

## A Retrospective Assessment of the Patient Related Barriers Affecting Effective Treatment of Asthma

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Conflict of interest: Nil

### Abstract

**Aim:** The aim of the present study was to assess the patient related barriers affecting effective treatment of asthma.

**Methods:** The study was a retrospective study for a period of one year by the Department of Pharmacology, ANMMCH, Gaya, Bihar, India from March 2019 to February 2020. 100 patients were included in the study.

**Results:** The average age of the Patients was 38.52±23.77 Yrs. (Range- 6-83), majority of the patients were Male -55% and Females were 45%. 13% patients said that they were bored to take medication. 9% patients said they do not remember to take medication. 22% patients did not use inhaled corticosteroid as they were feeling better. 36% patients did not feel the need to take ICS. 18% patients said that it was wastage of money to use ICS. 2% patients had concern about side effects.

**Conclusion:** It can be concluded from our study that the most common barrier found were bored to take medication, do not remember to take medication, feeling better, no need to take it, wastage of money concern about side effects.

**Keywords:** Barriers of treatment of asthma, Bronchial asthma (BA)

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### Introduction

Self-management is an established, effective and guideline-recommended approach to controlling asthma. [1] It has been defined by the US Institute of Medicine as “the tasks that individuals must undertake to live with one or more chronic conditions. These tasks include having the confidence to deal with medical management, role management and emotional management of their conditions”. [2] With regard to asthma control, this encompasses adherence to treatment. Adherence enables individuals to self-manage their condition and is essential to the success of self-management interventions. [3] Effective self-management has resulted in improved quality of life and reduced healthcare utilization, days absent from work or school, and nocturnal asthma. [4] However, despite effective medication being available, asthma is poorly controlled in over 50% of cases, [5,6] and the promotion, uptake and use of self-management among people with asthma, carers of children with asthma, and healthcare professionals remain low. [7–9] To maximize the benefits of self-management, barriers and facilitators to effective self-management (which may be encountered by the individual with asthma (or carer), the healthcare professional, or at the organizational level) [10–12] need to be identified. Further, more effective

treatment and management strategies are needed. Identification of the needs, beliefs, and behaviours of these individuals and organizational features [12] can indicate where improvements should be focused to help groups of people least likely to benefit from existing self-management interventions, and potentially inform the design and implementation of future interventions. [10]

According to the European Respiratory Society (ERS)/American Thoracic Society (ATS) guidelines, [13] severe asthma is defined as the condition that requires regular use of high doses of inhaled corticosteroids (ICS) in combination with a second controller and/or systemic corticosteroids to be controlled, or that remains uncontrolled despite such treatment. [13,14] The 2020 Global Initiative for Asthma (GINA) recommendations define this condition as difficult-to-treat asthma, while severe asthma is a subset of difficult-to-treat disease that remains uncontrolled despite treatment with maximal optimized therapy or that worsens if such treatment is withdrawn. [15] These definitions assume that the differential diagnosis of asthma has been established, that comorbidities have been optimally treated, and that environmental factors and poor adherence or inhaler technique have been

excluded as reasons for lack of control. [14] Therefore, the definition of severe asthma requires repeated observations of ongoing symptoms in patients whose treatment has been optimized.

The aim of the present study was to assess the patient related barriers affecting effective treatment of asthma.

### Materials and Methods

The study was a retrospective study for a period of one year by the Department of Pharmacology, ANMMCH, Gaya, Bihar, India from March 2019 to February 2020. 100 patients were included in the study.

Permission was acquired from the head of department of medicine and pediatrics for the study. Confidentiality regarding patients' information was maintained. A written informed consent was obtained from patients willing to take part in the study. A written informed consent of patients of

either sex above age 5 years was obtained from parents/guardians and assent was obtained from children above age 7 years.

