



# PHARMACEUTICAL INTERVENTIONS IN THE EMERGENCY DEPARTMENT: RELEVANCE IN HIGH-ALERT MEDICATIONS

Abstract number: 4CPS-234

C. Caballero Requejo<sup>1</sup>, M Onteniente Candela<sup>1</sup>, P. Salmerón Ruiz<sup>2</sup>, M. Gil Candel<sup>1</sup>, I. Salar Valverde<sup>1</sup>, C. Gallego Muñoz<sup>1</sup>, E. Urbieta Sanz<sup>1</sup>.

1Hospital Universitario Reina Sofía, Pharmacy Department, Murcia, Spain.  
2Hospital Universitario Reina Sofía, Emergency Department, Murcia, Spain.

## BACKGROUND

- The **Institute for Safe Medication Practices (ISMP)** defines **high-alert medications (HAM)** as drugs that bear a heightened risk of causing significant patient harm when used in error. Medication errors are frequent in the hospital **Emergency Department (ED)**, and the most common drugs involved in these errors are HAM.

## PURPOSE

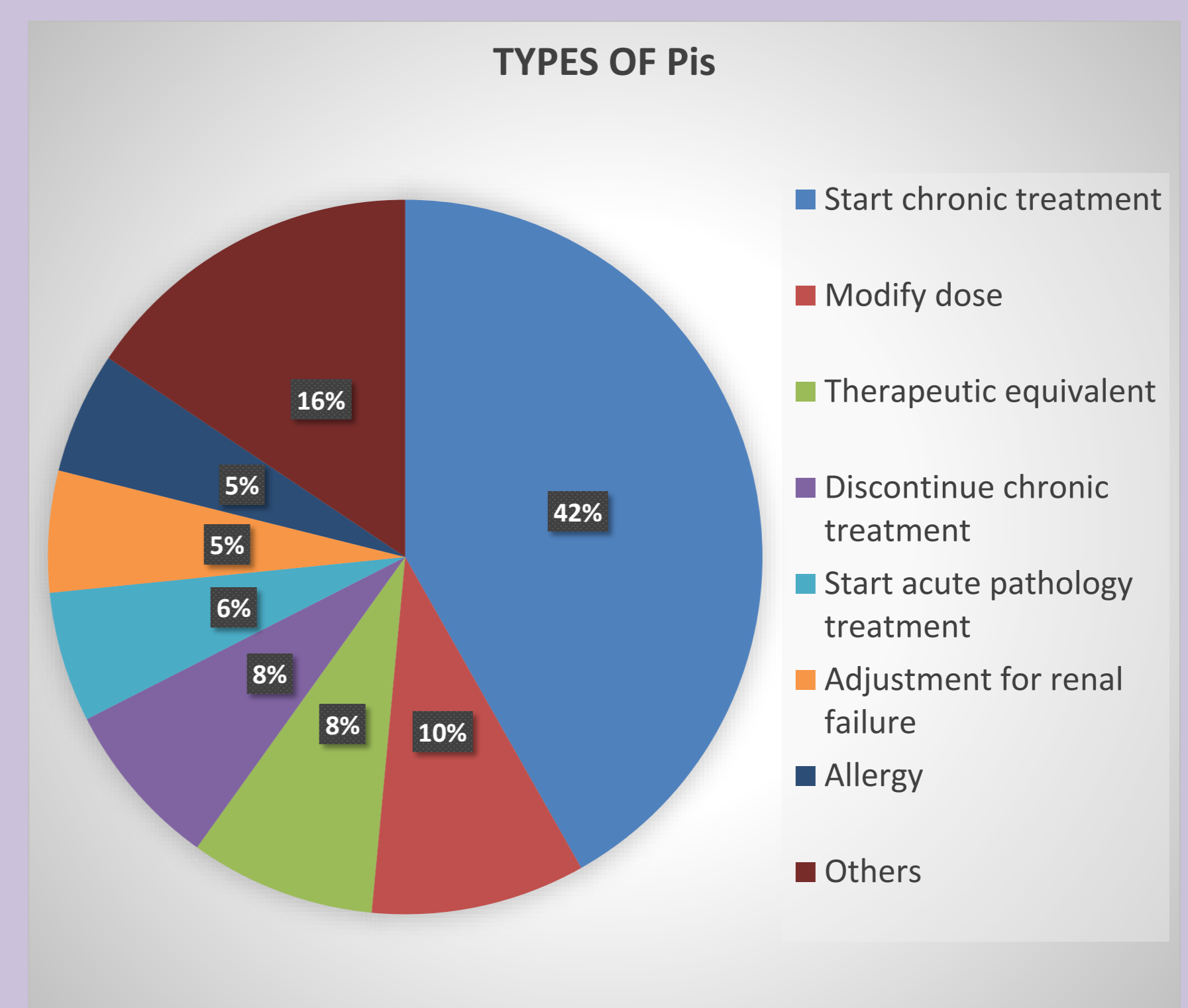
- To assess the potential **impact** of the **pharmaceutical interventions (PIs)** on HAM in patients at **ED observation unit (EDOU)**.

## MATERIAL AND METHODS

- Prospective observational study**, conducted from July to September of 2017 in the **EDOU** of a referral hospital.
- The **pharmacist** performed clinical activity in the ED from **Monday to Friday in the morning**.
- Variables** included in the analysis were:
  - ✓ Gender
  - ✓ Age
  - ✓ Admission diagnosis classified with International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)
  - ✓ Number and type of PIs
  - ✓ Value of potential impact of PIs (Overhage et al.<sup>1</sup>)
  - ✓ Classification of ISMP list of HAM.
- Analysis was performed using SPSS Statistics IBP-19 version.

## RESULTS

- 579 patients were in the EDOU during the working hours of the **pharmacist**, who **intervened in 120 patients (20.7%)**.
- 52.5% were man and mean age was 70.84±15.5 years.
- The **most frequent admission diagnosis** in patients with PIs were:
  - ✓ Chest pain 11.7%
  - ✓ Acute respiratory failure 7.5%
  - ✓ Intermediate coronary syndrome 6.7%
  - ✓ Urinary tract infection 3.3%
  - ✓ Congestive heart failure 3.3%
  - ✓ Sepsis 2.5%,
  - ✓ Hyposmolality and/or hiponatremia 2.5%
  - ✓ Hemorrhage of gastrointestinal tract 2.5%.
- 237 PIs were performed (1.97±1.6/per patient)**.



- 71.3% of PIs** had a potential **impact on patient care**, and **37.6%** were made on **HAM**.
- The relevance of PIs in HAM was higher** than in the rest of medication, being **statistically significant (p<0.001)**.

## CONCLUSIONS

- Pharmacists at the ED had a positive impact on the medication process, improving safety and effectiveness of prescriptions, and minimising the risk to the patient, especially with HAM.**