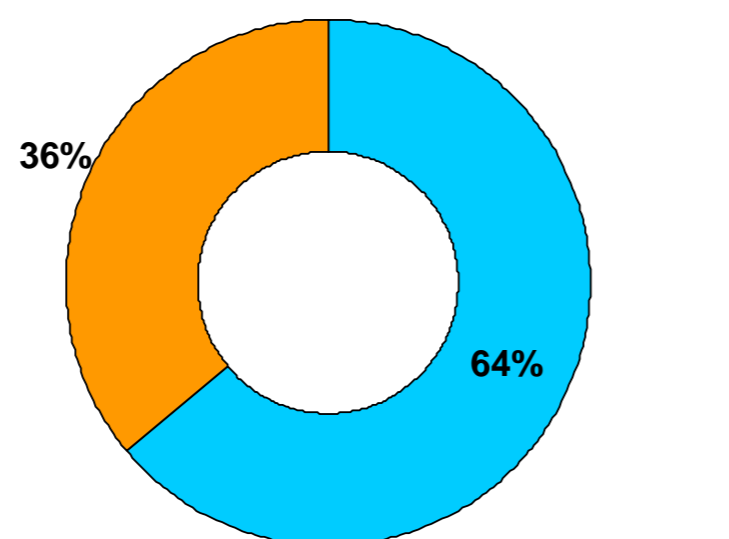
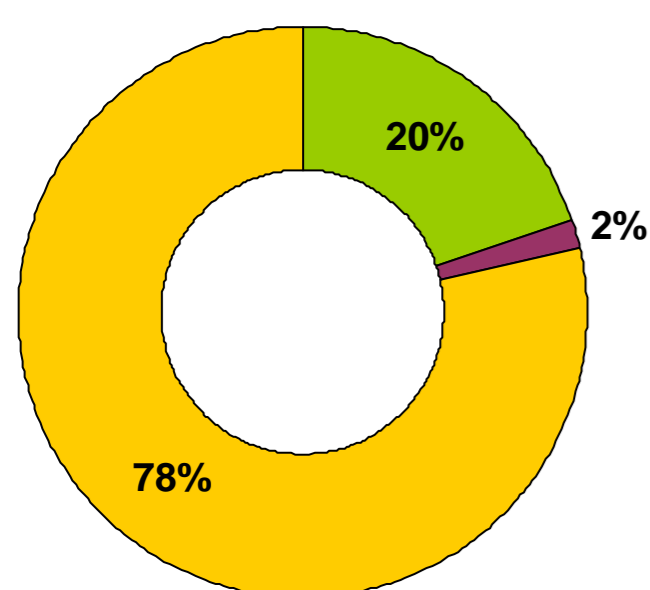
By type of admixture

By type of preparation and admixture

Risk level for patients

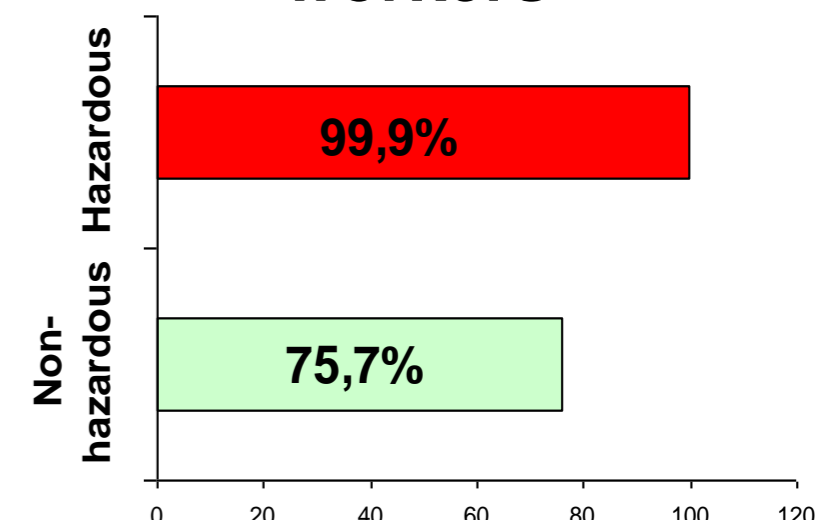
■ F ■ PN ■ PD

■ Standardized ■ Individualized



26,9% Medium-high risk
5,1% Hazardous drugs

Hazardous level for workers



Conclusions

Compounding in a CIVAS provides coverage of 77% parenteral preparations. Higher patient risk reduction and staff protection standards are provided by avoiding elaboration of 89.6% of medium-high risk preparations and 99.9% of parenteral hazardous drugs in clinical areas.