


# Definition of Chronic Obstructive Pulmonary Disease Exacerbation: The Essentials of the Rome Proposal

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Last year, a group of experts on chronic obstructive pulmonary disease (COPD) proposed an updated definition of COPD exacerbation<sup>1</sup>. They reached a consensus on the new definition using a modified Delphi method and named it ‘the Rome Proposal’ (Table 1). As a correct definition of COPD exacerbation is necessary not only for clinical practice but also for healthcare decisions, the Rome Proposal was designed to overcome the shortcomings of the current definition of COPD exacerbation documented by the Global Initiative for Chronic Obstructive Lung Disease (GOLD) strategy<sup>2</sup>.

One of the shortcomings of the GOLD definition is that it relies only on subjective symptoms, which can be mimicked by pneumonia, heart failure, or pulmonary thromboembolism. In contrast, in the Rome Proposal, the experts suggested objective measurements of respiratory rate, heart rate, serum C-reactive protein, pulse oximetry, and arterial blood gas in addition to the symptoms. The Rome Proposal also suggests the evaluation of differential diagnosis and etiologic testing for airway insult and removes the term, “additional therapy” from the definition of COPD exacerbation. This is because an additional therapy may differ across COPD patients due to its availability and the preference of patients or physicians upon COPD exacerbation.

However, a good definition should be concise, with the exclusion of non-essential components, and must be composed of two parts—genus (category of concept) and differentia (differentiating characteristics)<sup>3</sup>. A good definition of COPD exacerbation is fundamental for precise communication among healthcare professionals, patients, medical students, and even the general public. Considering the com-

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**Table 1.** Three definitions of COPD exacerbation

### The GOLD strategy<sup>2</sup>

COPD exacerbation is defined as the acute worsening of respiratory symptoms that results in additional therapy.

### The Rome Proposal\* for the definition of COPD exacerbation<sup>1</sup>

In a patient with COPD, an exacerbation is an event characterized by dyspnea and/or cough and sputum that worsen over  $\leq 14$  days, which may be accompanied by tachypnea and/or tachycardia and is often associated with increased local and systemic inflammation caused by airway infection, pollution, or other insult to the airways.

### The essentials of the Rome Proposal

COPD exacerbation is defined by the acute worsening associated with increased airway inflammation in a patient with COPD.

\*In the Rome Proposal, they also reached a consensus on an updated classification of severity. In this paper, I have focused only on the definition of COPD exacerbation.

COPD: chronic obstructive pulmonary disease; GOLD: Global Initiative for Chronic Obstructive Lung Disease.

ponents of definition by the Rome Proposal, “various etiologies” cause an “increase in inflammation (airway and systemic)” that results in the “acute worsening” of “symptoms” and “signs” in a patient with COPD. Among the five components, various etiologies and inflammation are important because they could be the targets of prevention and treatment, respectively. However, etiology may not be an essential component of the definition because it varies from one patient to another and can even be unidentifiable in some patients. Similarly, symptoms and signs may not be essential for the definition because they are followers of airway and systemic inflammation. Further, systemic inflammation may not be essential for the definition because it is the result of increased airway inflammation. However, acute worsening is essential for the definition of COPD exacerbation because exacerbation should be differentiated from the stable state, considering that chronic airway inflammation is one of the essential features of the stable state of COPD patients<sup>4</sup>.

In conclusion, the essentials of the Rome Proposal for the definition of COPD exacerbation are “acute worsening (genus)” associated with “increased airway inflammation (differentia)” in COPD patients. Fortunately, there is evidence to support the occurrence of acute airway inflammation in COPD patients with exacerbation—moderate or severe<sup>5-7</sup>.

## Conflicts of Interest

No potential conflict of interest relevant to this article was reported.

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