

# Allergies to NSAIDs and antibiotics reported in an adult emergency dental department: a retrospective observational study.

Manuel Nobre<sup>1</sup> , Ricardo Cachinho<sup>1</sup> , Tiago Dionísio<sup>1</sup>, Eduardo Guerreiro<sup>1</sup>, Ana Delgado<sup>1</sup>, João Rua<sup>1</sup>, José João Mendes<sup>1</sup>  
<sup>1</sup> Egas Moniz Center for Interdisciplinary Research (CiiEM); Egas Moniz School of Health & Science, 2829-511 Almada, Portugal



## INTRODUCTION

Dental treatments often involve the administration of pharmacological agents to manage intraoperative and postoperative conditions and to restore health in patients. Non-steroidal anti-inflammatory drugs (NSAIDs) and antibiotics are among the most frequently employed agents. (1)

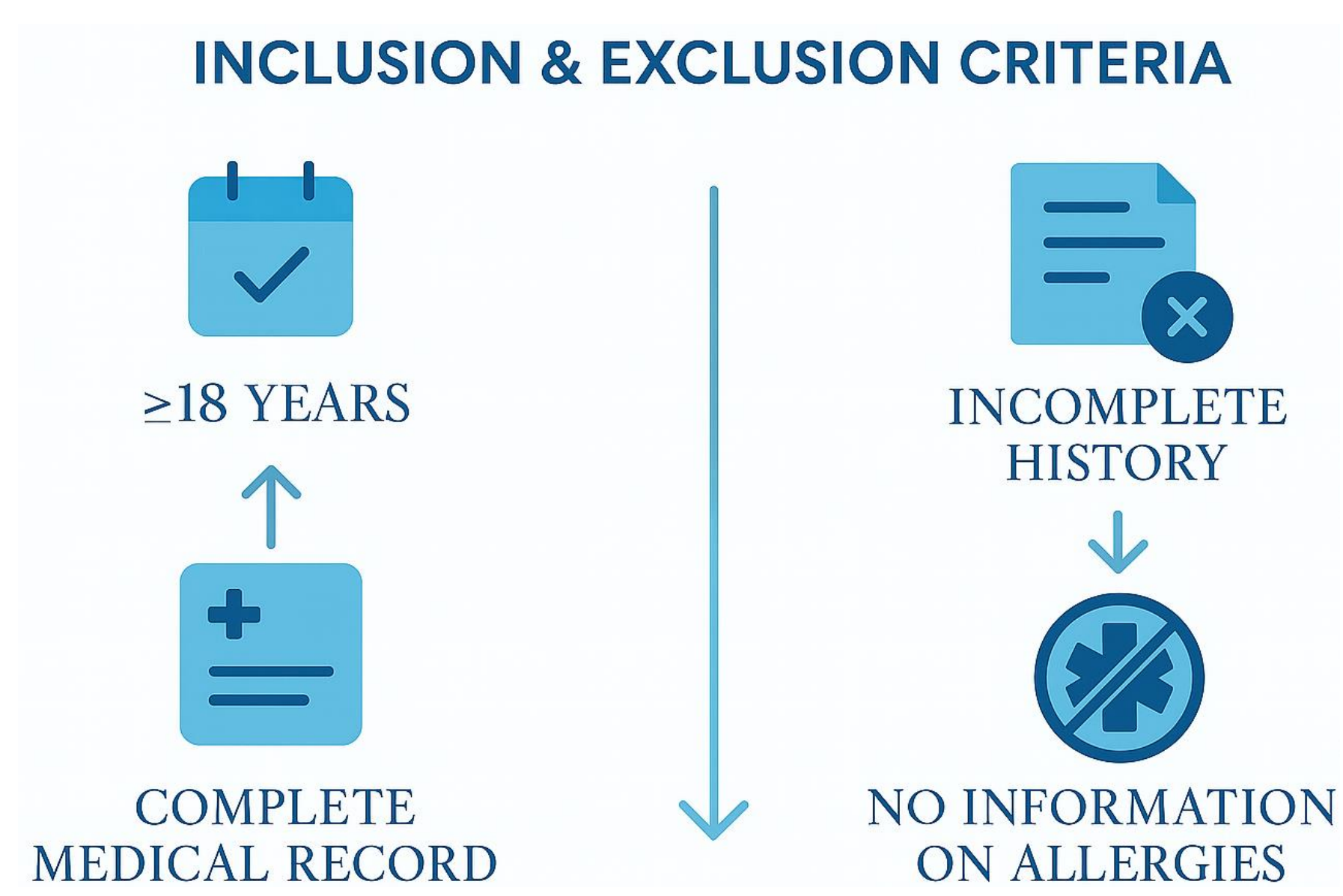
Adverse drug reactions represent a major concern in daily clinical practice, as they directly affect patient health. These reactions are defined as undesirable secondary effects of medications. True drug allergies are characterised by the involvement of a definitive immunological mechanism, such as T-cell activation or the production of drug-specific antibodies, and may manifest either immediately or after a delay. It is crucial to distinguish between adverse reactions and allergic reactions: although allergic reactions constitute a subset of adverse reactions, not all adverse reactions are mediated by immune mechanisms. (2,3)

