

## ADVERSE DRUGS EVENTS ATTENDED IN EMERGENCY DEPARTMENT: ANALYSIS, ECONOMIC IMPACT AND PREVENTIVE MEASURES ADOPTED

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### BACKGROUND AND IMPORTANCE

The incidence of adverse drug events (ADE) are increasing and some of them are severe, preventable and have a significant public health and economic impact. Studies show the importance of incorporating preventative measures in order to improve patient's safety and healthcare system resources.

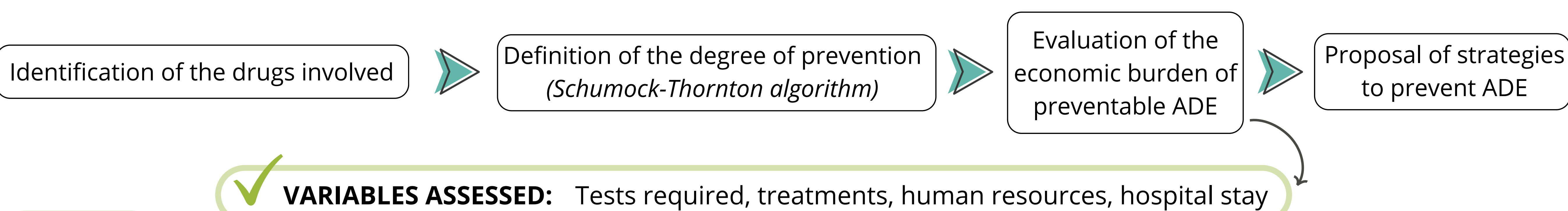
### AIM AND OBJECTIVES

- To determine the prevalence of patients attending the Emergency Department (ED) because of an ADE.
- To identify the implicated drugs, and to classify the causes and level of preventability.

The economic impact of preventable ADEs was determined and preventative measures adopted were described.

### MATERIALS AND METHODS

Observational and cross-sectional study included patients over 18 years old who were attended in ED because of an ADE in a tertiary-level hospital on 15 March 2023 at 12:00 pm.



### RESULTS

Drug involved	Adverse drug event	Degree of prevention
Digoxin	bradycardia	Definitely preventable
Furosemide	heart failure	Probably preventable
Apixaban	gastrointestinal bleeding	Probably preventable
Vincristine	neutropenic fever	Probably preventable
Nitrofurazone	erythema	Not preventable
Moxifloxacin	myalgia	Not preventable
Amoxicillin	diarrhoea	Probably preventable

Table 1. Summary of the drugs involved, adverse drug events and degree of prevention.

Patients (n=5)	Total cost (treatments received, medical consultations, hospital stay and tests required)
Patient 1	1.651,04 €
Patient 2	1.666,71 €
Patient 3	1.109,86 €
Patient 4	874,35 €
Patient 5	4.014,84 €
<b>TOTAL</b>	<b>9316.8 €</b>

Table 2. Description of healthcare costs for each patient who developed a preventable ADE.

#### Measures implemented

- Pharmaceutical care in ED
- Assessment of therapeutic appropriateness
- Follow-up on discharge
- Data intelligence tool development with built-in algorithms to generate alerts and detect ADE

### CONCLUSION AND RELEVANCE

- Adverse drug events have an important prevalence and economic impact on the healthcare system.
- Approximately 70% of ADE could have been prevented, which suggests the contribution of prevention measures to reduce ADE, improving the quality and resources of the healthcare system.

