

# FOUR YEARS OF A PHARMACEUTICAL CARE PROGRAMME IN PATIENTS UNDERGOING CARDIAC SURGERY

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## BACKGROUND AND IMPORTANCE

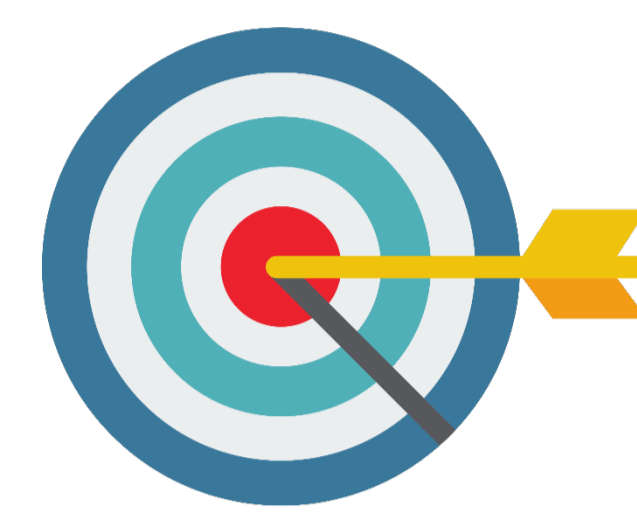
**Preoperative setting:** high risk for medication errors with potentially severe consequences.

### Pharmaceutical care programmes (PCP):

- Achieve an adequate preoperative pharmacological management.
- Reach surgery in optimal pharmacological conditions.

**COORDINATION** with other specialists is paramount to guarantee patient safety.

## AIM AND OBJECTIVE



To evaluate the impact of a PCP in patients undergoing cardiac surgery in preventing medication errors after 4 years of implementation.

## MATERIALS AND METHODS



### Design:

- ✓ Retrospective, observational study
- ✓ July 2018 - July 2022
- ✓ All patients scheduled for cardiac surgery

### 1. 24-72h before the surgery: Telephonic pharmacists' clinical interviews

- Patients' complete medication list (over the counter medicines and herbal products)
- Instructions for adequate preoperative medication management were reinforced.



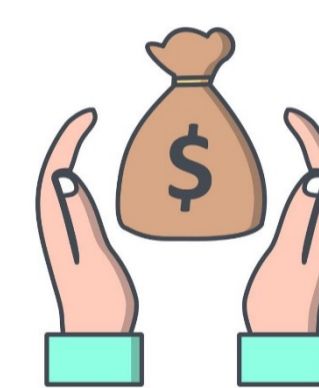
### 2. Avoided medication errors categorization:

- Overhage-classification and their severity was analysed according to NCC-MERP



### 3. Savings:

- Multiplying the probability of adverse event occurrence with the error(NCC-MERP≥F:high risk of admission or prolonged hospital stay) by avoided cost (6.745€ according to Ministry of Health, Consumer and Social Welfare).



## RESULTS



- ✓ 1020 pharmacist preoperative interviews
- ✓ Mean age was 66.8(sd:12.6) years
- ✓ 65.8% were males

41,8%

At least one drug that needed to be discontinued before surgery



- 23,6%\_ Angiotensin-converting enzyme inhibitors, angiotensin-II receptors blockers and diuretics
- 22,2%\_ Anticoagulants and antiplatelet treatment
- 11,4%\_ Hypoglycemic treatment



