Gac Sanit. 2025;39(S2):681

Gaceta Sanitaria

https://www.gacetasanitaria.org

# 1036 - SOCIOECONOMIC VARIABILITY OF COVID-19 VACCINE ATTRITION: THE CASE OF CATALONIA

*M. Moreno, C. Faes, M. Sáez, M. Barceló, J. Vidal*

*Universitat de Girona; Hasselt University; Institut Català de la Salut.*

## Resumen

Background/Objectives: The success of COVID-19 vaccination campaigns depends not just on initial uptake but also on completion of recommended doses. However, vaccine attrition –the failure to complete full vaccination schedules– remains understudied, particularly how socioeconomic factors influence this phenomenon. This study examines the regional patterns of vaccine attrition in Catalonia during 2021-2022, focusing on how income inequality, and urban-rural disparities affected vaccine schedule completion.

Methods: Using the Catalan primary care records, we tracked dose completion among 5.2 million adults eligible for primary series vaccination. Attrition was defined as failure to receive subsequent doses within recommended intervals. Socioeconomic variables included individual income, regional income, and comorbidities. We employed hierarchical Bayesian spatial regression, through the INLA framework to assess attrition predictors while controlling for the covariates of interest.

Results: Vaccine attrition varied across socioeconomic groups, with higher non-completion rates in the most deprived areas. Spatial analysis revealed persistent attrition clusters. Age emerged as a promotion factor – elderly individuals had lower attrition odds.

Conclusions/Recommendations: This study reveals how structural inequalities manifested in COVID-19 vaccine attrition, with economically marginalized urban communities disproportionately affected. The findings challenge assumptions about urban healthcare access advantages and highlight the need for place-specific strategies addressing vaccine hesitancy. Public health systems must incorporate socioeconomic vulnerability mapping into vaccination campaigns, with targeted community outreach and flexible scheduling for high-attrition zones. These lessons are crucial for preparing equitable responses to future health crises.

0213-9111 © 2025 SESPAS. Publicado por Elsevier España, S.L.U. Todos los derechos reservados