



Review Article

A Review on Medication Adherence in Asthma Patients

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Medication adherence is an important factor in effective asthma management and is associated with asthma control, quality of life, and risk of exacerbations. Studies have identified several factors affecting adherence, including patient beliefs, knowledge, forgetfulness, medication concerns, treatment complexity, inhaler technique, and communication with healthcare professionals. Various methods, including self-report scales, medication possession ratio, and proportion of days covered, have been used to assess adherence to asthma medications. Evidence suggests that poor adherence, particularly to inhaled corticosteroids, may increase the risk of exacerbations and negatively affect treatment outcomes. Therefore, patient education, proper inhaler technique, regular follow-up, effective communication, and patientcentred interventions are essential for improving long-term medication adherence in people with asthma.

Keywords: Medication adherence, Asthma Patients.

INTRODUCTION

Introduction to Asthma

Asthma is a common chronic disease that causes inflammation and narrowing of the airways, making it difficult to breathe. It affects millions of people worldwide and can occur due to various environmental and genetic factors. Common symptoms include shortness of breath, coughing, wheezing, and breathing difficulties, especially at night. Poorly controlled asthma can reduce the quality of life and may lead to emergency visits and hospitalization. Although asthma cannot be completely cured, regular use of prescribed inhalers and other medications helps control the symptoms and prevent severe attacks. However, many patients do not take their medications regularly, which can result in poor asthma control. Anxiety and depression are also commonly seen in people with asthma and may

affect their medication adherence and disease management. At the same time, uncontrolled asthma may increase psychological distress. Therefore, this study examines the relationship between medication adherence among adults with asthma.

Introduction to Medication Adherence of Asthma

Medication adherence refers to the extent to which a person's medication-taking behaviour follows the treatment recommendations agreed upon with a healthcare professional. Good medication adherence is important in chronic diseases such as asthma because regular and correct use of prescribed medicines can improve disease control and reduce the risk of exacerbations and hospitalization. However, poor adherence to long-term medication remains a major problem worldwide.

In asthma, non-adherence may occur because of forgetfulness, concerns about side effects, difficulty using inhalers, cost of medicines, or misunderstanding of the treatment plan. Poor adherence can result in inadequate asthma control and worsening of symptoms. Therefore, understanding medication adherence among patients with asthma is important for improving treatment outcomes and quality of life.

Medication Adherence in Asthma

Asthma is a chronic condition that often requires long-term treatment. Controller medications need to be used consistently even when the patient feels well because asthma inflammation may continue even when symptoms are absent.

Good adherence to asthma medication can help:

- Maintain better asthma control.
- Reduce asthma symptoms.
- Reduce the risk of exacerbations.
- Prevent unnecessary emergency visits.
- Reduce hospitalization.
- Improve quality of life.
- Reduce the burden on healthcare services.

Types of Medication Adherence

Medication adherence can be understood in different stages of medication use.

A. Initiation: Initiation refers to whether the patient starts taking the prescribed medication after it has been prescribed. For example, a patient may receive a prescription for an inhaled corticosteroid but never start using it.

B. Implementation

Implementation refers to how well the patient's actual medication-taking behaviour follows the prescribed treatment regimen. For example, if an inhaler is

prescribed twice daily but the patient regularly uses it only once a day, there is poor implementation.

Discontinuation

Discontinuation occurs when the patient stops taking the medication before the treatment period recommended by the healthcare professional has ended. For example, an asthma patient may stop using a controller inhaler after symptoms improve.

D. Intentional Non-adherence

Intentional non-adherence occurs when the patient consciously decides not to take the medication.

- Possible reasons include: Fear of side effects.
- Belief that the medicine is unnecessary.
- Feeling better and believing treatment is no longer required.
- Concerns about long-term medication use.
- Negative beliefs about inhaled corticosteroids.
- Preference for avoiding medication.

The 2023 systematic review found that patients' attitudes and beliefs about medication are important influences on adherence.

E. Unintentional Non-adherence

Unintentional non-adherence occurs when the patient wants to follow the treatment but fails to do so because of practical difficulties.

