

# PHARMACEUTICAL DECISION SUPPORT SYSTEM FOR SALT ACETAMINOPHEN USE: RAISING AWARENESS AMONG CARDIOVASCULAR PATIENTS



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## Background and importance

**High quantities of salt (1g) in Effervescent Acetaminophen Formulations (EAF) (either 500 mg or 1,000 mg) ->**

EAF regimen: salt intake up to 8 g/day

Recommended salt among cardiovascular patients: 5 g max/day

EAFs: lead to cardiovascular adverse events (Zeng C *et al*, 2022)

EAFs: to avoid among cardiovascular patients

## Aim and objectives

To detect prescribed EAF among cardiovascular patients by using a Pharmaceutical decision support system (PDSS)

## Materials and methods

Prospective study from April 2020 to August 2022 (28 months) in 2 facilities – 1,600 beds

**PDSS detection operates on PharmaClass® (Keenturtle) using:**

- real-time patient data
- 1 dedicated Pharmaceutical algorithms (PA) for identifying situation of EAF prescriptions in 2 versions
  - 1<sup>st</sup> from April 2020
  - 2<sup>nd</sup> from May 2022 with more elements to detect cardiovascular comorbidities

**Alert analysis by pharmacists** leads to Pharmaceutical interventions to stop EAFs prescriptions

Collected data: patient's cardiovascular diseases, EAF consumption and analyzed alerts

Data analysis: Excel® (Microsoft Office suite)

## Results

- Most patients (245 out of 258) have at least one cardiovascular disease: 225 high blood pressure, 34 cardiac insufficiency and 167 ischemic pathologies
- Salt intake between EAFs prescription and pharmacist's intervention was:
  - ❖ 2,910 grams over 987 days of treatment at general hospital
  - ❖ 624 grams over 361 days of treatment at university hospital

**Importance to stop EAF is highlighted**

	1 <sup>st</sup> version		2 <sup>nd</sup> version	
	28 months			
Data collection period	24 months		4 months	
<b>Analyzed alerts</b>	<b>159</b>		<b>124</b>	
Technical false positives	13	8 %	29	23 %
Situations not classified as Drug-related problem	39	25 %	33	27 %
<b>Drug-related problems requiring Pharmaceutical interventions</b>	<b>101</b>	<b>64 %</b>	<b>35</b>	<b>28 %</b>
Accepted pharmacist's intervention	50	50 %	20	57 %
EAFs on demand	120	76 %	46	37 %

## Conclusion and relevance

Using a PDSS reveals the salt intake through EAF among cardiovascular patients.

Improved detection by 2<sup>nd</sup> version underlines the importance of PA modeling process. However, a rise in false positives emerges.

PDSS reinforce pharmacists and physicians learning and ability to act for patient safety