

Driving Pressure or Tidal Pressure: What A Difference a Name Makes

In Reply:

We certainly agree that the term driving pressure is a misnomer because it is the difference between two static variables recorded at end-inspiration and end-expiration. As such, it represents the amplitude of the tidal alveolar pressure, but the only thing it “drives” is the onset of deflation. Nonetheless, that term has long been used in engineering and physiology to indicate amplitude and has taken hold in clinical practice since publication of *The New England Journal of Medicine* article by Amato et al¹ in 2015. We seem to be stuck with it now as representing the

quotient of externally measured and readily accessible variables: tidal volume and compliance and/or the difference between plateau pressure and total PEEP. Most competent practitioners who adjust ventilators recognize the underlying definition and meaning of that term. We took pains in our article² to note that *passive* (no flow) conditions ideally must apply without muscular effort at both extremes of the tidal cycle when recording plateau and total PEEP, as Chatburn and van der Staay dutifully note.³ With regard to pressure control ventilation, we also agree that the maximum tidal airway pressure is not always static at end-inspiration. Fortunately, only an uninformed respiratory therapist would record the pressure control ventilation target as the “plateau” without confirming that flow had stopped.

We do foresee some problems with the substitute term suggested by Chatburn and van der Staay. Whether intended or not, tidal pressure, invites confusion at the bedside because it conjures up the idea of the total *dynamic* pressure needed to overcome both tidal resistance and elastance, which is not the alveolus-level stretch pa-

rameter of primary interest. Nonetheless, we appreciate and encourage such thoughtful reflection on the current scientific literature and terminology of our field.

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