43.5% of patients needed heparin bridge therapy

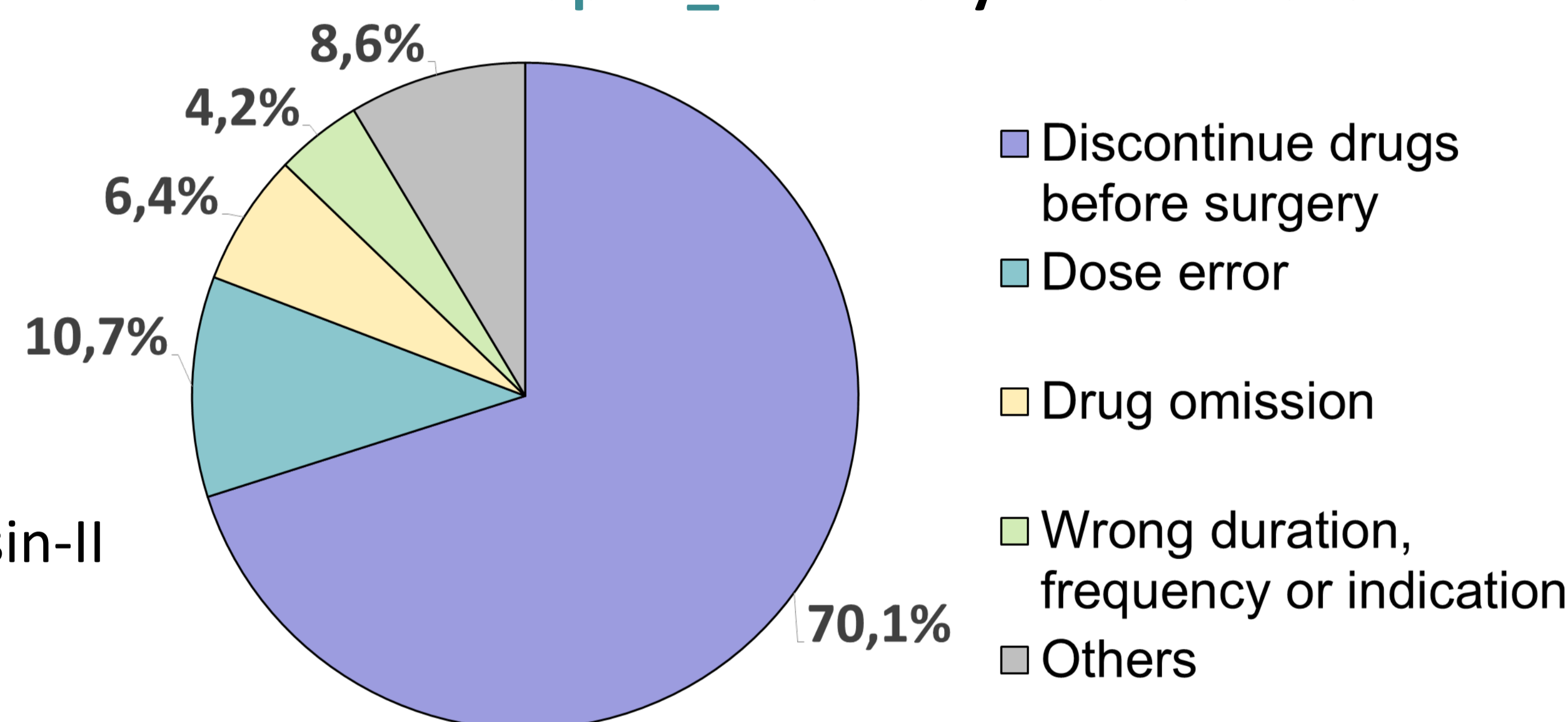


Potential medication errors avoided an estimated cost of **992.130€**

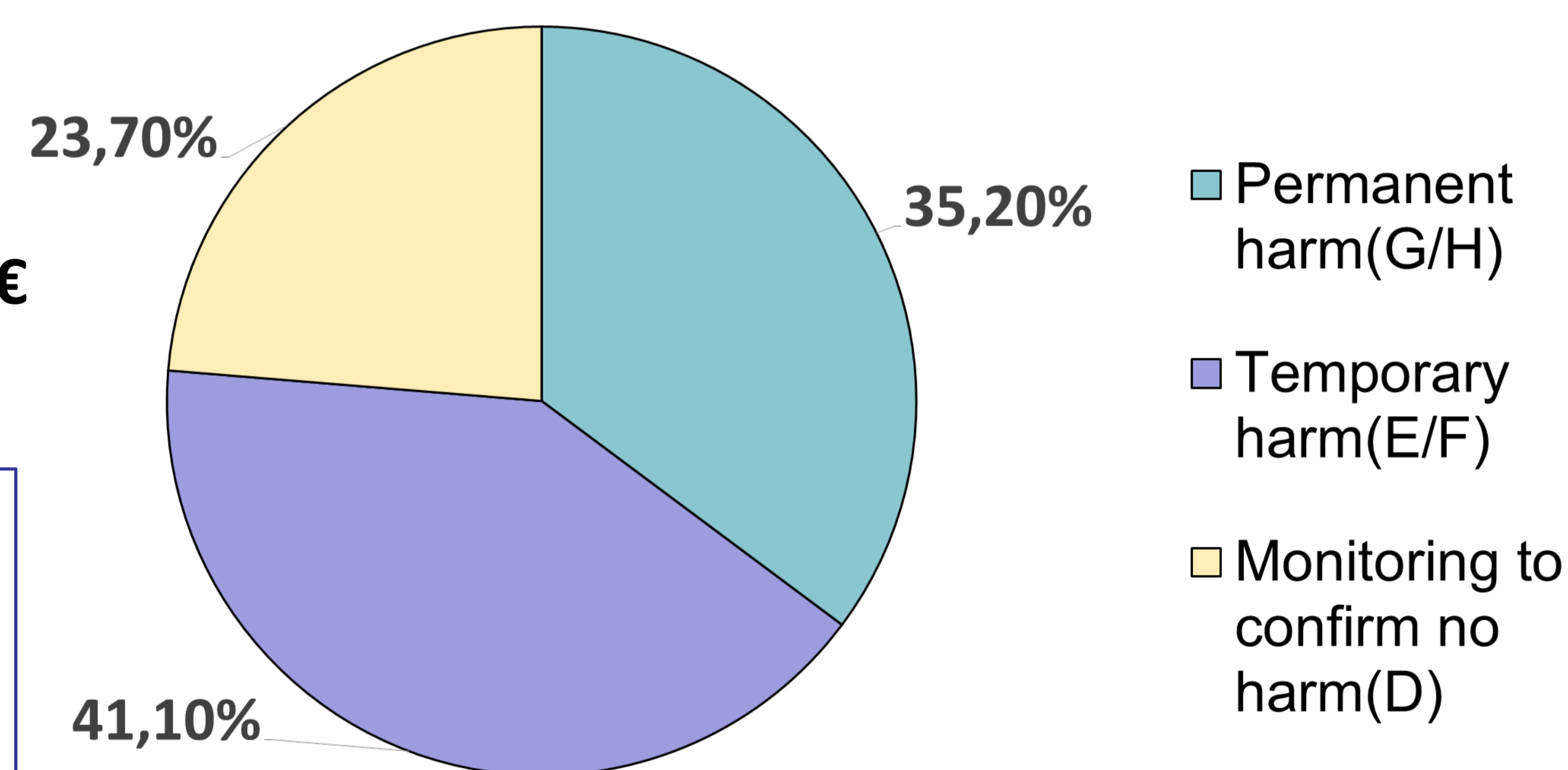
### Take home

- **807 pharmacy interventions were conducted with 94.2% of acceptance rate**
- **673 serious errors were avoided**
- **Significant cost savings by avoiding medication errors**

Graph 1\_ Pharmacy interventions



Graph 2\_ Severity of medication errors



## CONCLUSION AND RELEVANCE

A PCP in patients undergoing cardiac surgery was successfully implemented, ensuring a **correct preoperative drug management**, with 0.8 severe medication errors avoided per patient that was interviewed and potential savings of 992.130€.

