
Sex Differences in Vital Organ Support in ICU



There is increasing evidence that factors such as sex, race, and socioeconomic status may influence the treatment received in ICUs. Data suggests that women are less likely to receive invasive ventilation, vasoactive medication, renal replacement therapy (RRT), extracorporeal membrane oxygenation (ECMO), and tracheostomy than men, but previous studies have shown heterogeneity and risk of bias. Factors like illness severity, admission diagnosis, and predefined limitations of medical treatment were not considered.

A recent study aims to investigate whether these differences reflect variations in illness severity and treatment limitations or are attributed to sex. The primary objective was to assess whether women were less likely to receive invasive ventilation than men before and after adjusting for confounding factors. The secondary objective was to explore the relationship between sex, various vital organ supports, and hospital mortality.

The study used the Australia and New Zealand Intensive Care Society Adult Patient Database data from 2018 to 2021. This registry captures information from 90% of ICUs in both countries, providing a comprehensive and representative dataset for analysing ICU admissions and related factors during that period. The analysis included 699,535 ICU admissions to 199 ICUs, where 43.7% were women.

The findings indicate that, after adjustment, women were less likely than men to receive invasive ventilation and all other forms of organ support except for ECMO. Additionally, women exhibited lower adjusted hospital mortality overall. Among patients who did not receive any organ support, women had significantly lower adjusted hospital mortality. However, according to the analysis, among patients who received any organ support, both women and men were equally likely to die.

Overall, these findings show that women in ICUs in Australia and New Zealand received significantly less vital organ support than men. Despite this observed difference, the findings suggest that the more conservative approach to treatment for women may not result in harm, as women did not experience higher mortality rates in comparison to men.

Source: [Critical Care Medicine](#)

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