Examples include:

- Forgetfulness.
- Busy daily schedules.
- Difficulty remembering doses.
- Difficulty using the inhaler.
- Lack of access to medication.
- Financial difficulties.

- Complex treatment schedules.

Importance of Medication Adherence

Medication adherence is important because the effectiveness of a prescribed treatment depends not only on the medicine itself but also on whether it is used correctly and consistently.

1. Better disease control: Good adherence to controller medication helps maintain asthma control and reduce symptoms

2. Reduction in exacerbation: Poor adherence to controller medication may increase the risk of asthma exacerbations. The 2026 study by Khezrian et al. specifically examined ICS adherence after a severe exacerbation and its relationship with subsequent exacerbation risk.

3. Prevention of complications: Regular use of appropriate asthma medication can help prevent worsening of the disease and complications associated with uncontrolled asthma.

4. Improved quality of life: Better disease control can allow patients to perform normal daily activities with fewer symptoms and limitations.

5. Reduction in healthcare utilization: Good adherence may reduce unnecessary emergency department visits, hospital admissions and other healthcare requirements.

6. Better therapeutic outcomes: A medicine can produce its expected therapeutic effect only when it is taken appropriately. Therefore, adherence is an important component of treatment effectiveness.

Factors Affecting Medication Adherence

Medication adherence is influenced by multiple factors rather than a single cause. The 2024 literature review and 2023 systematic review identified several important categories.

Medication-related factors Adherence may be affected by:

- Complexity of treatment.

- Number of medications.

- Dosing frequency.

- Side effects or concerns about adverse effects.

- Difficulty using the inhaler.

- Different types of inhaler devices.

Disease-related factors

Asthma is often characterized by periods when symptoms improve. When patients feel better, they may believe that medication is no longer necessary and stop their controller treatment. This can contribute to poor long-term adherence.

Healthcare professional-related factors

The relationship and communication between healthcare professionals and patients are important.

Poor communication may result in:

- Lack of understanding about the disease.
- Lack of understanding about medication.
- Incorrect expectations regarding treatment.
- Failure to understand the importance of regular medication use.

Social and economic factors

Other factors may include:

- Cost of medication.
- Availability of medicines.
- Difficulty obtaining prescriptions.
- Social circumstances.
- Access to healthcare

Causes of Non-adherence in Asthma

Non-adherence may occur because of several reasons:

1. Forgetting to take medication.

2. Feeling better and stopping medication.
3. Fear of adverse effects.
4. Lack of knowledge about the disease.
5. Lack of understanding of the importance of controller medication.
6. Incorrect inhaler technique.
7. Complex treatment regimen.
8. Difficulty remembering multiple doses.
9. Cost or availability of medication.
10. Negative beliefs about long-term medication.
11. Inadequate communication with healthcare professionals.
12. Lack of follow-up.
13. Personal or lifestyle-related barriers Medication adherence is an essential component of effective asthma management. Even when appropriate medication is prescribed, poor adherence can reduce treatment effectiveness and contribute to poor asthma control and exacerbations.

RESULT

Medication adherence in asthma refers to using prescribed medicines correctly and regularly as advised by the healthcare professional. Good medication adherence helps maintain proper asthma control and prevents worsening of symptoms. Poor adherence is common among asthma patients and may result from forgetfulness, side effects, cost, or lack of knowledge. On adherence can lead to increased asthma exacerbations, emergency visits, and reduced quality of life. Therefore, patient education, proper inhaler technique, counselling, and regular follow-up are important to improve medication adherence.

CONCLUSION

Medication adherence in asthma is influenced by various factors such as patient beliefs, knowledge, forgetfulness, medication concerns, treatment

complexity, inhaler technique, communication with healthcare professionals, and social or economic barriers. Improving adherence requires effective communication, patient education, regular follow-up, and patientcentred interventions. Proper inhaler technique and identifying individual barriers can further improve treatment adherence and asthma control. Therefore, assessing and improving medication adherence is an important part of asthma management. It also helps in understanding treatment effectiveness and suspected adverse drug reactions.

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