Economic burden of severe asthma in the Brazilian Public Health System.

Key words: severe asthma, economic burden, DATASUS, GINA

Introduction: Information about the burden of severe asthma in Brazil is scarce. The goal of this study is to estimate the economic burden of severe asthma in Brazilian Public Health System perspective (SUS).

Methods: We evaluated the DATASUS available data from Outpatient (SIASUS) and Hospital (SIHSUS) Information Systems, between January 2017 and March 2019. We selected the ICD-10 J45 (asthma) and J20 (acute bronchitis), and patients over 12 years old. Therapeutic regimens obtained from SIASUS was used to classify patients as STEP 3, 4, 5, and unclassified, according to GINA 2019. After the classification, patients were related to SIHSUS data. Drug prices were obtained from the Health Price Bank (BPS).

Results: A total of 268,065 patients were identified, being classified into STEP 3 (21,987), STEP 4 (156,337), STEP 5 (81,947) and unclassified (7,794). 55.6% of patients with severe asthma (STEP 4 and 5) are in the southeast region, being 46.7% in the State of São Paulo. The costs associated with patients with severe asthma were 146.4 million BRL (93.2% in outpatient and 6.8% in hospital). While non-severe patients (unclassified and STEP 3) totalized 29.1 million BRL (38.6% in outpatient). The average per capita cost of hospitalization of patients with severe asthma was 1,590.83 BRL, approximately 2.9 times the average hospitalization cost of non-severe patients. Patients with severe asthma require more hospitalization days with (16.0 vs 10.7 days) and without (6.1 vs 2.9 days) ICU. The analysis of the “Consultation / Attendance / Follow-up” subgroup showed that patients with severe asthma perform 2,691 procedures, approximately 6.2 times that performed by non-severe patients.

Conclusion: Patients with severe asthma consume more resources when compared to non-severe patients, given the volume of patients with severe asthma, the discussion of an efficient control of this population becomes relevant to public health.