

## ORT\_20 - Socioeconomic Conditions Effects On Biological Prescriptions For Inflammatory Bowel Disease In Brazil

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**Introduction:** Inflammatory bowel diseases (IBD) affect numerous individuals globally, and Brazil's public healthcare system offers free medications for their management. However, socioeconomic factors can influence medication use and prescriptions.

**Objectives:** To analyze the effects of material deprivation, income inequality, and human development on biological prescriptions for IBD in the Brazilian public health system (SUS).

**Methodology:** This ecological study analyzed data from individuals with Crohn's disease and ulcerative colitis who were registered in the SUS Outpatient Information System between 2008 and 2022 and prescribed adalimumab, certolizumab pegol, infliximab, or vedolizumab. Conditional negative binomial regressions were conducted to examine the relationship between the quintiles of the Brazilian Deprivation Index (BDI), Gini Index (higher:  $\leq 0.550$ , and lower income equality:  $> 0.550$ ), Municipal Human Development Index (MHDI) (low:  $\leq 0.550$ , medium: 0.551-0.699, high: 0.700-0.799, and very high:  $\geq 0.800$ ), and biological prescriptions while accounting for covariates such as gender, age, poverty, and primary healthcare coverage.

**Results:** Biological prescriptions for IBD have increased significantly in Brazil, from 3.03% to 16.69%. However, fewer biological prescriptions were observed in municipalities within the third (RR 0.75; 95%CI 0.67- 0.85), fourth (RR 0.69; 95%CI 0.62-0.78), and fifth (RR 0.65; 95%CI 0.58-0.73) quintiles of the BDI, adjusted for the proportion of elderly people, extremely poor people, poor people, and people vulnerable to poverty, than those in the first quintile. Regarding the Gini index, a 14% lower prescription rate of biological medicines was observed among municipalities with lower income equality (RR 0.86; 95%CI 0.81-0.92) compared to those with higher income equality after adjustment. Meanwhile, after adjustment for the covariates, a 30% (95%CI 0.56- 0.88) lower incidence of biological prescriptions among municipalities with medium MHDI was observed, and a 37% greater incidence of biological prescriptions among municipalities with very high MHDI was found (RR 1.37; 95%CI 1.01-1.86) than in municipalities with low MHDI.

**Conclusion:** The effects of material deprivation, income inequality, and human development on biological prescriptions for IBD are substantial, and these findings can help create public health policies to enhance patient outcomes and minimize the IBD burden across diverse socioeconomic groups.

**Keywords:** Inflammatory Bowel Diseases; Socioeconomic Factors; Drug Prescriptions