Previously diagnosed patients of bronchial asthma of varied duration who visit the hospital outpatient department of medicine and pediatrics or are admitted in the inpatient department of medicine and pediatrics. Newly diagnosed patients of bronchial asthma by physicians either clinically, radiologically or by laboratory investigations were included into the study while Patients with coexistent respiratory disorders like bronchitis or emphysema (COPD), fibrosis and any other known lung disease. Patients who were not willing to give written informed consent were excluded from the study. Details of Age and Sex was asked and the reasons for not taking drugs were also noted.

The data was entered in excel sheet and analyzed by for excel software for windows 10.

### Results

**Table 1: Distribution of the patients as per the Age and Sex**

Characteristics	Mean±SD
Age in years	38.52±23.77
Range	6-83
<b>Gender N (%)</b>	
Male	55(55)
Female	45 (45)

The average age of the Patients was 38.52±23.77 Yrs. (Range- 6-83), majority of the patients were Male -55% and Females were 45%.

**Table 2: Barriers of treatment**

Barriers of treatment	N	%
Bored to take medication	13	13
Don't remember to take medications	9	9
Feeling better	22	22
Don't feel the need to take	36	36
Wastage of money	18	18
Concern about side effects	2	2

13% patients said that they were bored to take medication. 9% patients said they do not remember to take medication. 22% patients did not use inhaled corticosteroid as they were feeling better. 36% patients did not feel the need to take ICS. 18% patients said that it was wastage of money to use ICS. 2% patients had concern about side effects.

### Discussion

Drugs play an important role in improving human health and promoting well-being. However, to produce the desired effect, they have to be safe, efficacious and have to be used rationally. Drug use is a complex subject involving the prescriber, the patient and pharmaceutical institutions. It is influenced by factors such as drug availability,

prescribers' experience, health budget, promotional activities of the pharmaceutical industry, cultural factors, communication system and the complex interaction between these factors. [16] Drug utilization has been defined by the World Health Organization (WHO) in 1977 as "the marketing, distribution, prescription, and use of drugs in society, with special emphasis on the resulting medical, social, and economic consequences". [17]

Effective self- management has resulted in improved quality of life and reduced healthcare utilization, days absent from work or school, and nocturnal asthma. [18] However, despite effective medication being available, asthma is poorly controlled in over 50% of cases [19,20] and the promotion, uptake and use of self-management among people with asthma,

carers of children with asthma, and healthcare professionals remain low. [21-23] To maximize the benefits of self-management, barriers and facilitators to effective self-management (which may be encountered by the individual with asthma (or carer), the healthcare professional, or at the organizational level) [24-26] need to be identified. Further, more effective treatment and management strategies are needed. Identification of the needs, beliefs, and behaviors of these individuals and organizational features [26] can indicate where improvements should be focused to help groups of people least likely to benefit from existing self-management interventions, and potentially inform the design and implementation of future interventions. [24] 13% patients said that they were bored to take medication.

9% patients said they do not remember to take medication. 22% patients did not use inhaled corticosteroid as they were feeling better. 36% patients did not feel the need to take ICS. 18% patients said that it was wastage of money to use ICS. 2% patients had concern about side effects. Sandra Peláez et al [27] they found Patients were aged 2–76 years old and 58% were female. Nine patients were followed by an asthma specialist (pulmonologist or allergist), 13 patients by family doctors or pediatricians, and two patients had no regular follow-up. Barriers and facilitators to long-term daily inhaled corticosteroids were classified into the following loci of responsibility and its corresponding domains: (1) patient (cognition; motivation, attitudes and preferences; practical implementation; and parental support); (2) patient-physician interaction (communication and patient-physician relationship); and (3) health care system (resources and services). Patients recognized that several barriers and facilitators fell within their own responsibility. They also underlined the crucial impact (positive or negative) on their adherence of the quality of patient-physician interaction and health care system accessibility.

### Conclusion

It can be concluded from our study that the most common barrier found were bored to take medication, do not remember to take medication, feeling better, no need to take it, wastage of money concern about side effects.

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