



# Asthma and Mental Illness

*Comprehensive Monograph*

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# Asthma and Mental Illness

## Introduction

Asthma is a chronic disease that affects a person's airways (breathing tubes that carry air in and out of the lungs). Asthma is characterized by the temporary inflammation (swelling) of these airways, which results in the symptoms these individuals often experience. Such symptoms include: wheezing, coughing, chest tightness, and difficulty breathing. Asthma is often triggered by a variety of different environmental factors that these consumers may be allergic to or that may serve as irritants to their airways.

The number and severity of new cases of asthma seen in this country every year is dramatically increasing. It is one of the most common chronic conditions, reported to affect nearly 22 million Americans, and is among the most common reason for Emergency Room visits. Asthma death rates have increased by more than 50 percent in recent years.

Although the consumer with schizophrenia does not appear to be in any increased risk for developing asthma, there are other mental disorders that do co-occur more often than what would be expected by chance. The two most frequent mental disorders found in consumers with asthma include anxiety disorders and bipolar disease. Although there does not appear to be an association between consumers with schizophrenia and asthma, the schizophrenic consumer with asthma may pose some special considerations and management issues. Non-adherence to medications used to control asthma, places the schizophrenic consumer at an increased risk for developing potentially fatal asthma.

The case manager can serve a critical role in the management of the mentally ill consumer with asthma by: (1) screening for the presence, duration and severity of symptoms, (2) assuring that the consumer is appropriately managed for his/her asthma, (3) determining how well the consumer is adhering to his/her medications and if the consumer is experiencing any side effects from the medication, (4) educating the consumer about asthma, and (5) providing this information to the provider responsible for the medical management of such consumers.

## Screening for the presence, duration and severity of symptoms

The symptoms that the asthmatic consumer experiences at any given time may vary. Symptoms may also differ in severity, being anywhere from mildly annoying to life threatening. Finally, the frequency of such symptoms can also vary from person-to-person. Some people have symptoms every few months, others have symptoms every few weeks, yet others may have symptoms every day.

For every consumer with asthma, the case manager must first determine the presence of symptoms and then determine the severity of these symptoms.

## The case manager should ask the consumer:

Have you experienced any of the following symptoms?

- Coughing that is often worse at night or early in the morning making it difficult to sleep?
- Wheezing, which is a whistling or squeaky sound when you try to breathe?
- The feeling that you can't catch your breath or that you can't get enough air in or out of your lungs?
- Faster breathing or noisy breathing?
- How often do you have asthma symptoms?
- Do you have symptoms twice a week or less?
- Are you bothered by symptoms at night twice a month or less?
- Do you have symptoms more than twice a week but no more than once in any single day?
- Are you bothered by symptoms at night more than twice a month?
- Do you have asthma symptoms every day?
- Are you bothered by night time symptoms every week?
- Do you have symptoms throughout the entire day?
- Are you bothered by night-time symptoms often?
- Assuring that the consumer is appropriately managed for his/her asthma

The goals of asthma treatment include: (a) improving consumer's quality of life, (b) providing symptom relief, (c) providing optimal therapy with minimal adverse effects, (d) preventing recurrent exacerbations and minimizing the need for emergency room visits or hospitalizations.

There are three steps that can accomplish all of these goals: (1) determining which allergens or irritants exacerbate the consumer's asthma and counseling consumers to avoid these when possible, (2) determining what type medications the consumer is currently using to treat his/her asthma, and (3) determining if the proper tests and preventive measures were performed.

Determining which allergens or irritants exacerbate the consumer's asthma and counseling consumers to avoid these when possible. The case manager should ask the consumer: Have any of the following made your asthma symptoms worse?

