Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Instead of resuming CCO-CPR with ACO-CPR-induced ventilations to support circulation after defibrillation, it can be further postulated that continuous ACO-CPR would be a more effective method of cardiac assist. Rhythmic abdominal compressions alone, which was termed abdominal counterpulsation, was originally developed as a method of cardiac assist to support circulation after successful resuscitation until the patient could be put on a balloon pump [14-15].

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1 May 2017

https://doi.org/10.1016/j.ajem.2017.06.002

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Are height and weight estimates in ED patients reliable for setting the ventilator?

Dear Editor,

We congratulate Goyal et al. with their recent paper on the association between body mass index (BMI) and inappropriately sized tidal volumes in adult intubated and ventilated emergency department (ED) patients [1]. A staggering 20% of patients received ventilation with inappropriately large tidal volumes, and after adjusting for age and gender, patients in all three obesity categories had higher odds of receiving inappropriately large tidal volumes compared with patients with a normal BMI.

Goyal et al. chose to call a tidal volume 'appropriate' when it did not exceed 10 cm^3/kg ideal body weight (IBW). Given that a tidal volume of 8 cm^3/kg IBW is currently seen as 'protective' in patients with non–injured lungs, we suggest the authors recalculating the percentages and odds using this cutoff value. In doing so, the authors allow better comparisons with ventilation practices in operation rooms [2] and in intensive care units [3]. As we are uncertain whether using a too large tidal volume also translates into a higher incidence of acute respiratory distress syndrome (ARDS) in ED patients, the authors could also report the incidence of ARDS in their cohort as well.

One essential comment is that one should be careful calculating IBW based on estimated height and weight values. As this was a retrospective study, we assume that height and weight were not collected as precisely as it would have been done in a prospective study –usually these values are more 'guesstimates', and we recently showed that using 'guesstimates' results in inappropriate calculations of the IBW. Of note, this challenge is particularly important for extreme values, namely in underweight and overweight patients [4].

Despite all these comments, we very much applaud increasing interest in the way mechanical ventilators are set in the ED [5,6], were peculiar working conditions and the acuteness of illness could bring the clinician to be less cautious in setting the ventilator and to focus more on other, more stringent, tasks. More studies are warranted to understand the potential role of protective ventilation in this setting.

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24 April 2017

https://doi.org/10.1016/j.ajem.2017.06.003

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Body mass index is associated with inappropriate tidal volumes in adults intubated in the emergency department ☆,☆☆,☆☆☆,☆☆☆☆

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29 May 2017

https://doi.org/10.1016/j.ajem.2017.06.005

Thank you for the opportunity to re-evaluate our work and offer our commentary. Defining an "appropriate" tidal volume (TV) was challenging because of the paucity of existing data. We chose 10 cm^3/kg IBW based on a recent meta-analysis by Neto and colleagues where the authors demonstrated that larger TVs were associated with worse clinical outcomes when compared to smaller TVs in patients without acute respiratory distress syndrome [1]. Of the 20 included studies, the most common TV in the conventional, or larger, TV group was 10 ml/kg (9 of 20 studies). The mean conventional TV was 10.6 ml/kg.

Despite our choice to use 10 cm^3/kg IBW, we agree with the notion that 8 cm^3/kg IBW may be more appropriate and, therefore, re-calculated adjusted odds ratios (Table 1) as well as overall rate of inappropriate ventilator settings. With the revised definition, the overall rate of inappropriately high set TV was 63.4% (95% CI 59.0%, 67.5%). This suggests that nearly ⅔ of the patients intubated in our department during the study period were ventilated with an inappropriately high tidal volume.

We agree that reporting the incidence of ARDS is an important clinical outcome; however, our database does not include datapoints required to diagnose ARDS. Similarly, as you mentioned given the retrospective design, height and weight were taken from the electronic medical record (EMR) or driver's license (if not recorded in the EMR). When possible, patients at our hospital have their height and weight measured. There is no documentation in the EMR whether the recorded values are estimates or measurements.

Table 1
Logistic regression of the categorical outcome variable "inappropriate tidal volume >8 cm^3/kg" on BMI categories, after adjusting for potential confounding factors age and gender.

Odds of receiving inappropriate tidal volume	
Comparison	Odds ratio (95% CI)
Underweight vs normal	0.44(0.18, 1.10)
Overweight vs normal	1.64(0.99, 2.70)
Class I obesity vs normal	2.37(1.23, 4.57)
Class II obesity vs normal	1.84(0.81, 4.21)
Class III obesity vs normal	12.7(2.82, 57.12)

☆ The data were presented at the Society for Academic Emergency Medicine Annual Meeting on May 17, 2013 in Atlanta, GA.
☆☆ This work was supported by a Graduate Medical Education Grant from MedStar Washington Hospital Center.
☆☆☆ In accordance with ICJME guidelines, the authors report no conflicts of interest.
☆☆☆☆ MG and RB conceived the study, designed the trial and provided data monitoring and oversight. AB led data extraction and managed the data. SKG obtained research funding, provided statistical advice, and drafted the manuscript. ET analyzed the data. MG and RB performed substantial revisions. All authors subsequently contributed substantially to its revision. MG takes responsibility for the paper as a whole.

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Medication errors with push dose pressors in the emergency department and intensive care units ☆,☆☆

Dear Reader,

Utilization of push dose pressors (PDP, low doses of phenylephrine or epinephrine administered IV push) during care of emergency medicine (EM) patients is increasingly popular in EM free open access medical education (FOAMed) [1,2] with resultant increased use in emergency department (ED) and intensive care unit (ICU) settings for peri-/post-intubation hypotension [3]. Due to prominence of this topic in FOAMed, indications are expanding to include bridge to continuous infusion vasopressors, medication related hypotension during procedural sedation and anaphylaxis.

This indication creep has potential detrimental effects, which are rarely discussed. Concerns we have identified are:

☆ Source of support: None.
☆☆ Prior presentations: None.