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## ARDS Prevalence in LUNG-SAFE Study Questioned



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The recent publication of the results from the Large Observational Study to Understand the Global Impact of Severe Acute Respiratory Failure (LUNG SAFE) study has prompted a rejoinder from Jesús Villar, CIBER de Enfermedades Respiratorias, Instituto de Salud Carlos III, Spain and colleagues Marcus J. Schultz and Robert M. Kacmarek, writing in [Critical Care](#). They argue that the study's findings on ARDS prevalence amongst ICU patients and patients receiving mechanical ventilation arises from four sources of bias.

See Also: [ARDS Still Under-Recognised, Under-Treated - LUNG-SAFE Results](#)

Villar and colleagues write that the LUNG-SAFE study's reporting of an ARDS prevalence of 10.4 % of all ICU admissions and of 23.4 % of all patients receiving mechanical ventilation is much greater than expected based on European clinical experience.

They suggest "at least" four sources of bias that could explain a figure they call "surprisingly epidemic":

1. Use of an algorithm-recognition ARDS tool for 40% of the cases included.
2. More than 17 % of patients diagnosed with ARDS based on the Berlin criteria did not fulfill the criteria 24 hours after routine care.
3. Time of study. The study was conducted in a 4-week period during winter 2014, when pulmonary infections had a seasonal peak. Villar and colleagues argue that it is not appropriate to extrapolate data from such a period to represent ARDS prevalence year round.
4. ICUs that did not enrol at least one ARDS patient during those 4 weeks were excluded from the analysis. Villar and colleagues argue that all ICUs should be considered in determining global prevalence.

They go on to question other aspects of the study, including hospital mortality differences between difference categories of ARDS, which they calculated.

The authors acknowledge the contribution of the LUNG-SAFE study in revealing the gap between the scientific evidence and actual practice, concluding: "it can only be assumed that there is still a huge need to assist the medical community in understanding the importance of lung-protective ventilation in all patients we mechanically ventilate."

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