

Comparison of the Proportion and Healthcare Utilisation of Adult Patients with Uncontrolled Severe Asthma versus Non-Severe Asthma Seen in a Southeast Asian Hospital-Based Respiratory Specialist Clinic

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Abstract

Introduction: Understanding the burden of uncontrolled severe asthma is essential for disease-targeted healthcare planning. There is a scarcity of data regarding the proportion, healthcare utilisation and costs of patients with uncontrolled severe asthma in Asia. This study aimed to plug the knowledge gap in this area. **Materials and Methods:** Consecutive patients with asthma managed in our respiratory specialist clinic were evaluated prospectively. Healthcare utilisation comprising unscheduled asthma-related primary care visits, emergency department (ED) visits and hospital admissions were obtained from the national health records system. We defined uncontrolled severe asthma as poor symptom control (Asthma Control Test score <20); 2 or more asthma exacerbations requiring ≥ 3 days of systemic corticosteroids in the previous year; 1 or more serious asthma exacerbation requiring hospitalisation in the previous year; or airflow limitation with pre-bronchodilator forced expiratory volume in 1 second (FEV₁) <80% predicted despite high dose inhaled corticosteroids and another controller medication. **Results:** Of the 423 study participants, 49 (11.6%) had uncontrolled severe asthma. Compared to non-severe asthma, patients with uncontrolled severe asthma were older and more likely to be female and obese. They had a median of 2 (interquartile range: 0 to 3) exacerbations a year, with 51% having ≥ 2 exacerbations in the past 12 months. They were responsible for 43.9% of the hospital admissions experienced by the whole study cohort. Mean annual direct asthma costs per patient was S\$2952 \pm S\$4225 in uncontrolled severe asthma vs S\$841 \pm S\$815 in non-severe asthma. **Conclusion:** Approximately 12% of patients with asthma managed in a hospital-based respiratory specialist clinic in Singapore have uncontrolled severe asthma. They account for a disproportionate amount of healthcare utilisation and costs. Healthcare strategies targeting these patients are urgently needed.

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