



## What is the Optimal Patient-Intensivist Ratio?

# 7.5

A retrospective cohort study of 49,686 adults admitted to 94 ICUs in the UK between 2010 and 2013 found that a patient-intensivist ratio less than or greater than 7.5 was associated with higher hospital and ICU mortality.

The study, by Hayley Gershengorn, MD, Albert Einstein College of Medicine and colleagues was the first multicentre study to assess how outcomes for critically ill patients are related to the patient load of the intensivists caring for them during their ICU stay. researchers found great variation between ICUs in the patient-intensivist ratio, which was calculated as the total number of patients cared for by the intensivist for all or any portion of daytime hours averaged over the patient's ICU stay. They suggest that the association of lower PIRs with higher in-hospital mortality may be explained by the volume-outcome relationship and/or by the intensivists having responsibilities outside the ICU.

The authors acknowledge several limitations, including the study's lack of information on the composition of the multidisciplinary care team and the lack of generalisability outside the UK.

The [research was presented](#) at the Society of Critical Care Medicine's 46th Critical Care Congress in Hawaii, and is published in *JAMA Internal Medicine*.

In an accompanying commentary, Elizabeth M. Viglianti, MD, MPH and Theodore J. Iwashyna, MD, PhD, of the University of Michigan, Ann Arbor, speculate that the relative absence of additional mortality once the PIR is above 12 may be due to non-intensivist resources assisting with the workload. While the study is limited to the UK, they urge more research into the ideal PIR ratio, taking into account the characteristics of the intensivists and the systems and institutions in which they practise.

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