
Interprofessional Familiarity Improves Outcomes in Mechanically Ventilated Adults



Over 1 million patients with acute respiratory failure requiring mechanical ventilation are admitted to ICUs every year, with a one-in-five mortality rate. While interventions like lung-protective ventilation, prone positioning, and protocols such as spontaneous awakening and breathing trials are crucial, there's a growing interest in optimising staffing to improve patient outcomes. Historically, the focus has been on increasing nurse and intensivist physician staffing, but this is not always feasible with rising labour costs and workforce shortages.

Instead, there's a push for cost-neutral solutions that optimise existing resources. This involves better coordination among ICU staff—nurses, physicians, and respiratory therapists—across shifts. The current approach is often siloed and random, with teams of clinicians who may not be familiar with each other. Research suggests that teams who work together more frequently tend to have better patient outcomes.

A new study aimed to explore whether familiarity among ICU teams affects patient outcomes. Using electronic health record data from five ICUs, the researchers investigated whether greater interprofessional familiarity was associated with lower ICU mortality, shorter mechanical ventilation duration, and higher likelihood of receiving spontaneous breathing trials (SBTs).

The study analysed electronic health records from five ICUs for the years 2018–2019. Researchers tracked the interprofessional team assigned to each mechanically ventilated patient per shift and calculated their familiarity with each other. They then used generalised linear regression models to examine the impact of this familiarity on ICU mortality, the duration of mechanical ventilation, and the implementation of SBTs, adjusting for factors such as the severity of illness.

In the study, familiarity was defined as the frequency with which clinicians worked together across all patients in an ICU (coreness) and specifically for each patient (mean team value). Among 4,292 patients (4,485 encounters, 72,210 shifts), the unadjusted mortality rate was 12.9%, the average duration of mechanical ventilation was 2.32 days, and SBT implementation occurred in 89% of cases. Increased familiarity, measured by both coreness and mean team value, was associated with lower mortality, higher likelihood of receiving SBT and shorter duration of mechanical ventilation.

These findings show that interprofessional familiarity was linked to better patient outcomes. Therefore, assignment models that prioritise familiarity among ICU teams could be a promising approach to improving care quality.

Source: [American Journal of Respiratory and Critical Care Medicine](#)

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Published on : Mon, 5 Aug 2024