- Exposure to pets such as cats or dogs
- House dust
- Cockroaches
- Pollen
- Mold
- Cigarette smoke
- Air pollution
- Cold air or changes in weather
- Strong odors from painting or cooking
- Scented products
- Strong emotional expressions
- Stress
- Medications such as aspirin or beta blockers
- Sulfites in food (dried fruit) or beverages (wine)
- Special chemicals or dusts that you may be exposed to at work
- Infections

For every item above that is noted to trigger an asthmatic attack in the consumer with asthma, the case manager should work with the consumer to gradually reduce (or eliminate if possible) exposure to that substance. This may not always be possible with some items (such as air pollution), may be difficult to accomplish with other items (such as cigarette smoking) and very easy to accomplish with other items (such as scented products or wine).

## **Determining what type medications the consumer is currently using to treat his/her asthma**

The case manager should then determine which medications the consumer is using to treat his/her asthma, and how often are they using these medications.

There are three different types of medicines that consumers with asthma require to control their symptoms. These include: (1) rapid acting, immediate symptom relief medications, to be taken only when the asthmatic consumer feels the onset of symptoms (wheezing, shortness of breath, chest tightness), (2) chronic long

acting medications that the asthmatic consumer needs to take every day regardless of whether or not they are currently having any asthmatic symptoms (Most asthmatic consumers require both types of medications), (3) medications to administer for a short term (a few days) if a severe asthmatic attack is not responding to any of the conventional medications.

## **Immediate Symptom Relief Medications:**

**Inhaled bronchodilators:** These medicines work by relaxing the tightened muscles around the airways that occur when a consumer has an asthma attack. These medications should be used the minute a consumer first starts to experience asthmatic symptoms, because they start to work almost immediately and thus may prevent symptoms from getting any worse. It is usually recommended for severe asthmatic consumers to carry these inhalers with them all the time. Although these medications work quickly, their effects only last a short time. Thus, a consumer that continues to have symptoms, despite taking this medication, should seek immediate medical attention. Regular use of these medications should not be encouraged, and if it gets to the point where the asthmatic consumer requires frequent daily use of these inhalers, chronic long acting medications should be considered. Examples of bronchodilators: Albuterol, Proventil, Ventolin, Proair

## **Chronic Long Acting Medications:**

**Inhaled Cortico-steroids:** Persistent asthma (symptoms more than two times a week) requires the initiation of an inhaled cortico-steroid to be used daily. It should be noted, that although inhaled cortico-steroids start working almost immediately, full benefit might not be appreciated for days to weeks. These medications are safe and very effective when used as prescribed by a physician. Inhaled steroids go directly into the lungs and are very different from the type of steroids body builders often take to increase muscle size. Examples of inhaled cortico-steroids: Pulmicort, Flovent, Asmanex, Azmacort.

**Leukotriene modifiers:** These medications can be taken orally (by mouth) once a day to control the inflammatory response of asthma. These medications have very limited side effects. Although, they have not been shown to be as beneficial in controlling asthmatic symptoms when compared to the inhaled cortico-steroids, this class of medications can be used effectively in those consumers reluctant to use an inhaler or in those consumers who continuously use an inhaler incorrectly. Examples of Leukotriene modifiers include: Singulair, Accolate.

**Cromolyn and Nedocromil:** These medications can be used either alone to treat mild persistent asthma or in conjunction with inhaled cortico-steroids to treat moderate persistent asthma or severe persistent asthma.

**Theophylline:** These oral (by mouth) medications can also be taken alone for mild asthma or in combination with an inhaled cortico-steroid for moderate or severe asthma.

## **Medications for an acute severe asthmatic attack not responding to conventional medications:**

Oral Cortico-steroids: Rapid, initial relief of moderate or severe symptoms may be achieved by adding an oral cortico-steroid (such as Prednisone). The oral cortico-steroid should be tapered over 10-14 days.

## **Determining if the proper tests and preventive measures were performed:**

Spirometry is a test that evaluates lung function, by measuring how much and how fast a consumer can blow air out of their lungs after taking a deep breath. Because the presentation of asthma may be similar to other chronic lung diseases such as emphysema or bronchitis, spirometry should be done initially when a consumer first presents with symptoms to assure the diagnosis of asthma is appropriate. Spirometry does not need to be repeated in the asthmatic consumer beyond that initial evaluation, unless the consumer's asthmatic symptoms continue to deteriorate or respond poorly to conventional medications.

