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Rome Criteria for Exacerbation of Chronic Obstructive Pulmonary Disease: Not Built in a Day

To the Editor:

The Perspective article by Celli and colleagues is a much-needed effort to update the definition and severity classification of acute exacerbation of chronic obstructive pulmonary disease (AECOPD) (1). The current definition of AECOPD is limited by its reliance on patient reports, lack of specificity, and a severity classification defined by where patients are treated. The authors propose a number of criteria, which include both subjective and objective measures. Although a step in the right direction, several issues should be considered before this definition and classification schema are ready for prime time, either for use clinically or for use in research studies. The proposed definition justifiably argues for an upper limit for the duration over which symptoms develop. The lack of a lower threshold for the duration, however, makes it hard to differentiate day-to-day variation in symptoms from a true exacerbation at the time of onset. Unless symptoms are severe and of rapid onset, this definition may not facilitate early and timely detection of exacerbations. The existing definition, which requires a change in symptoms beyond usual, places the onus of detection of clinical deterioration on the patient. The main value, however, of this definition lies in that within-patient day-to-day variation is accounted for (2).

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The proposed definition discounts cough as an important symptom, though many patients rank cough as more bothersome than dyspnea, and given that dyspnea can be modulated by the level of physical activity, cough may indeed be a more sensitive symptom than dyspnea is for early recognition of an exacerbation. Although a threshold of five for the visual analog scale for dyspnea is perhaps practical, it is important to make a distinction between chronicity and acuity of symptoms; it is not uncommon for individuals with severe COPD to have significant dyspnea at baseline. I presume the authors want to use a single value because this scale is not commonly used on a daily basis by patients. However, such a scale is, by its nature, especially when maximal severity is worded as “most dyspnea ever felt,” designed to measure change with the assumption that patients will have experienced the entire spectrum of the severity scale. Perhaps a visual analog scale recall over the preceding few days may help introduce a measure of change that is necessary to define an “exacerbation” or worsening. The suggested oxygen saturation criterion of less than 92% may be challenging to implement, given that the current recommendation is to maintain oxygen saturation at 88% and above.

The inclusion of self-reported physical exam findings may also be problematic. Not all patients can accurately and reliably count their heart rate and respiratory rate, especially if this is not measured over a certain minimum time period (3, 4). Do these physical exam findings need to be abnormal for a certain period of time? Although the authors suggest that technological advances will make these measurements easy, prior experience suggests that the signal-to-noise ratio is quite low for daily monitoring, and a snapshot provided by patients may result in frequent false alarms (5). The inclusion of laboratory values, although desirable for confirmation, will also imply that patients will need to get to a healthcare facility instead of diagnosis over the phone. The authors should be congratulated for this much-awaited move toward changing the current unsatisfactory definition of AECOPD, but Rome was not built in a day. The proposed definition needs refinement. ■

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Chronic Obstructive Pulmonary Disease Exacerbations: Do All Roads Lead to Rome?

To the Editor:

The Rome chronic obstructive pulmonary disease (COPD) exacerbation proposal is a welcome step forward (1). Celli and

colleagues have attempted to revise the definition and propose a new severity classification, based on measurable clinical and laboratory variables instead. The central role of healthcare use when defining exacerbations has held us back from a better understanding of these critical events.

We agree that it is appealing to direct the definition of an exacerbation toward causation and measurable pathophysiological variables instead of symptoms alone (2). We also sympathize with the concept of a genuine exacerbation being an “inflammatory burst” caused by an “insult to the airways” on a background of chronic inflammation. However, practical implications of narrowing acute COPD exacerbations to these primary inflammatory events need to be considered. The clinical reality is that we have no universal marker that is specific for this implied inflammatory burst and that, despite a thorough work-up, we still do not identify a cause in many exacerbations (3). Currently, exacerbations remain a diagnosis of exclusion. Acute exacerbations of symptoms that are induced by

