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**Where you live matters: how degree of urbanization influences healthcare utilization in Portugal**

**Júlia Martinho**

*J. Martinho<sup>1,2</sup>, A. Leite<sup>1,3</sup>*

<sup>1</sup>Department of Epidemiology, National Institute of Health Dr. Ricardo Jorge, Lisbon, Portugal

<sup>2</sup>Public Health Unit of Lezíria, ACES Lezíria, Santarém, Portugal

<sup>3</sup>Public Health Research Center, CHRC, NOVA National School of Public Health, NOVA University Lisbon, Lisbon, Portugal

Contact: juliamartinho94@gmail.com

**Background:**

The degree of urbanization is a health determinant, causing inequalities in exposure to risk factors, influencing health services' territorial organization and enabling healthcare utilization. Since Portugal's proportion of population residing in urban areas is higher than the world average, we aimed to estimate the magnitude of the association between the place of residence's degree of urbanization and healthcare utilization in the country.

**Methods:**

A cross-sectional study was conducted, using data from the Portuguese 2019 National Health Survey, a multi-stage clustered stratified sample. All participants, aged over 15, were included. Outcomes assessed included: going to general practitioner ( $n = 14\,360$ ) and specialist consultations ( $n = 14\,334$ ), taking a flu vaccine ( $n = 5\,270$ ), undergoing a colonoscopy ( $n = 9\,075$ ), too-long waiting times ( $n = 12\,009$ ) and waiting for healthcare due to distance/transportation ( $n = 12\,117$ ). Crude and adjusted prevalence ratios (aPR) and respective 95% confidence intervals (95%CI) were estimated using Poisson regression models.

**Results:**

Compared to urban areas, living in less populated areas was significantly associated with waiting for healthcare due to distance/transportation (aPR = 1.54, CI95% 1.06-2.24) and lower colonoscopy utilization (aPR = 0.86, CI95% 0.78-0.95). Flu vaccination prevalence ratios were significantly higher for rural (aPR = 1.15, CI95% 1.03-1.29) and suburban areas (aPR = 1.16, CI95% 1.04-1.30) than urban areas. There was no significant association between degree of urbanization and attending general or specialist consultations nor too-long waiting times.

**Conclusions:**

Healthcare needs are not being met in less populated areas likely due to geographic constraints. Against expectation, flu vaccination might not be optimized in urban areas, which could bring concerns for immunization rates in risk groups. Policies to improve universality and equity in population's access to healthcare are needed.

**Key messages:**

- Differences in healthcare utilization related to place of residence's degree of urbanization show that universal health coverage is yet to be reached.
- Less populated areas are more likely to wait too long to receive healthcare due to distance and mobility hindrances, representing a challenge for health systems which policies should help mitigate.