

Introduction

Since mid-2019, the Algarve and Baixo Alentejo Pharmacovigilance Unit (UFALBA) has been responsible for monitoring adverse drug reaction (ADR) in the Algarve and Baixo Alentejo regions. Within this context, the geographical distribution of ADR reports may reflect disparities in pharmacovigilance engagement and healthcare access. In line with the theme "Pharmacovigilance without Borders: from Innovation to Inclusion", this study analysed ADR reporting patterns in the districts of Faro and Beja from 2020 to 2025.

Objectives

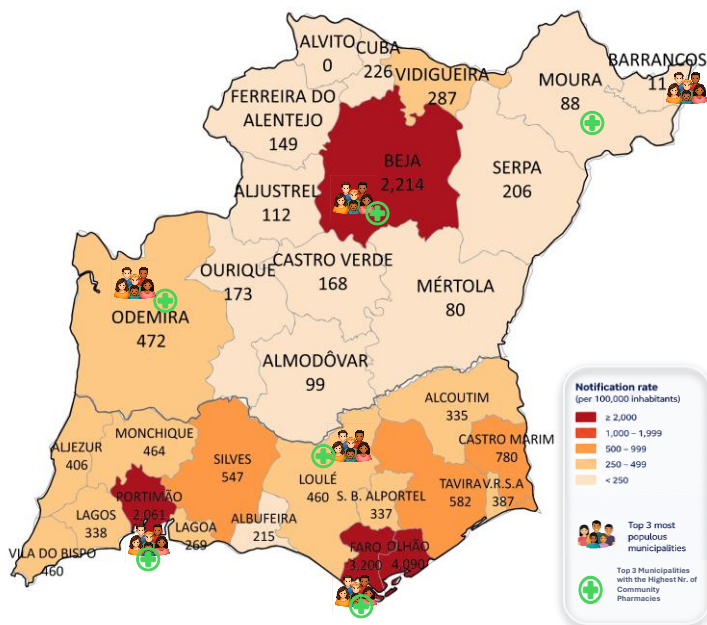
This study aimed to **compare average ADR reporting rates** per million inhabitants across municipalities in the **districts of Faro and Beja** from **2020 to 2025**, and to explore their relationship with population size and the number of community pharmacies.

Methods

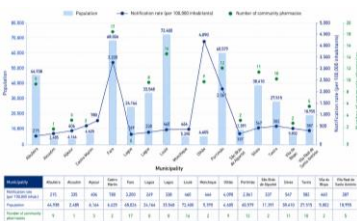
An observational, descriptive, retrospective study was conducted using suspected ADR reports registered in the RAM Portal public dashboard for municipalities in Faro and Beja from 2020 to 2025. Average reporting rates per million inhabitants were calculated by dividing the average number of reports per municipality by the resident population and multiplying the result by one million. Population data were obtained from the 2021 Census (INE), and the number of community pharmacies per municipality was retrieved from the INFARMED, I.P. website.

Results

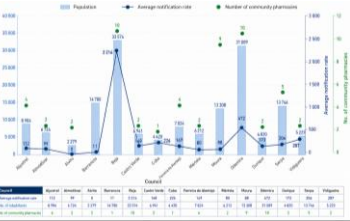
Map of Notification Rates, Population, and Community Pharmacies by Municipality



Faro



Beja



Results

In the district of **Faro**, the municipalities with the highest average ADR reporting rates per million inhabitants were **Olhão** (4090), **Faro** (3200), and **Portimão** (2061). Faro and Portimão are among the most populous municipalities and have a high number of community pharmacies, whereas Olhão has a comparatively smaller population and a moderate number of community pharmacies. Conversely, municipalities such as Albufeira (215), Lagos (338), Loulé (460), Silves (547), and Tavira (582) exhibited lower reporting rates despite substantial population size and pharmacy coverage.

In the district of **Beja**, the highest reporting rates were observed in **Beja** (2214) and **Odemira** (472), the two most populous municipalities, both with the highest number of community pharmacies. However, this pattern was not consistent across all municipalities. For example, Barrancos (14780 inhabitants and one pharmacy) showed a particularly low reporting rate (11). Overall, these findings suggest that population size and pharmacy coverage alone do not fully explain reporting variability, indicating the influence of additional factors.

Conclusion

The findings suggest a partial association between ADR reporting rates, population density and pharmacy coverage. Nevertheless, important discrepancies were identified, particularly in municipalities with lower-than-expected reporting rates considering their demographic and pharmaceutical characteristics. These differences may reflect variability in pharmacovigilance awareness, healthcare professional engagement, hospital presence, or regional demographic dynamics, including seasonal population fluctuations, particularly relevant in the Algarve.

Geographical analysis of ADR reporting may therefore represent a useful tool to identify potential underreporting areas and support the development of targeted awareness and training strategies. This approach may contribute to a more inclusive, equitable and effective pharmacovigilance system.

References

- <https://www.infarmed.pt/web/infarmed/entidades/medicamentos-uso-humano/farmacovigilancia/desempenho-do-snf>
- <https://tabulador.ine.pt/indicador/?id=0011609>
- <https://www.infarmed.pt/web/infarmed/pesquisa-de-farmacias>

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