Previous studies suggest that such events affect between 5% and 25% of the population and are influenced by factors such as sex, age, ethnicity, and history of drug use. (1,4)

## AIMS

This study aimed to estimate the prevalence of self-reported allergies to NSAIDs and antibiotics among adult patients attending the screening and emergency consultation of the Egas Moniz University Clinic between January 2021 and March 2025.

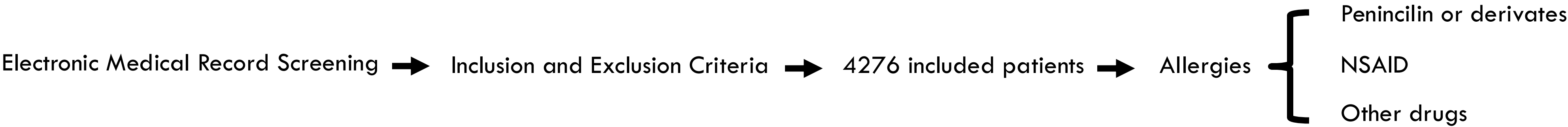
## MATERIALS AND METHODS



### Egas Moniz University Clinic

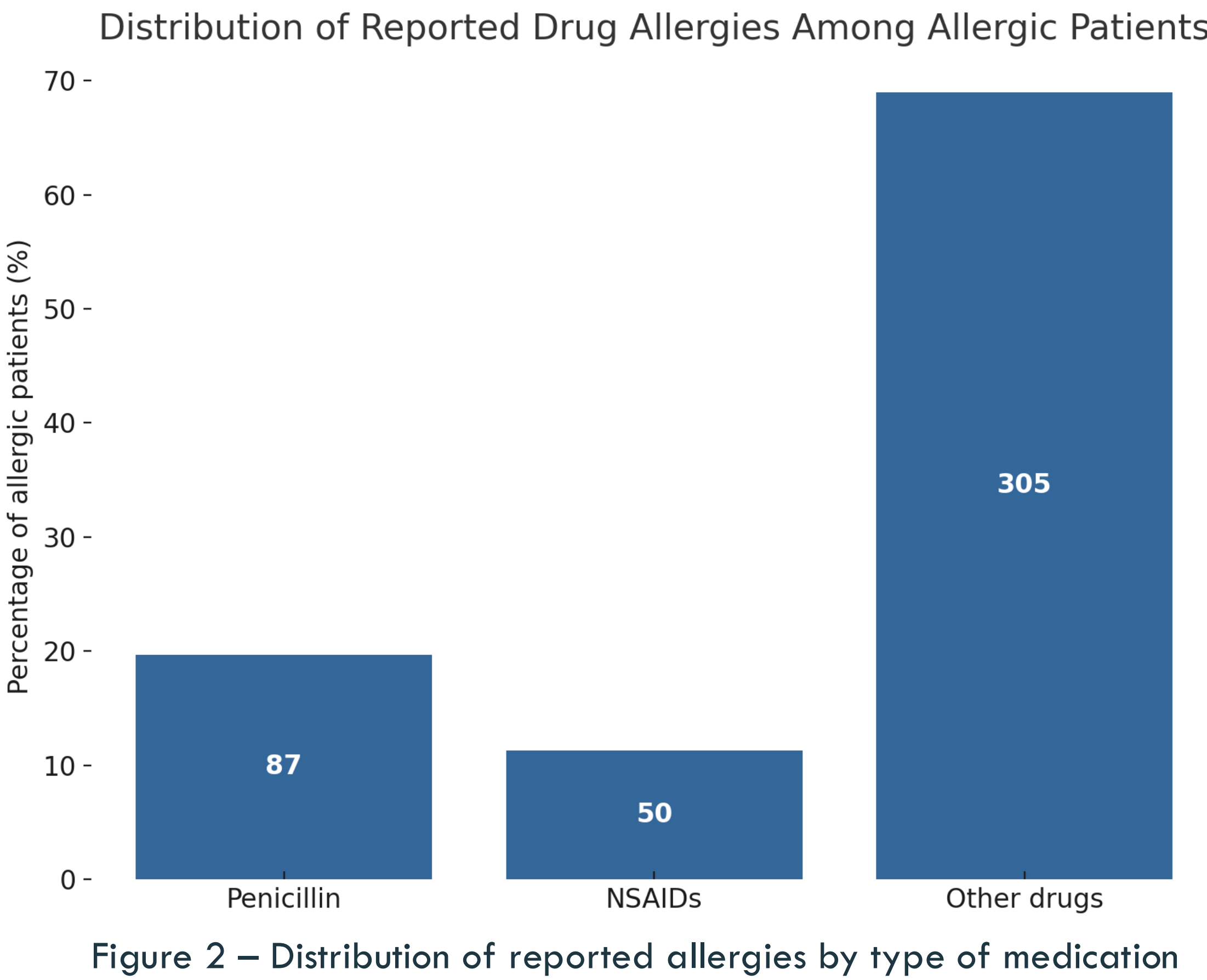
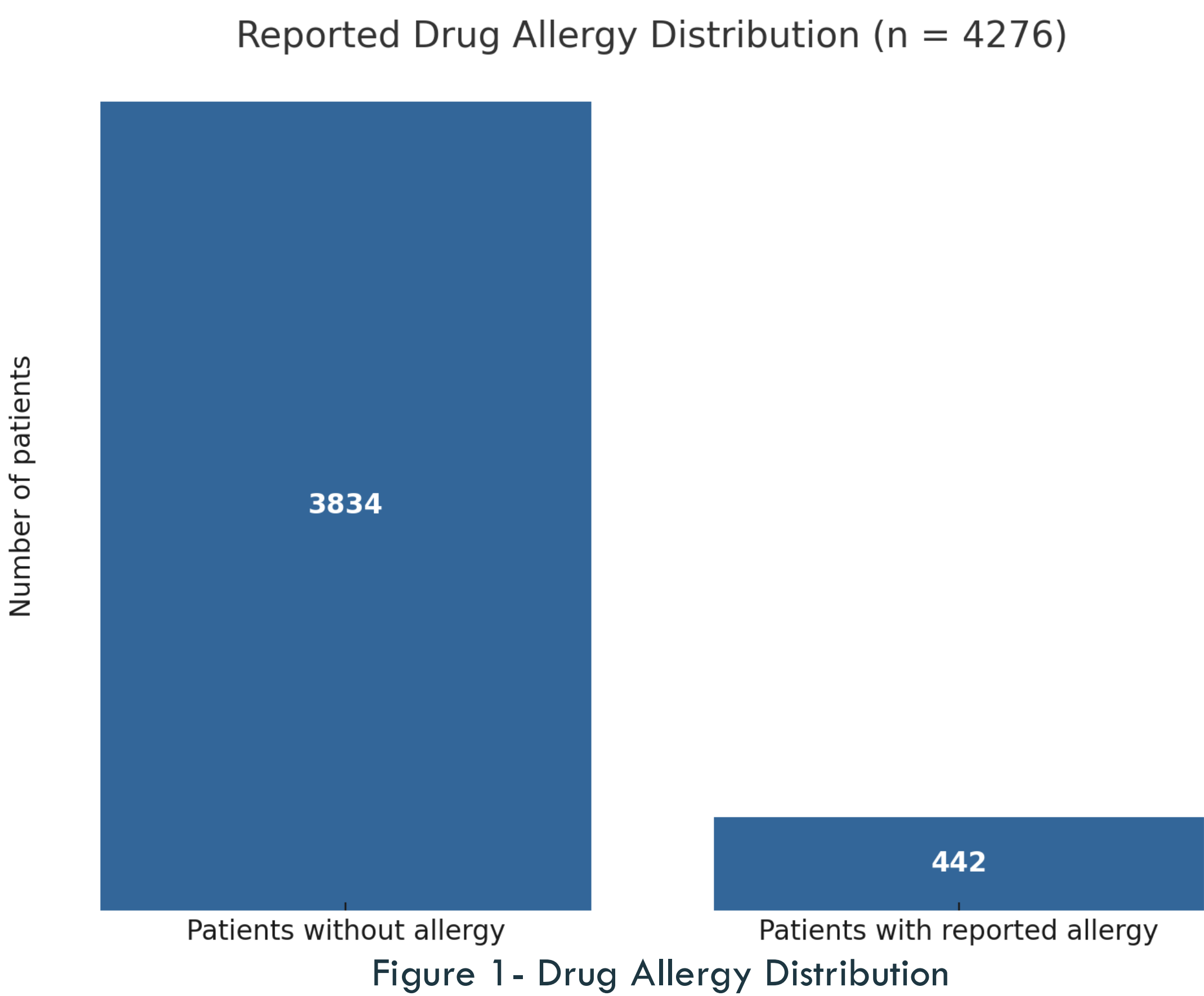
A retrospective observational study was conducted with the aim of estimating the prevalence of self-reported allergies to NSAIDs and antibiotics among adult patients who attended the screening and emergency consultation at the Egas Moniz University Clinic between January of 2021 and March 2025.