Rome severity criteria applied to BACE cohort

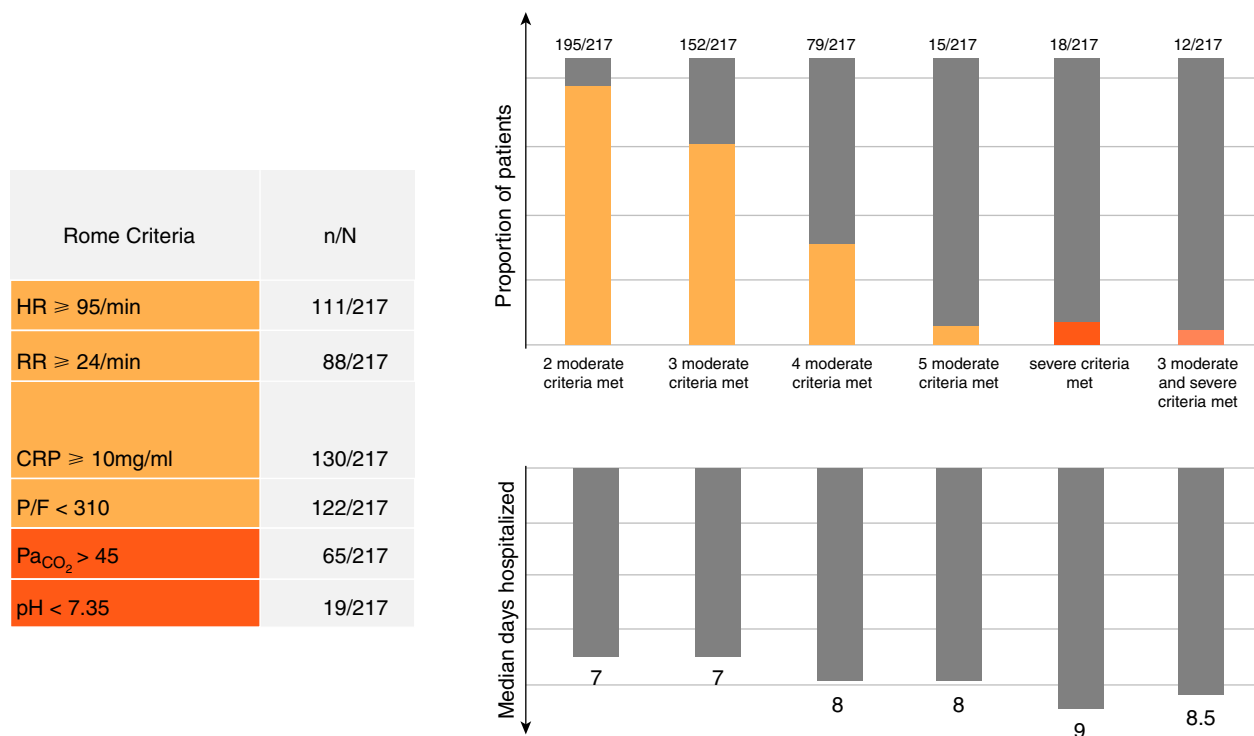


Figure 1. The BACE cohort consisted of 301 patients with chronic obstructive pulmonary disease (COPD) hospitalized for an acute COPD exacerbation. The Rome severity criteria could not be assessed in 84 of 301 patients because of missing variables. Visual analog scale score for dyspnea was not available in the BACE cohort, but it was assumed to be \geq 5 in all patients. Saturation without oxygen was not available for all patients and was replaced by P_{O₂}-to-F_{I_{O₂} ratio (P/F) <310, which corresponds to 92% saturation at ambient air. BACE = Azithromycin for Acute Exacerbations Requiring Hospitalization; CRP = C-reactive protein; HR = heart rate; RR = respiratory rate.}

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comorbidities such as heart failure or even a panic attack require a different treatment approach. For patients, however, these events are equally frightening and just as much part of the reality of living with COPD. We believe that the emphasis of the Rome proposal on the inflammatory paradigm may shift the focus away from such events. Moreover, in practice, exacerbations of comorbidities and exacerbations of airway inflammation are not mutually exclusive but often coincide. Rather, we would keep the concept of an acute COPD