Allergy testing may be appropriate during the initial presentation of asthma in a consumer to determine if there are specific things in the environment (that may be prevented) that are now exacerbating or causing the symptoms of asthma.

Peak flow meter is a hand held device that can be used any time a consumer has an exacerbation of his/her asthmatic symptoms to objectively quantify how bad the asthma may be at that specific period in time.

Chest x-ray is not necessary other than perhaps initially, in order to exclude the possibility of a foreign object, other lung disease or heart disease causing the symptoms of asthma.

Lab work: There are no routine labs that need to be obtained in the asthmatic consumer, other than a theophylline blood level if the consumer is taking this medication. A complete blood count (CBC) may be necessary to rule out the possibility of an infection or allergic reaction causing or exacerbating asthmatic symptoms. A consumer with an elevated white blood cell count may have an underlying infection. A consumer with an elevated eosinophilic (a specific type of white blood cell) count may have an allergic reaction to an environmental stimulus, causing/exacerbating his/her asthmatic symptoms.

Preventive measures: Every consumer with asthma (unless contra-indicated) should also be administered the pneumonia and influenza vaccines. They also should be encouraged to stop smoking.

## **Determining how well the consumer is adhering to his/her medications and if the consumer is experiencing any side effects from the medication**

Although as noted earlier, there does not appear to be any increase in asthma in consumers with schizophrenia, these consumers are more likely to have serious complications occur from their asthma if they are non-adherent to their medications. Thus, a critical role for the case manager is to monitor adherence.

The case manager needs to determine:

- Does the consumer know how to properly take his/her medication? This is especially important with the use of inhalers.
- Does the consumer understand the difference between the quick relief, short acting medications and the chronic long-lasting medications?
- Is the consumer taking his medications as prescribed?
- Is the consumer experiencing any side effects from the medications

## **Educating the consumer about asthma**

Asthma consumer education has been shown to improve outcomes such as: preventing asthma exacerbations, reducing emergency room visits, and reducing hospital admissions. Educational campaigns should focus on: promoting adherence, improving disease monitoring, and optimizing decision- making.

Consumers should be educated about:

- Asthma as a chronic illness
- The inflammatory nature of asthma
- The role of medications (including long term versus quick relief medications)
- How to use inhalers and spacers
- How to monitor symptoms and how to use peak flow monitoring
- Early warning signs of an asthma attack and what to do about it
- Smoking cessation

The summary in the following page should be completed for every consumer with asthma to assure that he/she has his/her asthma optimally managed.

## WORKSHEET FOR THE CONSUMER WITH ASTHMA

- What asthmatic symptoms has the consumer experienced?
- How frequent does the consumer experience these symptoms?
- What environmental factors exacerbate the asthmatic symptoms in this consumer?
- Was the consumer counseled on how to reduce or avoid exposure to these factors?
- What medications does the consumer take for his/her asthma?
- Short acting Medications:
- Long acting Medications:
- Has the consumer had spirometry done? When was it done and what were the results?
- Has the consumer been allergy tested? When was it done and what were the results?
- If the consumer is on theophylline, is there a recent theophylline blood level? When was it done and what was the value?
- Has the consumer been vaccinated for pneumonia ever and influenza this year?
- If the consumer is an active cigarette smoker has he/she been counseled on smoking cessation?
- Does the consumer know how to properly use his/her medications?
- Has the consumer been adherent with his/her medication?
- Has the consumer experienced any side effects from the medications?
- Has the consumer been educated about asthma as a chronic illness?
- Has the consumer been educated about the role of medications (including long term versus quick relief medications)?
- Has the consumer been educated about how to use inhalers and spacers?
- Has the consumer been educated about early warning signs of an asthma attack and what to do about it?
- Has the consumer been educated about when to seek emergency assistance?