The analysis consisted of determining the absolute and relative frequency of reported allergies, followed by the calculation of the overall prevalence for each drug group within the study population.



## RESULTS

From the total population, 442 individuals (10.3 %) reported being allergic to at least one medication. Among them, 87 (19.7 %) reported allergies to penicillin or derivatives, and 50 (11.3 %) to NSAIDs such as ibuprofen, aspirin or diclofenac. The remaining 305 individuals (69.0 %) indicated other drug allergies. Overall, the prevalence of NSAID allergy in the full population was 1.17%, while penicillin allergy was reported by 2.03% of patients (Figure 1 and 2).



## CONCLUSIONS

These findings are consistent with international data, where approximately 10 % of adults report drug allergies, 0.3–6 % report NSAID hypersensitivity, and up to 10 % self-report penicillin allergy (though less than 1 % are confirmed by testing). Our results align with these benchmarks and contribute local evidence to the global understanding of drug allergy patterns in dental emergency care. This supports the importance of accurate drug history taking and reinforces the need for strategies to confirm or exclude allergy diagnoses when appropriate.

A major limitation of our study is the reliance on self-reported allergy data, which may overestimate the actual prevalence of confirmed drug allergies. Despite this, our findings contribute to the national mapping of drug allergy patterns and highlight the importance of verifying reported allergies, especially in acute care settings.

### REFERENCES

- 1.Castro RDD, Bezamat M, Vieira AR. Drug Hypersensitivity Associated with Dental Treatments. Pesqui Bras Em Odontopediatria E Clínica Integrada. 2024;24:e220189.
- 2.Ouanounou A, Ng K, Chaban P. Adverse drug reactions in dentistry. Int Dent J. abril de 2020;70(2):79–84.
- 3.Rastogi I. Challenges and opportunities in dentistry regarding adverse drug reactions. J Oral Med Oral Surg Oral Pathol Oral Radiol. 28 de outubro de 2024;10(3):185–90.
- 4.Becker DE. Drug Allergies and Implications for Dental Practice. Anesth Prog. 2013;60(4):188–97.