

Outpatient Management for Acute Exacerbations of Obstructive Lung Diseases

Brenda Marsh, MD, PhD, Matthew G. Drake, MD*

KEYWORDS

• Asthma • Chronic obstructive pulmonary disease • Exacerbation • Glucocorticoids

KEY POINTS

- The management of acute asthma and chronic obstructive pulmonary disease exacerbations involves reversing airflow obstruction with inhaled bronchodilators and reducing airway inflammation with corticosteroids.
- Outpatient management must include an assessment of disease severity to facilitate patient triage to the appropriate level of care.
- Outpatient therapy for exacerbations should include short-term follow-up and patient education to ensure recovery and reduce risk of exacerbation recurrence.

INTRODUCTION

Asthma and chronic obstructive pulmonary disease (COPD) are commonly encountered lung diseases in the outpatient setting. Outpatient providers must not only manage the chronic phases of these diseases but also promptly recognize and treat disease exacerbations. This review focuses on the diagnosis and management of acute exacerbations of asthma and COPD in the adult outpatient setting.

ASTHMA EXACERBATIONS

Disease Characteristics

Asthma is a chronic inflammatory disease of the airways characterized by excessive mucus production, bronchoconstriction (narrowing of the airways), and airway hyper-responsiveness (heightened contractile responses to stimuli). Symptom severity ranges from mild, intermittent wheezing, chest tightness, cough and dyspnea, to severe, persistent disease that limits daily activities. Asthma exacerbations are defined by worsening of symptoms outside the range of an individual's day-to-day variation.¹

The authors have no financial or commercial conflicts of interest to declare.

Division of Pulmonary and Critical Care Medicine, Oregon Health and Science University, 3181 SW Sam Jackson Park Road, Portland, OR 97239, USA

* Corresponding author.

E-mail address: drakem@ohsu.edu

Med Clin N Am ■ (2017) ■-■

<http://dx.doi.org/10.1016/j.mcna.2016.12.008>

0025-7125/17/© 2017 Elsevier Inc. All rights reserved.

medical.theclinics.com

Prompt recognition and early treatment of exacerbations are vital for preventing further decompensation that, in severe cases, may be life threatening.

Detecting Exacerbations and Assessing Severity

Asthma exacerbations present with breathlessness, wheezing, nonproductive cough, and/or chest tightness. Symptoms may develop acutely over hours or advance slowly over several days. Signs of an exacerbation include increased respiratory and heart rate, agitation, and expiratory wheezing on chest auscultation. Patients may have reduced lung function measured as a decrease in peak expiratory flow (PEF) or forced expiratory volume in 1 second (FEV₁). Importantly, some asthmatics have a blunted perception of their disease severity that may lead to underreporting of symptoms or delays in seeking care.² Thus, clinicians must be vigilant for evidence of a severe exacerbation. Pertinent risk factors for severe or fatal asthma exacerbations include a history of severe exacerbations requiring intensive care unit admission or intubation, 2 or more hospitalizations or 3 or more emergency room visits for asthma in the past year, or hospitalization in the past month for asthma (**Box 1**). In addition, improper use of asthma control medications (ie, incorrect inhaler technique, lack of a spacer), low socioeconomic status, use of 2 or more canisters of short-acting bronchodilators per month or comorbid psychiatric, cardiac, or other chronic lung conditions predispose to severe exacerbations.³

Asthma exacerbation severity is categorized by clinical symptoms and signs (**Table 1**). Mild exacerbations may include wheezing, cough, and chest tightness, but normal oxygen saturation and a PEF greater than 70% predicted. Patients should be able to speak in full sentences and have no shortness of breath at rest. Accessory respiratory muscle use (ie, sternocleidomastoid retractions) should be absent. Moderate exacerbations may involve mild shortness of breath at rest, use of accessory muscles, elevated heart and respiratory rate, and a PEF between 40% and 69% predicted. Severe exacerbations may include dyspnea at rest, speaking in 1- to 2-word sentences, accessory muscle use, and agitation. Pulsus paradoxus (>25 mm Hg), PEF less

Box 1

Risk factors for fatal asthma: components of the personal and medical history that should alert practitioners to an increased risk for fatal asthma exacerbations

Prior severe exacerbation requiring:

- Intensive care admission
- Intubation

2 + hospitalizations in past year

Asthma-related hospitalization or emergency room care in past month

3 + emergency room visits in past year

Current use or recent withdrawal of systemic corticosteroids

2 + refills of short-acting beta₂ agonist per month

Reduced perception of degree of airflow obstruction

Illicit drug use

Low socioeconomic status

Medical comorbidities:

- Psychiatric disorder
- Cardiovascular disease
- Other chronic lung disease

Download English Version:

<https://daneshyari.com/en/article/5680510>

Download Persian Version:

<https://daneshyari.com/article/5680510>

[Daneshyari.com](https://daneshyari.com)